

Universidade do Minho  
Escola de Economia e Gestão

The Impact of the COVID-19 Pandemic on Global Supply Chains

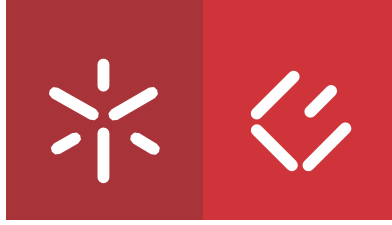
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UMinho |

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on Global Supply Chains

julho de 2021



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## The Impact of the COVID-19 Pandemic on Global Supply Chains

Dissertação  
Mestrado em Negócios Internacionais

Trabalho efetuado sob a orientação do  
Professora Doutora Isabel Maria Machado  
Correia Briosso Dias

julho 2021

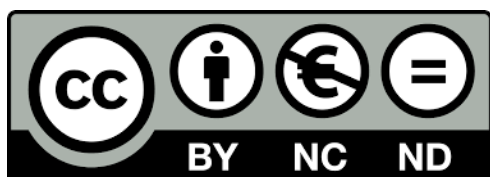
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## O Impacto da Pandemia da COVID-19 nas Cadeias de Abastecimento Globais

### Resumo

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A economia global sofreu notavelmente em 2020. A totalidade dos efeitos dos danos económicos que a pandemia da COVID-19 causou na economia global permanece incerta, uma vez que a pandemia ainda está em curso. Contudo, o surgimento da vacinação devolveu alguma esperança - e a confiança tem impacto nas decisões políticas à respeito de um possível fim de lockdowns bem como nos consumidores e nas empresas e, portanto, na economia. O objetivo desta dissertação é fornecer uma revisão bibliográfica das diferentes formas de gestão da cadeia de abastecimento em tempos de perturbações, bem como apresentar os resultados de uma investigação com base em dados primários recolhidos através de um questionário, conduzido para este documento.

O objectivo é investigar se estas rupturas nas cadeias de abastecimento globais, causadas pelos bloqueios no decurso da pandemia, causariam mudanças estruturais ou antes cíclicas nas cadeias de abastecimento globais, ou seja, se as rupturas e atrasos na entrega poderiam forçar certas empresas a reavaliar as suas estratégias de abastecimento, implementando, por exemplo, estratégias de Backshoring ou Reshoring.

Para responder a esta pergunta, começamos por rever um grande número de artigos científicos, relativos ao impacto previsível - a curto e a longo prazo - da pandemia, nas cadeias de abastecimento globais. Posteriormente, foi realizado um inquérito online, entrevistando 61 respondentes de diferentes indústrias, que trabalhavam em diferentes países. No inquérito, o comportamento real das empresas envolvidas durante estes períodos foi inquirido e documentado, concentrando-se no SCM imediatamente antes e depois do início da pandemia e nas subseqüentes perturbações da cadeia de abastecimento.

O inquérito mostra o que a maioria dos inquiridos esperam um impacto da pandemia sobre os SCs globais. Muitas das respectivas empresas estão dependentes de SC globais e, portanto, são afetadas por perturbações de SC. Conseqüentemente, os inquiridos esperam mudanças na estratégia de aquisição da sua respectiva empresa num futuro próximo. Podem ser imaginadas diferentes formas de alterar a estratégia. Os inquiridos estão conscientes de que as cadeias de abastecimento globais mudavam com o início da pandemia - e a maioria não acredita num regresso à normalidade.

**Palavras-chave:** cadeias de abastecimento globais, pandemia COVID-19, Outsourcing, Reshoring

## The Impact of the COVID-19 Pandemic on Global Supply Chains

### Abstract

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Global economy suffered notably in 2020. The full effects of the economic damage that the COVID-19 pandemic caused to the global economy remain uncertain, as the pandemic is still ongoing. However, the emergence of vaccination has restored some hope - this confidence has an impact on political decisions concerning a possible end of lockdowns, providing hope to consumers and businesses and, thus, to economy as a whole. The purpose of this dissertation is to provide a literature review of the different ways of managing the supply chain in times of disruption, as well as to present the results of an investigation based on primary data collected through a questionnaire, conducted for this paper.

The aim is to investigate whether these disruptions in global SCs (supply chains), caused by blockades in the course of the pandemic, would cause structural or rather cyclical changes in global SCs, i.e. whether disruptions and delivery delays could force certain companies to re-evaluate their supply strategies by implementing, for example, Backshoring or Reshoring strategies.

In order to answer this question, we started by reviewing a large number of scientific articles, concerning the predictable impact - in the short and long term - of the pandemic on global supply chains. Subsequently, an online survey was conducted, interviewing 61 respondents from different industries, working in different countries. In the survey, the actual behavior of the companies involved during these periods was surveyed and documented, focusing on SCM immediately before and after the onset of the pandemic and subsequent SC disruptions.

The survey shows that the majority of respondents expect an impact of the pandemic on global SCs. Many of the respective companies are dependent on global SCs and, thus, are affected by SC disruptions. Consequently, respondents expect changes in the procurement strategy of their respective company for the near future. Different ways of changing the strategy can be imagined. Respondents are aware that global supply chains change with the onset of the pandemic - and the majority do not believe in a return to business as usual.

**Keywords:** global supply chains, COVID-19 pandemic, Outsourcing, Reshoring

## Table of Contents

---

Acknowledgements.....	iii
Resumo.....	v
Abstract.....	vi
Table of Contents.....	vii
List of Figures.....	viii
List of Tables.....	ix
List of Abbreviations.....	x
1. Introduction.....	1
2. The COVID-19 Pandemic and the Great Lockdown.....	2
2.1 Comparison with previous crises.....	2
2.2 Impact of the Pandemic on Global Economy.....	7
3. Theoretical Approach.....	11
3.1 Production relocations and supply chains.....	12
3.2 Conceivable Impact of COVID-19 on Global Supply Chains in Different Industries.....	17
4. Methodology of the Investigation.....	21
4.1 Objectives of the Survey.....	22
4.2 Methodological Approach.....	22
4.3 Collection of Data.....	23
5. Results of the Investigation.....	24
5.1 The Respondents.....	25
5.2 The Companies.....	27
5.3 Position of the Respondents in the Respective Company.....	29
5.4 Content Evaluations.....	32
5.5 Main results of the survey.....	74
6. Conclusion.....	75
Bibliography.....	78
Appendix I. Questionnaire in English.....	83
Appendix II. Transcription of answers of all respondents to Q29.....	90
Appendix III. Questionnaire in Portuguese.....	94
Appendix IV. Questionnaire in German.....	101
Appendix V. Questionnaire in French.....	108
Annex: Complete Sample, including all answers of each individual respondent.....	115



## List of Figures

---

Figure 1. Real GDP during the Great Depression .....	3
Figure 2. GDP at market prices 2002-2020 .....	3
Figure 3. Beveridge Curve for Micro Market i.....	4
Figure 4. Evolution of the Euro Area Beveridge Curve Over the Financial Crisis.....	5
Figure 5. Unemployment rate April 2001- April 2021, seasonally adjusted percentage share.	6
Figure 6. Outsourcing vs. Insourcing processes .....	15
Figure 7. Disadvantages of Offshoring and Reasons for Reshoring.....	16
Figure 8. The impact of the Great Lockdown on most affected industries .....	19
Figure 9. Percentage share of tourism on GDP .....	20
Figure 10. The circle of decrease in times of economic crises and the intervention of the state .....	21
Figure 11. Language the respondents chose .....	23
Figure 12. Q1: Age .....	25
Figure 13. Q2: Gender .....	25
Figure 14. Q3: Educational background .....	26
Figure 15. Q4: Nationality .....	26
Figure 16. Q5: Country of workplace .....	27
Figure 17. Q6: Size of the enterprise.....	28
Figure 18. Q7: Industries the respondents work for .....	29
Figure 19. Q8: Departments the respondents work for .....	29
Figure 20. Q9: Years of affiliation to the company .....	31
Figure 21. Q10: Perceived impact of COVID-19 on global supply chains.....	32
Figure 22. Q11: Intermediate products purchased by the companies .....	34
Figure 23. Q12: Intermediate goods purchased from abroad .....	36
Figure 24. Q13: Countries of the suppliers .....	36
Figure 25. Q 14: Production facilities abroad.....	40
Figure 26. Q15: Changes in SCM planned before COVID-19.....	42
Figure 27. Q16: Changes in SCM in the course of the pandemic.....	44
Figure 28. Q17: Problems with the procurement of products.....	46
Figure 29. Problems in procurement by industry and size of company .....	47
Figure 30. Q18: Perceived probability of changes in procurement .....	51
Figure 31. Q19: Expected changes in the procurement strategy .....	53
Figure 32. Q20: Perceived probability of shifts in procurement.....	55
Figure 33. Q22: Perceived importance of sustainability for the company .....	60
Figure 34. Q23: Disposition to invest in more sustainable SCM .....	62
Figure 35. Q24: Perceived benefits of outsourcing.....	64
Figure 36. Q25: Regions in which the companies sell products/services .....	65
Figure 37. Q26: Perceived decrease in sales due to the pandemic .....	67
Figure 38. Q27: Cost-saving measures due to the pandemic .....	70
Figure 39. Q28: Perceived severity of long-term effects of COVID-19 on global supply chains .....	70

**List of Tables**

---

Table 1. IMF Latest World Economic Outlook Growth Projections 2020, 2021, 2022 ..... 10

Table 2. SME definition according to the European Commission..... 27

Table 3. Respondents by country of workplace, industry, and department ..... 31

Table 4. Perceived impact on global supply chains by size of company..... 33

Table 5. Intermediate products purchased by industry..... 35

Table 6. Regions of suppliers by selected productive industries ..... 38

Table 7. Regions of suppliers by country of workplace ..... 39

Table 8. Selected regions, in which certain industries have production facilities abroad ..... 41

Table 9. Changes in SCM planned before COVID-19 by industry..... 43

Table 10. Changes in SCM before COVID-19 in the automotive industry..... 43

Table 11. Changes in SCM planned before COVID-19 by size of the company ..... 44

Table 12. Changes in SCM before vs. during the pandemic by industry ..... 45

Table 13. Changes in SCM during the pandemic by size of enterprise..... 46

Table 14. Problems in procurement arising in times of the pandemic by industry..... 48

Table 15. Problems in procurement by productive industries ..... 49

Table 16. Perceived probability of changes in procurement by industry ..... 52

Table 17. Expected types of changes in procurement strategy by industry..... 54

Table 18. Expected changes in procurement — productive sectors ..... 54

Table 19. Perceived probability of shifts in procurement by industry ..... 56

Table 20. Q21: Statements on different strategic SCM options ..... 57

Table 21. Statements on different strategic options by sectors..... 59

Table 22. Importance of sustainability and tendency towards reshoring and nearshoring.... 61

Table 23. Correlation of importance of sustainability and readiness to pay for it ..... 62

Table 24. Expected changes in procurement and readiness to pay for sustainability ..... 63

Table 25. Sales markets by industries ..... 65

Table 26. Cross table Q26 und Q5..... 68

Table 27. Decrease in sales by industries..... 69

Table 28. Perceived severity of the effects of the pandemic by size of company..... 71

Table 29. Evaluation of Q29 — answers of respondents..... 72

## List of Abbreviations

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ADVs	=	advanced economies
Brexit	=	British exit
cf.	=	compare with
COVID-19	=	coronavirus disease 2019
CLSCM	=	closed loop supply chain management
e.g.	=	exempli gratia (for example)
EMDE	=	emerging market and developing economy
etc.	=	et cetera (and so forth)
EU	=	European Union
FED	=	Federal Reserve System (central banking system of the U.S.)
FDI	=	Foreign Direct Investment
ff.	=	following pages
GDP	=	Gross Domestic Product
GVC	=	Global Value Chain
HoReCa	=	Hotel, Restaurant and Catering
i.a.	=	inter alia
ibid.	=	ibidem (in the same place)
i.e.	=	in other words
ILO	=	International Labor Organization
IMF	=	International Monetary Fund
MERS	=	Middle East respiratory syndrome
MNEs	=	multinational enterprises
MNCs	=	multinational corporations
MSMEs	=	micro, small and medium-sized enterprises
no.	=	number
OECD	=	Organisation for Economic Co-operation and Development
pp.	=	pages
Q	=	question
SARS	=	severe acute respiratory syndrome
SC	=	supply chain

SCM	=	supply chain management
SSCM	=	sustainable supply chain management
SMEs	=	small and medium-sized enterprises
TEU	=	Twenty-foot Equivalent Unit (of a container)
UN	=	United Nations
UNICEF	=	United Nations International Children's (Emergency) Fund
U.S.	=	United States
WHO	=	World Health Organization
WTO	=	World Trade Organization

## **1. Introduction**

---

The COVID-19 pandemic is not the first pandemic ever occurring. However, the world has not experienced a pandemic as severe as the COVID-19 pandemic within the last 100 years. In 1918/19, the Spanish flu has caused a high mortality rate worldwide (on top of the mortality rate caused by World War I), which obviously caused consequences for global economy. In 2009/10, the SARS pandemic (swine flu) and MERS pandemic in 2012 have caused turmoil. Both the SARS and MERS viruses belong to the family of the coronavirus (respiratory syndrome), however, the scope of the two former pandemics caused by a coronavirus cannot be compared to the scope of the current COVID-19 pandemic – neither in terms of health issues nor in terms of economic impact.

However, there were two major global economic crises in the past 100 years: The Great Depression, which started in the late 1920s, the Great Recession/Financial Crisis in 2008/2009. Both of these crises had a severe impact on global economy. The economic impact the COVID-19 pandemic will have on global economy yet remains uncertain. However, there is reason to believe the impact might be immense.

The pandemic left millions infected and tens of thousands of decedents in many countries. The medical infrastructure was and is severely strained. A very different consequence is the strain placed on economies in all countries by politically imposed measures, in order to counter the pandemic. Lockdowns aimed at controlling the pandemic resulted in temporary production stops in individual regions and industries, borders were temporarily closed, and cross-border transport of goods was also heavily controlled. Disruptions to global supply chains were inevitably programmed.

This paper presents and discusses the main features of supply chain organization and the impact of the pandemic on global supply chains. In an empirical study with a number of respondents, employees from various industries and company sizes were asked for their assessment of the situation. The questions concern possible problems of supply chains caused by the pandemic COVID-19 and imaginable changes of supply chain strategies in the respective companies. Possible links to sustainability strategies are touched upon. Finally, an attempt is made to determine assessments of possible long-term effects of the pandemic on global supply chains.

## **2. The COVID-19 Pandemic and the Great Lockdown**

---

Pandemic — this word was widely unknown to most parts of the population until the Coronavirus suddenly hit the world. In December 2019, the COVID-19 virus was first detected in Wuhan, China. In January 2020, the situation started to become severe in Wuhan. As of late February 2020, the first cases of COVID-19 were detected in Europe. In March 2020, most countries worldwide imposed a lockdown, in order to prevent the spread of the virus. In some countries the restrictions were tougher, in other countries restrictions were rather loose, depending on the number of cases as well as on the respective political system and president.

On the one hand, the pandemic caused millions of lives and millions of infected people worldwide. In order to contain the pandemic, governments worldwide implemented lockdowns. As part of these restrictions, borders between certain countries were closed, transportation of both, human beings and goods were reduced to a minimum. All of these restrictions were imposed, in order to reduce contact between human beings and, thus, to reduce the spread of the virus.

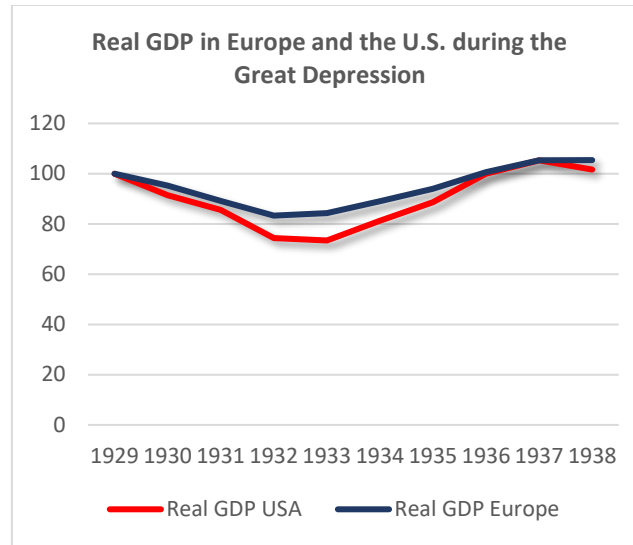
On the other hand, these lockdowns also caused many economic consequences, namely: production stops in certain industries, associated job losses, decline of demand and, thus, of the purchasing power, and, finally, decline of global GDP. The tourism industry, gastronomy, commodities, etc. were hit hard. Nevertheless, other industries such as, e.g., the furniture industry, the food industry (supermarkets, bakeries, little kiosks), and drugstores actually even benefited from the pandemic.

### **2.1 Comparison with previous crises**

In order to measure the impact of the COVID-19 pandemic on global economy, it is reasonable to take a look at the impact of previous crises on global economy and the accompanying GDP loss. To a certain extent, comparisons are possible, however, the exact long-term impact cannot be determined at this time. Moreover, unemployment rates are always affected in times of economic crises (see Figure 5, p. 6), which in turn has a negative impact on the overall purchasing power and finally leads to further decline in GDP.

Figure 1 demonstrates the GDP loss during the Great Depression, which started around 1929. As the graph shows, it took around seven years for the economy to recover after this crisis.

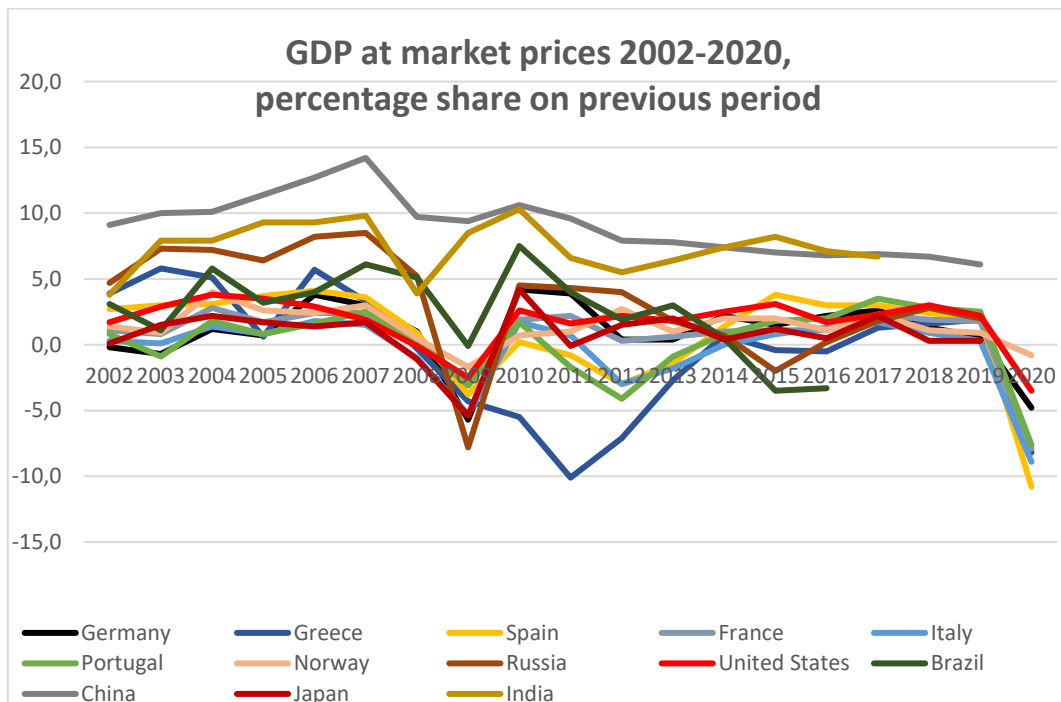
Figure 1. Real GDP during the Great Depression



Source: All data for this chart was taken from: Crafts & Fearon, 2010, p. 286 f

Figure 2 demonstrates the GDP loss during the Great Recession (Financial Crisis) in 2009 as well as it provides first insight into the GDP loss in the course of the current recession. The statistics for the GDP loss could only be provided until December 2020, however, the most recent World Economic Outlook (quarterly forecast for the development of global GDP), published by IMF, will be presented later in this paper.

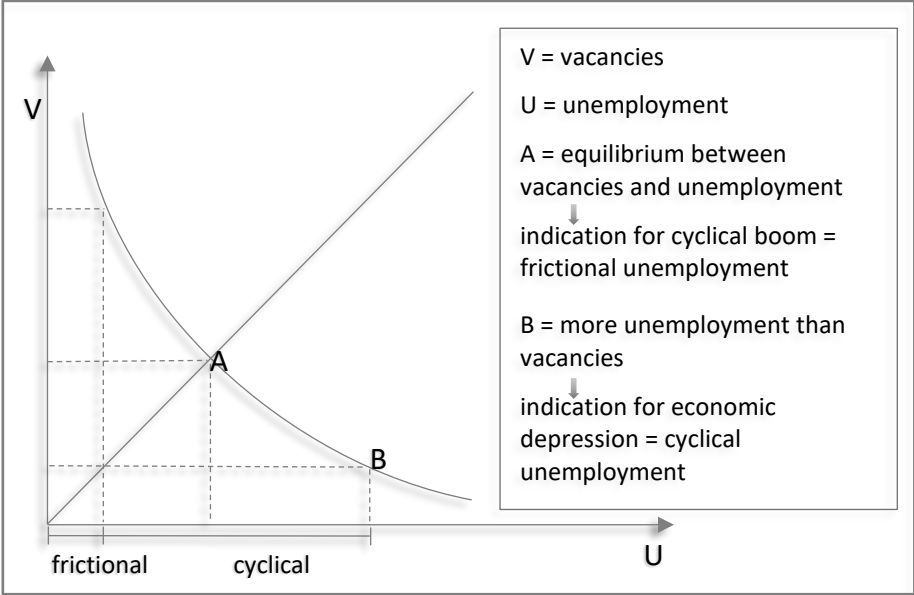
Figure 2. GDP at market prices 2002-2020



Source: All data for this chart was taken from: Eurostat [1]. (online data code: naida\_10\_gdp)

A decline in GDP and, hence, an economic depression, is usually followed by rising unemployment rates. The Beveridge curve (figure 3) can provide insight to whether the unemployment is cyclical (caused by an economic depression), frictional (employees are free-willingly switching their work for different reasons, such as, e.g., salary, work environment, promotion, etc. — however, frictional unemployment is rather low during economic crises), or structural (although there might be enough vacancies available, e.g., a surplus demand of labor on a certain sector, however, unemployment might still be high, as there might be rather a surplus supply of labor on another sector — cyclical unemployment might lead to structural unemployment if it lasts for a long time and changes the structure of demand and supply on the market).

Figure 3. Beveridge Curve for Micro Market i



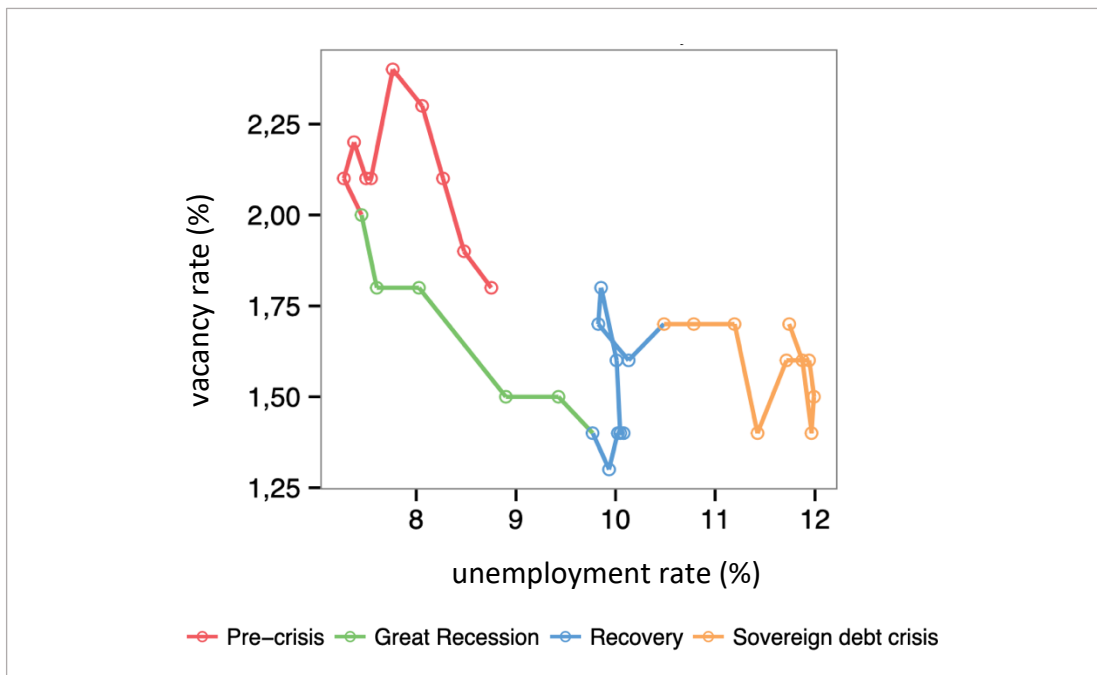
Source: Flückiger, Schöneberger and Zarinnejadan, 1986, p. 19, as cited in Sheikh and Pauer, 1999, p. 427.

The development of GDP can be regarded as indicator pointing to the fact that economies in all industrialized countries suffered considerably from the pandemic and the regulations by different lockdowns. Rising unemployment rates, for example in industries like tourism, restaurants and bars, in times of lock-down contribute particularly to falling GDP. Unemployment in a crisis is caused by falling demand for certain goods. At the same time unemployment means less income for the concerned employees, and that once again leads to less demand for a string of goods. The relationship between vacancies and unemployment



in general is reflected by the Beveridge curve (see figure 3). The evolution of the Beveridge curve over a crisis is shown in figure 4, indicating the effect of the Financial Crisis on the Beveridge Curve in the Euro Area: the time of pre-crisis (red line) with rather high vacancy rates, falling sharply (green line) in the phase of Great recession, with a rising unemployment rate at the same time. The recovery (blue line) is characterized by a robust increase of vacancies. The last phase of the crisis is the Sovereign Debt Crisis (yellow line) once again with an increase of the unemployment rate, indicated by a rightward shift of the Beveridge curve.

Figure 4. Evolution of the Euro Area Beveridge Curve Over the Financial Crisis



Source: ECB (2014).

Thus, the crisis can be divided into different phases (cf. ECB, 2014): The first phase of the crisis was during the crisis (green line), with a huge increase of unemployment, followed by a recovery phase (blue line), and subsequently by a sovereign debt crisis (yellow line). This might indicate a long-term structural shift on the labor market, hence, structural unemployment as a consequence of the Financial Crisis (cf. *ibid.*). According to Mario Draghi (former president of ECB),

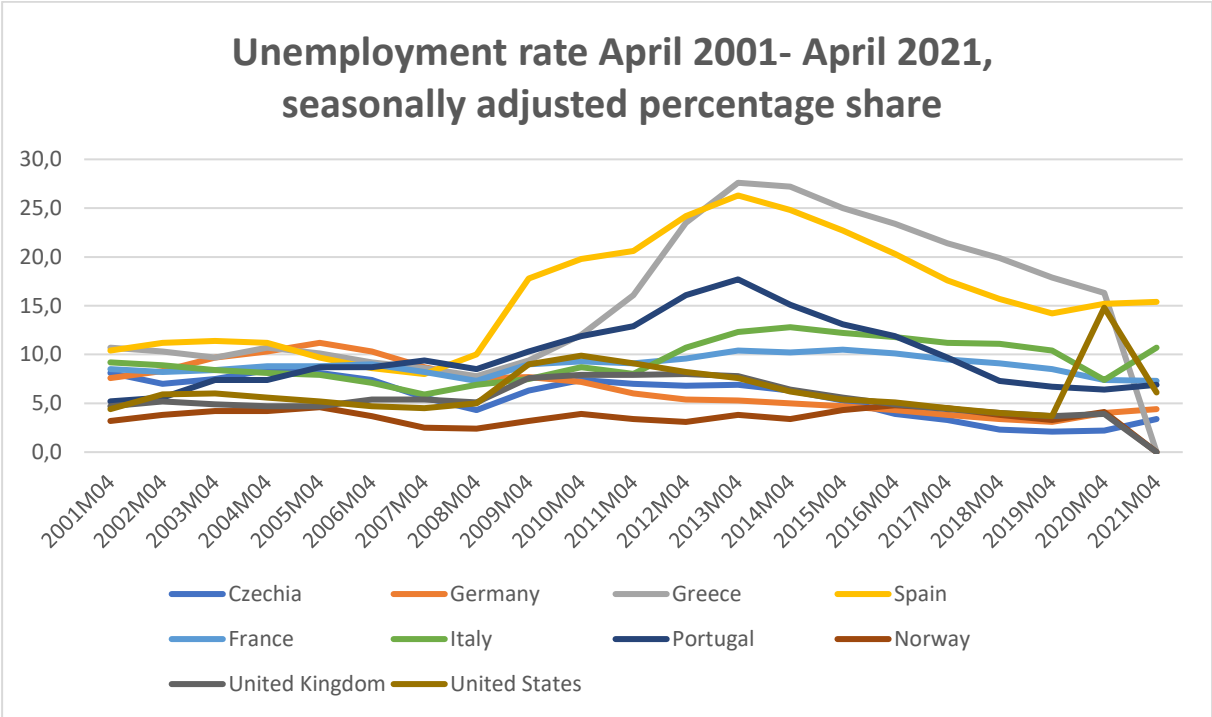
"[...] estimates, provided by international organisations — in particular, the European Commission, the OECD and the IMF — suggest that the [financial] crisis has resulted in an increase in structural unemployment across the euro area, rising from an average (across the three institutions) of 8.8% in 2008 to 10.3% by 2013." (Draghi, as cited in ECB, 2014).

As a consequence of the Financial Crisis, the construction industry was hit the hardest by unemployment. The increase of the overall unemployment rates during the Financial Crisis

resulted in a rightward shift of the Beveridge curve and, finally, in structural unemployment — in Europe (cf. ECB, 2014) as well as in the U.S. (cf. Hobijn & Şahin, 2013, p. 567; cf. Barnichon et al., 2011, p.1). A similar scenario — a rightward shift of the Beveridge curve — can be expected as a consequence of the COVID-19 crisis, however, rather the tourism industry, aviation industry, hotel industry, and restaurants and bars will be the industries hit the most.

The two crises, the Great Recession and the COVID-19 Pandemic obviously have two rather different starting points. The Great Recession started with a crisis in one specific industry, the construction industry in the US, in conjunction with the evolution of interest rates set by the FED (Federal Reserve System). (Spain followed with a similar crisis of its construction industry). The starting point of the COVID-19 crisis was completely different: the spread of the virus caused governments nearly all over the world to reduce contacts between people in the own country by lock-down (especially curfews and restrictions of retail) as well as the closure of borders to neighboring and other countries. Nevertheless, the results of the two crises are partly comparable: unemployment rates are rising and GDP falls. Figure 5 demonstrates the rising unemployment rates during the Great Recession (Financial Crisis) in

Figure 5. Unemployment rate April 2001- April 2021, seasonally adjusted percentage share



Source: All data for this chart was taken from: Eurostat [2] (online data code: une\_rt\_m)

2009 and the subsequent years. In the time between 2008 and 2013 unemployment rates in several countries are constantly rising. In the following years the rates sink, employment

recovers slowly – just until the beginning of the pandemic in 2020. The peak of unemployment for the pandemic is not yet clear, but it may be assumed, that part of the unemployment will rise in the form of structural unemployment in the upcoming years.

The above-mentioned closure of borders as well as stops of production in certain industries in some countries, for example at the beginning of the pandemic in Wuhan/China, had consequences for global supply chains: certain intermediate products had not been delivered in near-term and achieved its target with considerable delay and/or in a reduced quantity. “Recent shortages of semiconductors, lumber, and steel are a reminder of how vulnerable today`s global integrated supply chains can be.” (McKinsey, 2021, July 07).

The economic impact of the COVID-19 crisis appears to be partially comparable to the impact of previous crises, e.g., the Financial Crisis in 2008/09, which also caused disruptions on the labor market and huge unemployment rates, especially on the construction sector at that time (due to the abrupt decrease in demand for labor on the sector in the course of the crisis, the surplus supply of labor on that sector led to large-scale structural unemployment). At the same time social inequalities are aggravating in rich countries, but especially in less developed countries like Brazil (cf. World Bank in Brazil, 2021). Moreover, a sovereign debt crisis, which can be regarded as a second phase of the Great Recession (cf. Draghi, as cited in ECB, 2014), appears to be conceivable as one of the consequences of the COVID-19 crisis.

## **2.2 Impact of the Pandemic on Global Economy**

The COVID-19 pandemic is only partly comparable with previous crises. There have been other virus outbreaks in the last two decades like the Severe Acute Respiratory Syndrome (SARS) epidemic in 2002-2004 or the Middle East Respiratory Syndrome (MERS) epidemic in 2012 (Strange 2020, p. 456).

However, these epidemics were geographically limited – as compared to the global phenomenon of COVID-19. In comparison to the financial crisis 2008/2009 COVID-19 pandemic is multi-dimensional: governments all over the world aim at maintaining public health and at the same time avoiding a plunge of national economies.

Just until the beginning of 2020, the economic situation worldwide can be characterized by a considerable amount of globalization. In the last decades, companies in many countries organized at least parts of their supply chains overseas. The most important

reason to do so surely is the advantage of low labor costs in low-wage countries (cf. Kinkel, Malonca 2009, p. 154). In general, the authors resume:

"A large number of empirical studies examined the motives and drivers of international production activities of enterprises. Cost reasons, opening up new markets, access to foreign distribution channels, access to materials and goods, securing knowledge as well as following the investor are among the most important motives here." (Kinkel, Malonca 2009, 155).

Other reasons may be just the need for raw material, or climate advantage (what may concern the food industry).

Which kinds of impacts did economies and customers have to experience with the beginning of the pandemic? And which industries suffered the most from the pandemic and the lockdowns? At the beginning of the pandemic customers in Europe had to notice that certain foreign goods no more arrived for a certain time. For example, retail and customers in central Europe usually get a certain part of vegetables and fruits from Spain – with the beginning of the lockdown in Spain harvesters had to stay at home within the scope of the curfew (cf. Hofmann 2020, p. 3).

Another kind of restriction might be export restrictions like the rice export limitations declared by Vietnam (ibid.). A special case is one of the medical products needed in the pandemic itself, the surgical masks.

"China was the main producer of surgical masks at the start of the crisis, accounting for approximately one-half of world production (OECD 2020, pp. 5-6). Because China was the epicenter of the initial COVID-19 outbreak, however, its production was insufficient to meet its own demand related to the pandemic, and China imported a huge quantity of up to 2 billion masks during the crisis. Although China increased its mask production tenfold in just two months (January-March, 2020), it was estimated that global demand for surgical masks might be ten times higher than world production capacity prior to the COVID-19 crisis (OECD, 2020 a)." (Gereffi 2020, p. 293).

In the beginning of the pandemic, other industries like, e.g., the automotive industry, machine industry, technical facilities and high-tech industry had to deal with dramatic disruptions of supply chains (Hofmann 2020, p. 2), due to lack of raw material as well as pre-products like, for example, steel and lumber as well as semiconductors (see above; further examples of supply chain disruptions see chapter 3.2).

Disruptions of supply chains also refer to logistics. As the pandemic started in China, it was the first country to declare a lock-down and to reduce considerably the production of goods in certain regions. Thus, in the beginning of 2020 China exported considerably less goods than planned. But in this time goods from Europe and USA still arrived by containers. At the end of the first quarter 2020 there were huge amounts of empty containers lying in

Chinese ports – more than 5 million TEU (Twenty-foot Equivalent Unit) empty container capacity. Those container capacities were missing in Europe. And that meant European companies had to face restrictions to opportunities to export goods (Hofmann 2020, 5).

Empty containers lying in Asia interfering transportation of goods from Europe or the US are just one example of disruption of a supply chain, this time due to disruption of transport opportunities. In general, "[...] the global economy is so inter-connected through GVCs and international movements of people, capital, goods and services. Trade in intermediate goods and services account for over 60% of total international trade" (Strange 2020, 456). Multinational Enterprises play a prominent role in global trade either as exporters or as importers, often "simultaneously on both ends of the shipment" (ibid.).

All in all, it was found there are not too many companies left which had not been impacted by the pandemic. "A survey published on March 28 by the Chartered Institute of Procurement and Supply found that 86% of supply chains are impacted by the COVID-19 pandemic [...]. This has led to calls in the popular management press for the development of more resilient supply chains [...] and supply chain recovery scenarios [...]" (van Hoek 2020, p. 342).

Economic output declined by -3.3% worldwide in 2020 (see above, table 1). This decline applies to different degrees in different countries and is more pronounced in the advanced economies (-4.7%) than in the emerging and developing economies (-2.2%). Within the advanced economies, the Eurozone (at -6.6%) is almost twice as badly affected as the USA (-3.5%). The Southwest European countries (Spain, Italy, France) are hit harder than Germany. The United Kingdom is also significantly affected with -9.9%. For the year 2021 as well as for 2022, clear trend reversals, i.e., positive outputs again, are predicted for all countries.

Table 1. IMF Latest World Economic Outlook Growth Projections 2020, 2021, 2022

## Latest World Economic Outlook Growth Projections

(real GDP, annual percent change)	PROJECTIONS		
	2020	2021	2022
<b>World Output</b>	<b>-3.3</b>	<b>6.0</b>	<b>4.4</b>
<b>Advanced Economies</b>	<b>-4.7</b>	<b>5.1</b>	<b>3.6</b>
United States	-3.5	6.4	3.5
Euro Area	-6.6	4.4	3.8
Germany	-4.9	3.6	3.4
France	-8.2	5.8	4.2
Italy	-8.9	4.2	3.6
Spain	-11.0	6.4	4.7
Japan	-4.8	3.3	2.5
United Kingdom	-9.9	5.3	5.1
Canada	-5.4	5.0	4.7
Other Advanced Economies	-2.1	4.4	3.4
<b>Emerging Market and Developing Economies</b>	<b>-2.2</b>	<b>6.7</b>	<b>5.0</b>
<b>Emerging and Developing Asia</b>	<b>-1.0</b>	<b>8.6</b>	<b>6.0</b>
China	2.3	8.4	5.6
India	-8.0	12.5	6.9
ASEAN-5	-3.4	4.9	6.1
<b>Emerging and Developing Europe</b>	<b>-2.0</b>	<b>4.4</b>	<b>3.9</b>
Russia	-3.1	3.8	3.8
<b>Latin America and the Caribbean</b>	<b>-7.0</b>	<b>4.6</b>	<b>3.1</b>
Brazil	-4.1	3.7	2.6
Mexico	-8.2	5.0	3.0
<b>Middle East and Central Asia</b>	<b>-2.9</b>	<b>3.7</b>	<b>3.8</b>
Saudi Arabia	-4.1	2.9	4.0
<b>Sub-Saharan Africa</b>	<b>-1.9</b>	<b>3.4</b>	<b>4.0</b>
Nigeria	-1.8	2.5	2.3
South Africa	-7.0	3.1	2.0
<b>Memorandum</b>			
<b>Emerging Market and Middle-Income Economies</b>	<b>-2.4</b>	<b>6.9</b>	<b>5.0</b>
<b>Low-Income Developing Countries</b>	<b>0.0</b>	<b>4.3</b>	<b>5.2</b>

Source: IMF, *World Economic Outlook*, April 2021

Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2020/2021 starting in April 2020. India's growth projections are -7.1 percent in 2020 and 11.3 percent in 2021 based on calendar year.

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Source: IMF April 2021, World Economic Outlook

Already in June 2020, the World Bank expects "long-term scarring effects from COVID-19" (World Bank Group [2], June 2020, p. 160):

"Even this bleak outlook is subject to great uncertainty and significant downside risks. The forecast assumes that the pandemic recedes in such a way that domestic mitigation measures can be lifted by mid-year in advanced economies and later in developing countries, that adverse global spillovers ease during the second half of 2020, and that widespread financial crises are avoided. This scenario would envision global growth reviving, albeit modestly, to 4.2% in 2021.

However, this view may be optimistic. Should COVID-19 outbreaks persist, should restrictions on movement be extended or reintroduced, or should disruptions to economic activity be prolonged, the recession could be deeper. Businesses might find it hard to service debt, heightened risk aversion could lead to climbing borrowing costs, and bankruptcies and defaults could result in financial crises in many countries. Under this downside scenario, global growth could shrink by almost 8% in 2020." (World Bank Group [1], June 08, 2020).

Furthermore,

"[...] Structural changes in production, consumer behavior, and work patterns [are conceivable]. The fragility of the global trading system, highlighted by disruptions in global value chains, and by shortages of essential goods in many countries during the COVID-19 outbreak, may lead governments and firms to reassess the benefits of low-cost, off-shore sourcing." (World Bank Group [2], June 2020, p. 166).

In case ADVs (advanced economies) would change their sourcing strategies by implementing reshoring or nearshoring strategies, this would not only cause structural changes in certain industries but also on the respective labor markets of these industries.

### **3. Theoretical Approach**

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The disruptions of supply chains, mentioned above, caused by the outbreak of the pandemic and the following lockdowns came at a time globalization had reached its just until now highest level. However, globalization was not taken as the only way of organizing economies worldwide. "The Covid-19 pandemic has come at a time when globalization was already under threat because of concerns in many countries about sovereignty, national security and the unequal distribution of the benefits from globalization." (Strange 2020, 463). The most famous example is the trade war against China as well as against some European industries the US-administration had started in the second half of Mister Trump's presidency.

In times of a global pandemic like the current one, global value chains (GVC) obviously are vulnerable due to locked factories, closed borders and disrupted transportation ways. Therefore, it shall be discussed,

- why economies in the last decades worldwide have been organized with a high level of global value chains?
- why do companies outsource parts of their production?
- and what are the advantages and the disadvantages of different kinds of outsourcing?

### **3.1 Production relocations and supply chains**

The meaning of outsourcing is to transfer a part of the production to another company. "Outsourcing refers to the practice of transferring activities traditionally done within a firm to third party providers within the country or 'offshore' " (Sen & Shiel 2006, p. 145). There are several reasons for a company to source out certain parts of the production process to third parties. The first examples of buying services from a third party occurred decades ago. Companies transferred parts of the production to suppliers, if and when the company did not have the competency internally. Examples are the publisher, outsourcing the printing of the books; or the automotive manufacturer, purchasing windows and maybe even the installation of the windows. In both cases, the company outsources a part of the production which is not their key competence.

Today the first and surely most important reason to outsource a part of the production is to cut cost. Very often, companies are searching for the benefits from lower wages in other countries, especially in developing countries. It is estimated "that about 70% firms outsource to cut cost (Smith 2006)" (Iqbal, Dad 2013, p. 96). In the case of transferring the production of an intermediate product to a foreign country – either on the same continent or overseas, Offshoring can be explained as one option of implementing outsourcing (however, with rising wages in several developing countries this advantage could slowly go back.) In the last two decades, especially the automotive industry dealt with production networks in different countries. "Since the early 2000s, fierce market competition has forced automotive companies to expand the geographical scope of their production networks, and also to keep production costs under control. This has triggered vertical specialization in the European automotive value chains." (Gerocs, Pinkasz 2019, p. 172).

A second reason for outsourcing by a company is to purchase services like IT, human resources and finance functions. By outsourcing those services, the company is able to concentrate on its key competencies (cf. Iqbal & Dad 2013). The company might for example



buy IT services provided by a team with longtime experience as long as the company did not yet build up an own IT team. Outsourcing human resource or finance functions might also be a question of economies of scale. Smaller enterprises are likely to find out, that building an own human resource team could be more expensive and less efficient than to buy this service from an enterprise with skilled personnel.

“Other key drivers of offshore outsourcing include access to global talent pool, ... and reaching the global markets, improving service quality ...” (Iqbal, Dad 2013, p. 96). Access to global talent pool means, to get in contact with very qualified personnel in other countries which may be of interest for the company on the long run. Buying intermediate products or services in other countries at the same time can help to build contacts to foreign markets. In this case outsourcing can be profitable in two ways: as a cost-cutting measure as well as a support of sales strategy in a new market.

An alternative to outsourcing offshore in the form of buying services from other companies is the *captive offshoring*: captive offshore centers are “operation centers that are located in low-cost countries and are owned and managed by the corporation they serve.” (Chandok, Kekre & Khetarpal 2013). The business lines of captive offshore centers predominantly are shared business services, IT, engineering and R&D (ibid.).

A variant of the strategy of outsourcing can be Foreign Direct Investment (FDI): The company purchases shares of an enterprise in a foreign country. The advantage of direct investment is to gain influence on decisions of the concerned company. Commonly ten per cent shareholding are regarded as sufficient to have at least a certain control over the policy of the invested company (Moosa, 2002). That may imply for example an influence on the reliability of the supply chain. The valuation of FDI differs considerably depending on the author or the political position.

“The views on this issue are so diverse, falling between the extreme of regarding FDI as symbolizing new colonialism or imperialism, and the other extreme of viewing it as something without which the host country cannot survive.” (Moosa, 2002, p. 3).

Finally, outward FDI sometimes is regarded as a source of unemployment which means FDI is hold accountable for rising unemployment in certain industrialized countries. Regardless of its valuation FDI has been considerably increasing in the last years of twentieth century (Moosa 2002).

The advantages of outsourcing, resulting in globalization, were described. Nevertheless, outsourcing also bears a string of possible disadvantages. The realization of

those disadvantages will lead to corrections and possibly to changes of the strategy. The first obvious disadvantage of outsourcing, especially offshore outsourcing, will be that long distances mean transportation costs. And long-distance transportation can also imply delay of delivery (for example, when the Suez Canal was blocked for a week by a container vessel run aground which happened at the end of March 2021).

Purchasing intermediate products in foreign countries often means the company has to communicate with the partner in a foreign language, which sometimes implies translation cost. Business partners might be living in different cultures, which might imply that agreements are interpreted differently (Hofstede, 2011). Even in times of technological progress, a company will have to keep in personal contact with the foreign business partner from time to time, thus, a senior executive might have to travel far-distance and, thereby, spend time and money.

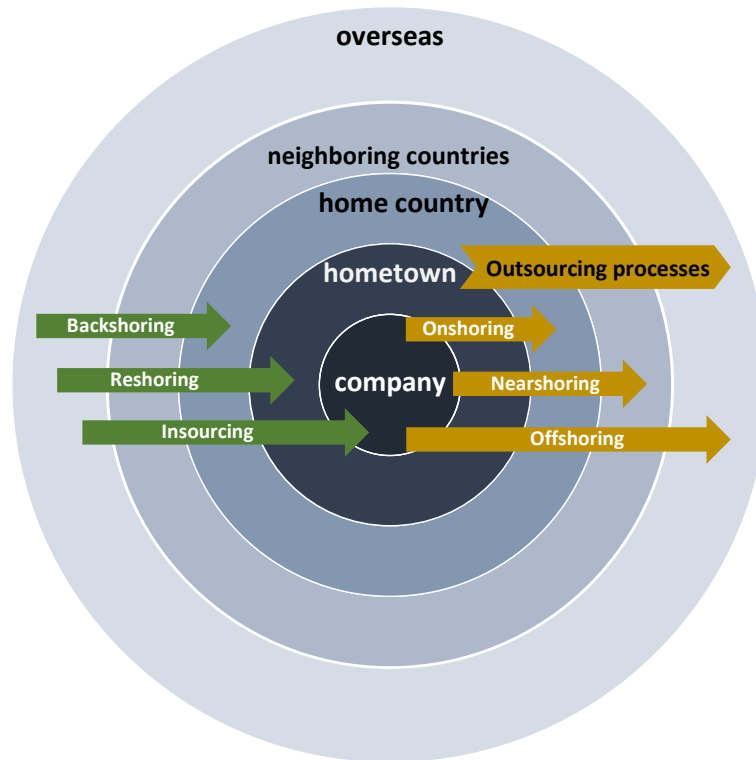
In any case, outsourcing means that part of the production will be conducted elsewhere, away from the factory and often even away from the home country. Employees of the company may fear either job losses and/or disqualification of their jobs (cf. Zimmermann, 2012). Governments may worry about jobs within the region or in the home country if local companies source out parts of their production buying intermediate products elsewhere or by investing in foreign companies instead of investing in the home country. The present paper addresses possible consequences of relocating parts of a production.

Regarding risks and possible disadvantages of outsourcing and offshoring, it has to be mentioned that production relocations are not irrevocable. “Backshoring activities of once offshored manufacturing capacities are quite common phenomena” (Kinkel 2012, p. 697). Although backshoring can be estimated as a common strategy in many cases, reliable data just until then (2012) are not available. “This phenomenon, known as backshoring or backsourcing, is made public only in the rarest cases and is also not statistically captured.” (Kinkel 2012, p. 698).

Backshoring of manufacturing capacities to the home country will be helpful to avoid long distance transportation and thus diminish the transportation costs and the risk of delays. Border inspections and import tariffs are further costs companies try to avoid. Finally, consumers sometimes are not convinced of cheap foreign manufacturing and prefer homemade products. “Due to consumers having a growing interest in quality, value and

sustainability [...], it could be an ideal time to reshore production processes in order to benefit from this consumer trend.” (Ashton, 2021, p. 1).

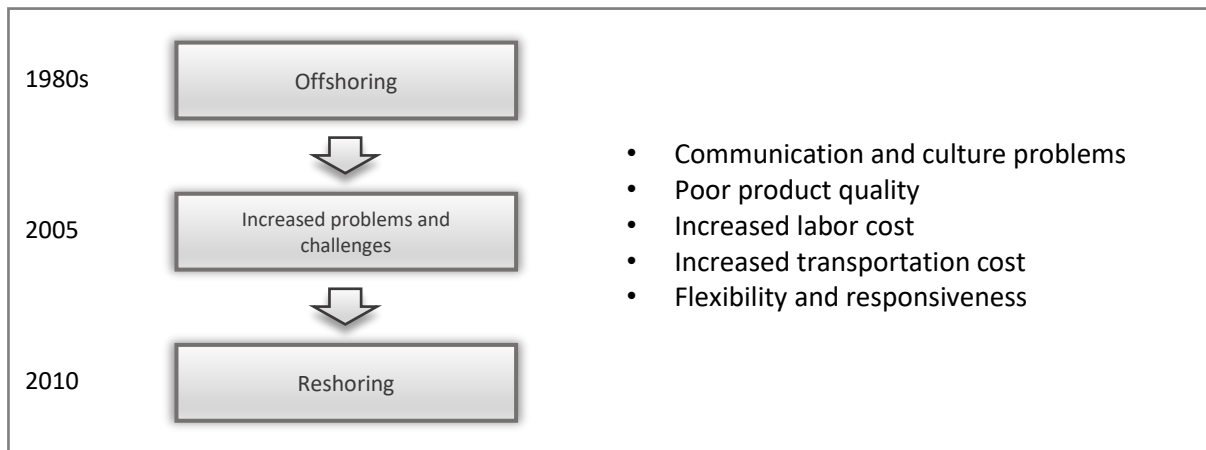
Figure 6. Outsourcing vs. Insourcing processes



Source: Graph was created by the author

There are three different types of outsourcing: onshoring (the company is outsourcing certain parts of their production in the company’s home country), nearshoring (the company is outsourcing certain parts in neighboring countries) and offshoring (the company is outsourcing certain parts overseas). In the last decades, offshore outsourcing increasingly gained importance. In the last few years, however, some companies figured that outsourcing certain parts might partially rather be less efficient regarding quality, partially even regarding cost (which was initially the main intent to implement offshoring). Hence, some companies started reassessing their offshore sourcing strategies by implementing reshoring (cf. Godsell, 2017). In the course of the COVID-19 pandemic, the problem of efficiency was exacerbated due to global SC disruptions.

**Figure 7. Disadvantages of Offshoring and Reasons for Reshoring**



Source: Li et al. (2017), Birmingham City University & University of Warwick

One way to avoid offshoring for the reasons mentioned above is to reshore (see Figure 7), i.e., to bring a supply chain that has already been organized remotely back into the company's respective country. Another way to avoid offshore outsourcing is to outsource certain parts, however, not offshore but onshore, i.e., in the company's respective home country. Geographically, onshoring (= outsourcing in the company's respective country) is in the same order as nearshoring (= outsourcing to neighboring countries) and offshoring (= outsourcing to countries overseas). With the strategy of onshoring, several goals can be pursued well: a) The geographic proximity allows the fastest possible delivery, just in time. b) Onshoring facilitates to check a partner as well as to receive information about reference projects. c) Legal certainty is greater because both parties are subject to the same legal framework in the same country. Of course, the most important advantage of offshoring, i.e., achieving favorable wages, cannot be offered by onshoring. A company will therefore have to weigh up whether the aforementioned advantages of onshoring or the cost advantage of offshoring carry more weight (cf. Kajjumba et a. 2020).

However, it must not be forgotten that relocation in any direction needs time and money. Even reshoring can imply that a company has to build factories in the home country. Two alternatives to reshoring are conceivable: The first alternative is the strategy of nearshoring, transferring a part of the production to a nearby (neighboring) country. The second alternative is called indirect reshoring, which means to build up manufacturing capacities in the home country instead of going abroad. That is to say, in a given case, at first

glance, offshoring would look profitable, however, having in mind the risks and possible disadvantages the company decides to stay in the home country building facilities nearby.

Developing new forms of SCM, it will be useful to consider environmental aspects at the same time. This is done comprehensively in Closed Loop Supply Chain Management (Kumar & Kumar, 2013), which strives to combine economic success, social aspects and ecological aspects. The aspect of environmental awareness concerns the possibility of recycling products as well as logistics.

### **3.2 Conceivable Impact of COVID-19 on Global Supply Chains in Different Industries**

As of December 2019, the first cases of COVID-19 were recorded in Wuhan, China. Li Wenliang, a Chinese doctor in Wuhan, first tried to warn some of his colleagues of a new virus, which brought similar symptoms as SARS (cf. Kamps, 2020, p. 425). In January 2020, a handful of doctors were discussing the topic on social media (ibid.). A few days later, “The Wuhan police announce[d] that they [were] investigating eight people for spreading rumors about a new infectious disease outbreak [...]” (ibid.). Only a few days later, the Chinese government made Dr. Li Wenliang sign a document, stating that his statements concerning the virus were “false” and that he “disrupted social order” and would never talk about this disease again (ibid.). This means, the Chinese government tried to suppress the first findings of the new coronavirus. Nevertheless, the Chinese government shut down the Huanan Seafood Wholesale Market, as most cases at that time could somehow be linked to this seafood market (ibid., p. 426). On January 07, 2020, the Chinese government officially admitted the existence of a new coronavirus from patients in Wuhan (ibid.). In the beginning of February, Li Wenliang died in a hospital in Wuhan in the cause of a coronavirus infection.

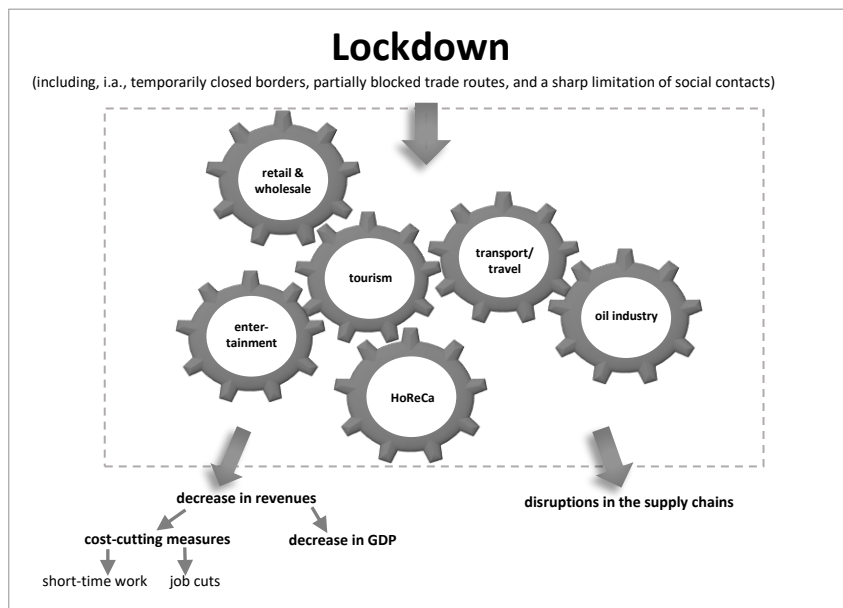
As for many other governments worldwide, communicating the pandemic measures appeared to be complicated as well, as part of the population did not want to accept and was demonstrating against the restrictions imposed by the respective government, in order to prevent the spread of the virus — whereas another part of the population was content with the measures, as they help to prevent from spreading the virus. On the one hand, each government had to calm down that part of the population, which was panicking. On the other hand, each government had to communicate the severe consequences a huge and

uncontrolled outbreak of the virus would have on the population as a whole, demanding the population to accept partial lockdowns for a certain amount of time. Convincing the population to follow the restrictions was even harder in democratic countries as opposed to totalitarian regimes: For example, demonstrations are allowed in democracies, however, in 2020, demonstrations turned out to be hotspots for the spread of the virus, as many people were gathering, often without wearing masks. The scope of the restrictions was different in many countries, depending on the amount of cases, as well as on the political system of the respective country.

In the course of this first infection wave in March-May 2020, most countries closed their borders, the tourism industry was shut down (flight cancellations, hotel reservations were cancelled, as well as many other touristic attractions such as, e.g., museums etc. were closed), restaurants, bars, shops, fitness studios, and swimming pools, etc. were closed. Furthermore, the oil industry and commodities were suffering quite hard from the pandemic. As a consequence of travel restrictions for tourism, business travel, and commuting, the oil industry was suffering due to the decline in demand of fuel. As for other industries like, e.g., the automotive industry, the food industry, the pharmaceutical industry, etc., the lockdown caused severe disruptions for the companies' supply chains: Many companies had to stop production entirely for a few weeks (e.g., in the automotive industry), other companies, e.g., in the food industry, had problems receiving their goods and products from abroad during the lockdown. Furthermore, certain countries had a surplus demand in certain goods, for example, in Portugal and Germany and in many other countries supermarkets had problems providing enough hygiene articles, whereas other countries like, e.g., France rather had a surplus demand in goods like wine — because the population bought certain goods on stock (the so-called 'hamster purchases').

The lockdowns and the supply chain disruptions led to a decline in revenues across all industries. As a consequence, the decline in GDP is expected to be severe in most countries all over the world. In order to prevent large-scale layoffs, part-time work was introduced in many countries. However, as a decrease in working hours goes along with a decrease in salary, a great part of the population started earning around 60-90 % of their usual salary, which, in turn, results in a decrease in purchasing power — resulting in a further decrease in revenues for many companies, which results again in a further decline in GDP. (cf. OECD [2] ILO paper 2020).

Figure 8. The impact of the Great Lockdown on most affected industries



Source: Graph was created by the author

With regard to the tourism industry, the scope of the impact of the pandemic is, i.a., dependent on the percentage share of the tourism industry on the respective national GDPs of the different countries.

For example, the percentage share of tourism on the Portuguese GDP sums up to 12.5%, whereas the percentage share of tourism on the German GDP sums up to merely 3.9% (see figure 9). As the tourism industry was one of the industries affected the most during the pandemic, some countries (e.g., Portugal, Spain, and Greece, whose GDP is also dependent to a large part on tourism) were more affected than other countries as, e.g., Germany and the United States, whose GDP is not that dependent on tourism.

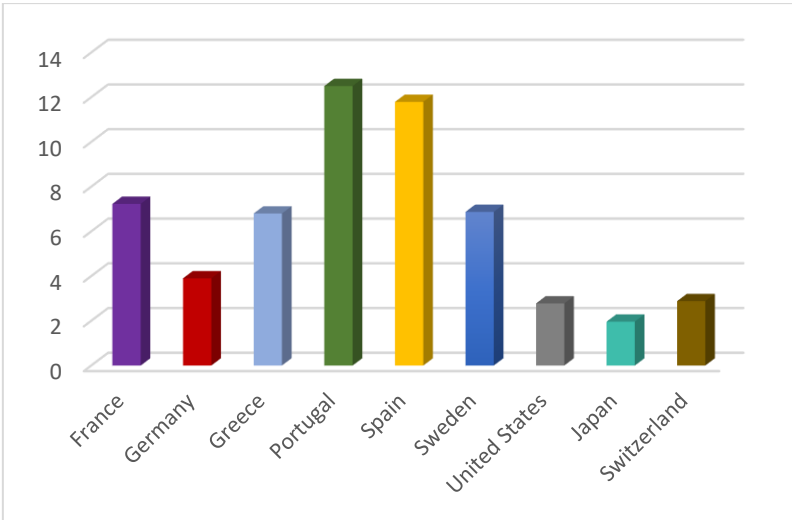
In times of pandemic, the medical industry is obviously of special interest. The global market of medical goods tends to be rather concentrated, at least until the beginning of the COVID-19 pandemic.

Regarding the American market, just until the beginning of the pandemic, China was "the leading supplier of numerous items, including [...] protective goggles, thermometers, and medical headwear. However, depending on the product, the main foreign supplier for the American market is often not China. The European Union is the primary source of CT (computed tomography) systems, hand sanitizers, patient monitors, X-ray equipment, and

breathing masks" (Gereffi 2020, p. 290). After the beginning of the pandemic, many countries tried to become less dependent on foreign suppliers for medical goods.

After the first shock of the pandemic and obvious interruptions of supply chains in several industries, governments of developed countries addressed the leading companies to reassess their supply chain policy with the aim to implement a more economic self-reliance and autonomy in general, i.e., implementing reshoring strategies. "Japan`s COVID-19 stimulus includes subsidies for firms that repatriate factories. European Union officials talk of "strategic autonomy and are creating a fund to buy stakes in firms." (The Economist 2020, May 14, as cited in: Verbeke 2020, p. 445).

Figure 9. Percentage share of tourism on GDP

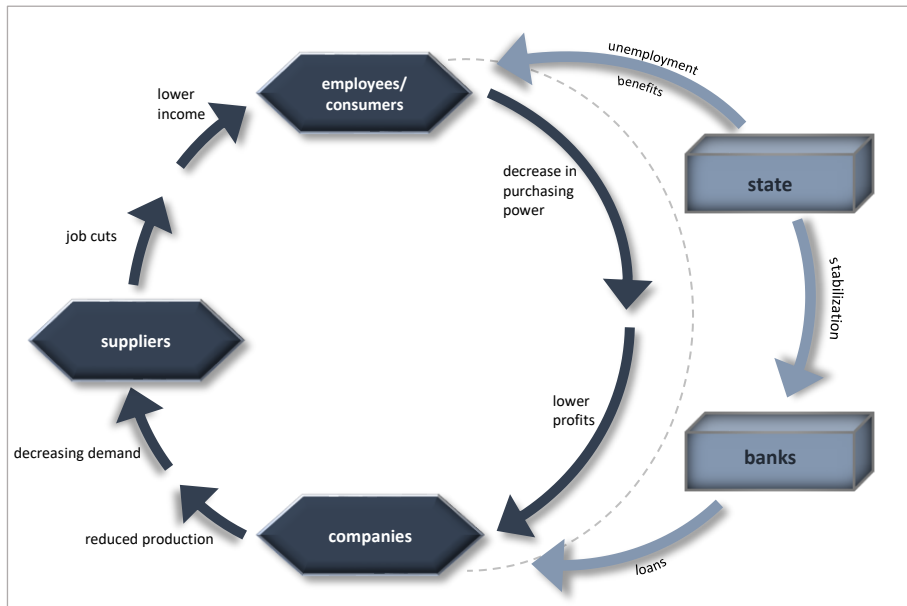


Source: OECD [1] data Tourism Statistics: Key tourism indicators (Tourism direct GDP corresponds to the part of GDP generated by all industries directly in contact with visitors. Data are shown as a percentage share of total GDP).

So far, value chains only have been discussed by analyzing the relationship between one supplier and the respective purchasing company. However, value chains usually consist of several steps, which means the buyer is a supplier for other companies at the same time, etc. Consequently, if the supply chain is interrupted at one point, it will have consequences for both, the buyer as well as for his customers. This effect, also known as the *ripple effect*, may be demonstrated by the example of the automotive industry: A Japanese car factory had to suspend the production of intermediate products at its factory in Korea due to a disruption of supply by a Chinese company (cf. Ivanov 2020).



Figure 10. The circle of decrease in times of economic crises and the intervention of the state



Source: graph was created by the author

Considering the phenomena described, the pandemic and its consequences can be explained as a circle (see figure 10). When the pandemic reached certain pikes, states declared lockdowns by curfews. As for the first lockdown, the manufacturing industry (e.g. German automotive industry) was hit hard by production stops. Those companies had to stop or at least reduce their production, hence, these companies demanded less supplies. Suppliers were forced to cut jobs or to arrange part-time jobs. As a consequence, employees received lower incomes, their purchasing power decreased, which resulted in lower profits for most companies. In order to stabilize the demand by consumers, in many countries the state provided unemployment benefits to employees who lost their jobs. This way states tried to interrupt a vicious circle, in most cases with considerable effect.

#### 4. Methodology of the Investigation

The present chapter serves as an explanation of the objectives of the survey (4.1), investigating the conceivable impact of the pandemic on global supply chains. The composition of the questionnaire will be explained in the theoretical approach (4.2). Chapter 4.3 sheds light on the method how data was collected — a description of the sample of respondents, as well as the conduct of the interviews (online) will be explained.

## **4.1 Objectives of the Survey**

The main aim of the present investigation is to observe whether the severe disruptions of global supply chains, which arose in 2020 due to the pandemic and its lockdowns in most parts of the world, will have an immediate impact or might even have a longer-term impact on global supply chains. The survey was designed, in order to investigate the experiences employees gathered in times of the pandemic and their estimations of the present and future development of their company as well as the economy as a whole. The questionnaire contains 29 questions. Employees working with companies of different sizes and in different industries (and in different countries) were interviewed. The aim was to gain a first impression, which kind of companies (by size, as well as by industry) are most affected and the possible resolutions concerning their company's supply chain, according to the personal opinion of the respondents.

The investigation was conducted, in order to ascertain whether there might be a current tendency of small, medium-sized, or multinational companies to implement changes in their company's supply chain. Furthermore, it will be examined which industries are more affected. The research question of the present dissertation is: "Will the COVID-19 pandemic have long-term or rather short-term effects on global supply chains?".

The survey aims to obtain the respondents' assessments of the following questions: How will the economy develop during the pandemic? How do employees in various industries assess the impact of the pandemic on supply chains? Do the respondents expect a change in SCM in their company? And if so, in what direction? The extent to which assessments are conditioned by the size of the company in question and the industry to which it belongs is examined. Possibilities for reorienting SCM are discussed.

## **4.2 Methodological Approach**

The questionnaire was compiled by the author. It includes a) questions on facts (e.g., "In which countries does your company purchase products?"); b) questions on estimations ("Do you think a change in your company's procurement strategy [...] is likely?"); c) questions on strategic propositions (e.g., "Which changes in the procurement strategy of your company could you imagine?". In order to receive answers to these above mentioned issues, questions were formulated in different types — either as a) open questions; b) multiple choice

questions, some of which providing the opportunity to choose multiple answers; c) questions to be rated on a scale.

The core of the investigation is the survey with 61 interviews. The sample was compiled by acquaintances and snowball system. The relation of respondents to the author is characterized by different social circumstances — ranging from friends at the university (in Germany and Portugal), neighbors, relatives in the family, and snowball system. Most of the respondents were addressed personally via e-mails. The respondents gained access to the questionnaire online through the following link: <https://www.umfrageonline.com/s/74ed961>.

In sum, the content of the questionnaire can be described as follows:

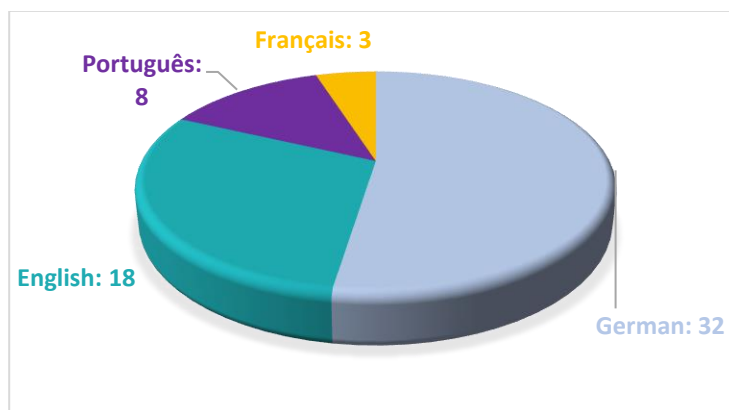
Questions concerning...

- ... the person (age, gender, educational background, and nationality)
- ... the company (size and industry)
- ... the supply chains of the respective company (percentage share of intermediate products from abroad; regions of the suppliers; production facilities abroad)
- ... the impact of the pandemic on the company's procurement strategy
- ... sustainability as potential interfering factor, with regard to changes in procurement
- ... sales abroad

### 4.3 Collection of Data

In total, 61 respondents from different countries, yet with similar educational background participated in the online survey. The questionnaire was available in four languages: English, Portuguese, German, and French. Thus, respondents were able to answer in the language they preferred.

Figure 11. Language the respondents chose



\* A very detailed version of the questionnaire is documented in English, Portuguese, German, and French in the appendixes, the English version also includes the results of each question.

The survey was carried out during the time September through December 2020. The spectrum of the respondents' line of work is quite diverse (see chapter 4.2). The respondents are working in different industries, different departments, and the companies they work for are small, medium-sized and multinational companies.

The main aim of the investigation is to ascertain whether there might be a current tendency of small, medium-sized, or multinational companies to implement changes in their company's supply chain. Furthermore, it will be examined which industries are more affected.

The first 10 questions of the survey are statistical questions, merely focusing on the respondents' personal, educational, and professional background, as well as a broad categorization of the companies they work for. As for questions 11-29, the respondents were asked to provide their personal opinion on the impact of COVID-19 on the supply chains of their respective company, on global supply chains, and on the economy as a whole. The respondents were asked about the current situation of the company they are working with, regarding the supply chains, their subjective evaluation of the possible impact of the COVID-19-Pandemic on their respective industry, as well as the conceivable strategies of their companies in those times.

## **5. Results of the Investigation**

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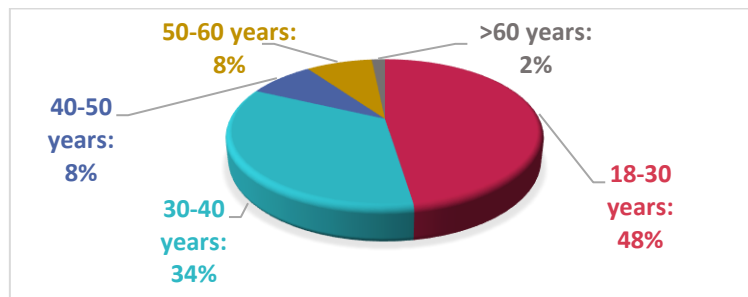
In this chapter, the results of the present investigation will be presented. On the one hand, responses were interpreted on the basis of the current political and economic situation. On the other hand, collected data was analyzed, extracting responses with regard to certain groups and compiling cross tables. In 5.1, general information on the respondents are presented. 5.2 provides an overview on the companies the respondents work for. 5.3 describes the position of the respondents in their respective company. 5.4 provides insight into the respondents' perception of the current pandemic situation in general, as well as SCs and sourcing strategies of their respective companies. In chapter 5.5, the main results of the investigation will be presented.

## 5.1 The Respondents

In order to ensure the representative status of the survey, several statistical questions were asked. At first, the respondents will be described with their statistical characteristics — like age, gender, educational background, nationality, and place of work:

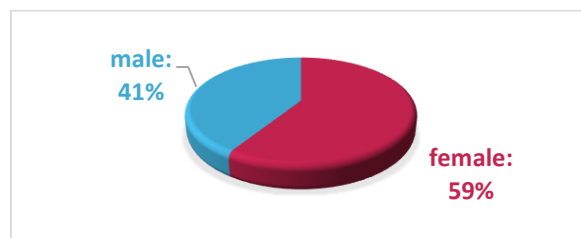
Age: Nearly half of the participants (47.5%) belong to the group of young adults, aged 18-30 years. Every third of the participants (34.4%) is 30-40 years old. A smaller part — 16.4% — belongs to the group of 40-60 years old. Merely one participant — which means 1.6% — has passed 60 years.

Figure 12. Q1: Age



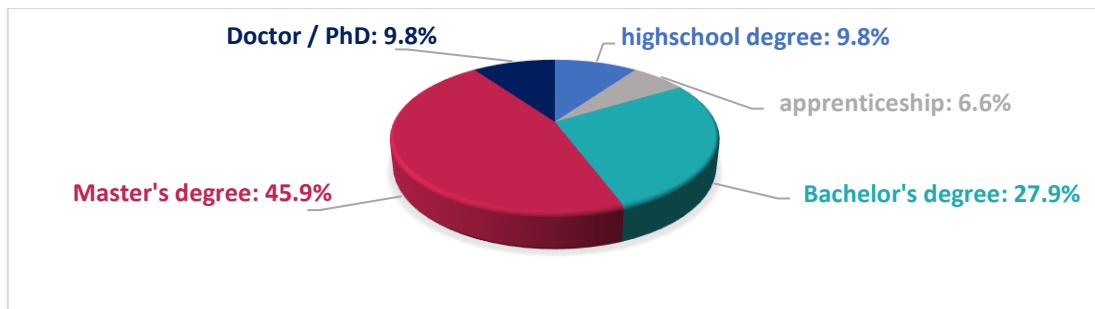
Gender: The numerical relationship of male to female respondents is 2 to 3: 41% male and 59% female respondents.

Figure 13. Q2: Gender



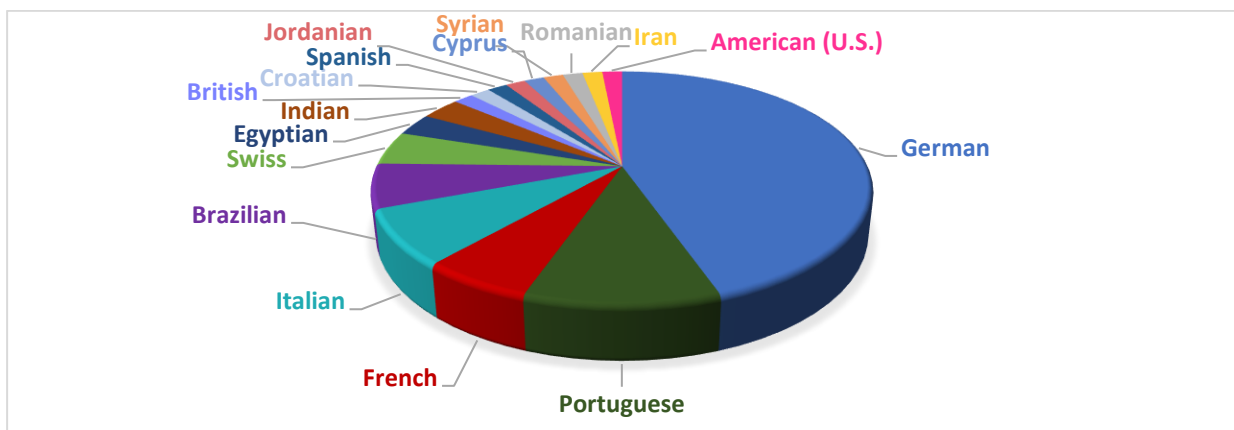
Educational background: Most of the respondents — nearly four out of five — have filed an academic degree: 28% Bachelor's degree; 46% Master's degree; and 10% Doctor/PhD. 7% of respondents filed an apprenticeship and 10% a high school degree. As the absolute majority of respondents have pursued an academic degree, this question was not used as a background variable, distinguishing different levels of educational background.

Figure 14. Q3: Educational background



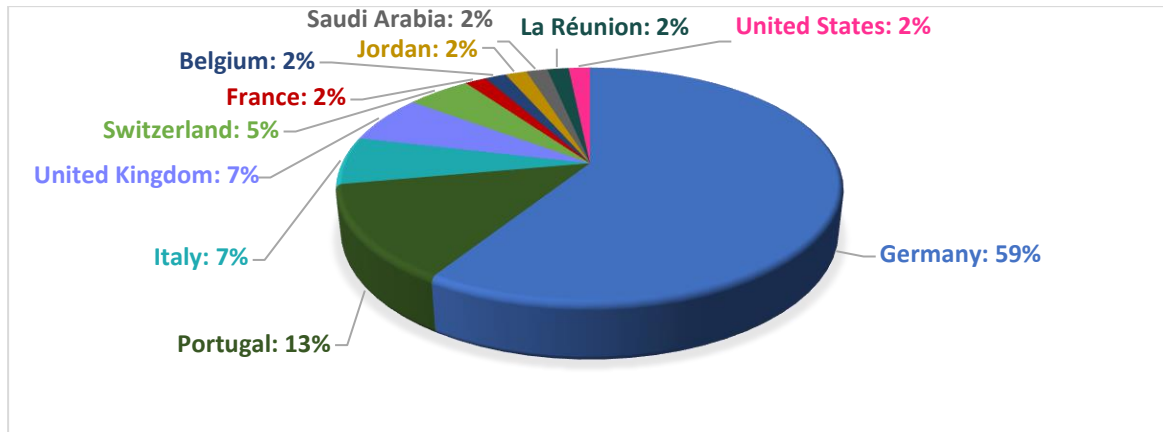
Nationality: Half of the respondents have the German nationality (29 out of 61). 7 are of Swiss or French origin. 15 have a Southern European nationality. 8 respondents have their roots in Middle East or India. 5 have an American nationality (4 from Brazil, 1 from the U.S.). (Three of the respondents have two nationalities.).

Figure 15. Q4: Nationality



Place of work: Corresponding to the nationality, the workplace of the respondents predominantly is situated in Germany: 36 cases (out of 61 in total). 8 of the workplaces are located in Portugal, 13 in other European countries, 4 are situated on other continents. That means: The workplaces of the respondents are rather concentrated in Europe, however, the number of nationalities is slightly more diverse, as a certain part of the respondents is not working in their respective country of origin.

Figure 16. Q5: Country of workplace



This question was designed, in order to get an idea of where in Europe and in the world at large the respondents of this survey have their workplace. The initial intention was to use this question as a background variable for the evaluation of other questions, however, it turned out that, on the one hand, the distribution of the respondents is not evenly distributed across the different countries and, on the other hand, the respondents in the respective countries are also not proportionally distributed across the sectors and company sizes. Therefore, the question concerning workplaces of the respondents could merely be used as a background variable for the analysis of this survey in few cases.

## 5.2 The Companies

In order to ascertain whether, e.g., SMEs (small and medium-sized enterprises) might be hit harder during the pandemic, question no. 6 (figure 17) sheds light on the size of the company the respondent is working for. The categorization of smaller firms is in accordance with the classification of SMEs by the European Commission (see table 2).

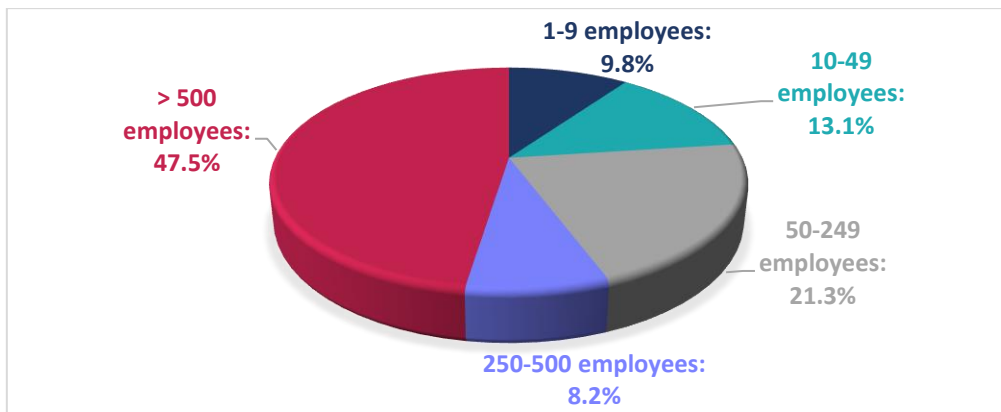
Table 2. SME definition according to the European Commission

Enterprise category	SME Definition		
	Ceilings		
	Staff Headcount (number of persons expressed in annual work units)	Turnover	Or Balance sheet total
Medium-sized	< 250	≤ € 50 million	≤ € 43 million
Small	< 50	≤ € 10 million	≤ € 10 million
Micro	< 10	≤ € 2 million	≤ € 2 million

Source: European Commission (2009)

Half of the respondents are working with sizeable enterprises with more than 500 employees (47.5% of all respondents). The other half is distributed among the categories:

Figure 17. Q6: Size of the enterprise



Industries (see below, figure 18, question no. 7): The sample included a wide range of industries, in which the respondents are working — productive industries as well as services. In order to provide an impression of the two broad fields, productive industries and services were divided into two groups.

Productive industries are represented by respondents as follows — in absolute figures:

- food industry: 5
- automotive industry: 4
- metal industry: 3
- machine construction/mechanical engineering: 2
- chemical industry: 3
- textile industry: 2
- construction industry: 1
- other (oil industry): 1

The field of services included:

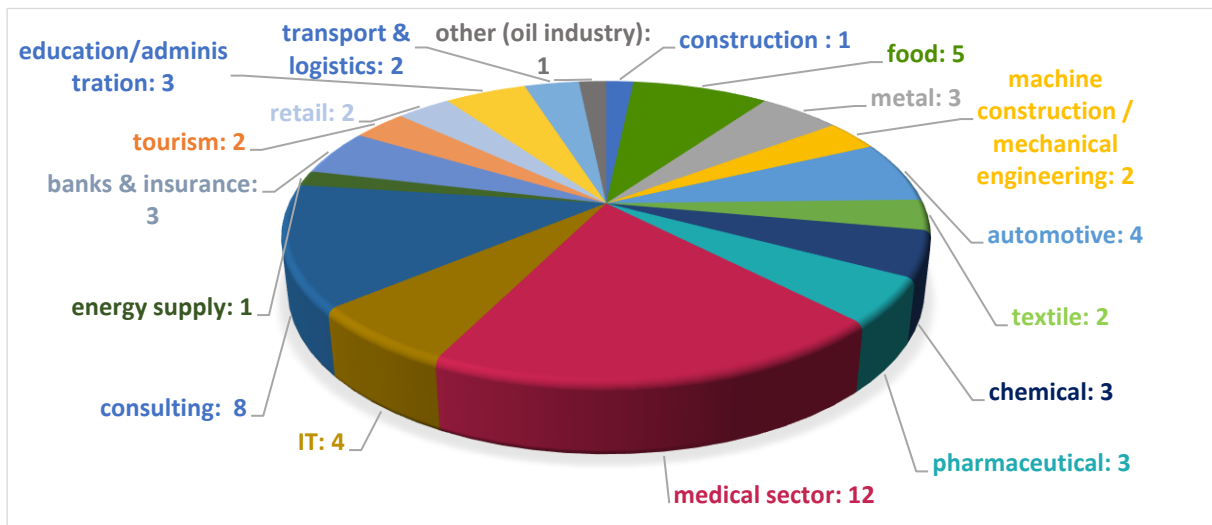
- medical sector: 12
- pharmaceutical: 3
- consulting (IT consulting, management cons., tax cons., audit): 8
- IT development: 4
- banks and insurance companies: 3
- tourism: 2
- retail: 2
- energy supply: 1
- transport & logistics: 2
- education & administration: 3

This question was used as a background variable for the investigation of several other questions later in the questionnaire. As for some questions, it appeared to be more appropriate to use merely the productive industries as a background variable (e.g., as for



questions merely concerning supply chains of the companies, where an investigation of differences in service industries is not useful, as service industries barely purchase goods). As for other questions though (e.g., general questions concerning the respondents' personal opinion on the impact of the pandemic), it appeared to be useful to divide the industries into 4 groups (group 1: productive industries; group 2: medical & pharmaceutical sector; group 3: IT, consulting, banks & insurances; group 4: rest of the service sectors).

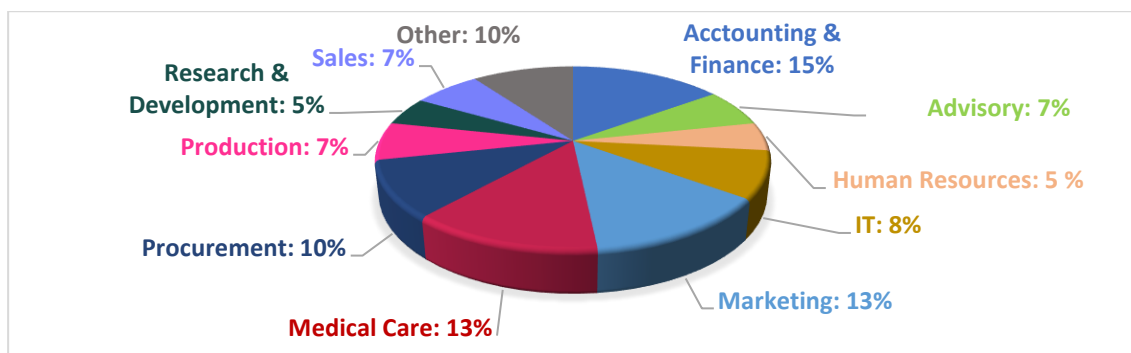
Figure 18. Q7: Industries the respondents work for



### 5.3 Position of the Respondents in the Respective Company

Two questions were asked to shed light on the position of the respondents in their respective company: Question no. 8 (see below, figure 19) was designed, in order to find out which spectrum of competencies is represented in the sample, asking for the department the respective respondent is working for.

Figure 19. Q8: Departments the respondents work for



\* The percentage shares have been rounded up, thus, the total sum is slightly different from 100% (96%)

\* Although medical care usually is not considered a department, as this investigation is concentrated on economic consequences of a medical issue, a number of medical doctors have been interviewed as well.

In order to enable profiling for the present sample, questions 7 and 8 were crossed with question 5, presenting the numbers with which the respective industries and departments are represented in this sample (see below, table 3).

The position of the respondents in their company: The sample includes every conceivable department within the companies: procurement, production, sales, marketing, project management, advisory, investment, accounting and finance, quality management, human resources, medical care (this category was exclusively designed for medical doctors participating in the survey), and others. All departments mentioned are represented by a share of respondents between 5% and 13 %.

The table depicts the distribution of the respondents on the countries of their workplace, the industry their company is attributed with, and the departments the respective respondents are working with. In most countries (except for those with merely one respondent), the distribution of industries is diversified, same is true for the departments.

12 respondents are working in the medical sector, however, merely 8 of them are actually working with medical care (all of these are medical doctors, working in public hospitals in Germany), the other 4 working in the medical sector are working in marketing, quality management, human resources, and advisory.

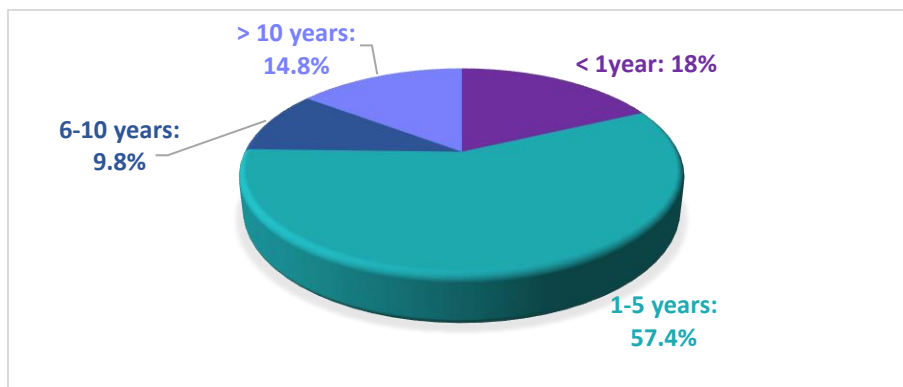
Table 3. Respondents by country of workplace, industry, and department

Cross table with Q5 (country of workplace) and Q 7 (industries)											
Question 7 (industries) Response options	Question 5: country of workplace										
	Germany	Portugal	Italy	France & La Réunion	Switzerland	United Kingdom	United States	Saudi Arabia	Jordan	Belgium	all
construction	-	-	-	-	1	-	-	-	-	-	1
food	2	1	1	1	-	-	-	-	-	-	5
metal	2	-	-	-	-	1	-	-	-	-	3
automotive	3	1	-	-	-	-	-	-	-	-	4
machine construction	-	1	-	-	-	1	-	-	-	-	2
textile	1	-	1	-	-	-	-	-	-	-	2
chemical	2	1	-	-	-	-	-	-	-	-	3
pharmaceutical	3	-	-	-	-	-	-	-	-	-	3
medial sector	12	-	-	-	-	-	-	-	-	-	12
IT development	1	-	-	-	1	-	1	-	1	-	4
energy supply	1	-	-	-	-	-	-	-	-	-	1
consulting	4	2	2	-	-	-	-	-	-	-	8
banks & insurance	2	-	-	-	1	-	-	-	-	-	3
tourism	1	1	-	-	-	-	-	-	-	-	2
retail	-	1	1	-	-	-	-	-	-	-	2
transport & logistics	1	-	-	-	-	-	-	-	-	1	1
education/administration	1	-	-	1	-	1	-	-	-	-	3
other	-	-	-	-	-	-	-	1	-	-	1
SUM	36	8	5	2	3	3	1	1	1	1	61

Cross table with Q5 (country of workplace) and Q 8 (departments)											
Question 8 (departments) Response options	Question 5: country of workplace										
	Germany	Portugal	Italy	France & La Réunion	Switzerland	United Kingdom	United States	Saudi Arabia	Jordan	Belgium	all
Accounting & Finance	3	1	2	1	1	-	-	-	-	1	9
Advisory	4	-	-	-	-	-	-	-	-	-	4
Human Resources	3	-	-	-	-	-	-	-	-	-	3
IT	1	1	-	-	1	1	-	-	1	-	5
Marketing	3	3	2	-	-	-	-	-	-	-	8
Medical Care	8	-	-	-	-	-	-	-	-	-	8
Procurement	5	-	-	-	-	1	-	-	-	-	6
Production	1	-	1	-	1	-	-	1	-	-	4
Research & Development	1	1	-	-	-	1	-	-	-	-	3
Sales	2	-	-	1	-	-	1	-	-	-	4
other	4	2	-	-	-	-	-	-	-	-	6
SUM	36	8	5	2	3	3	1	1	1	1	61

Figure 20. Q9: Years of affiliation to the company



Question no. 9 (see above, figure 20) provides information on the time the respondents have been working with their company, in order to receive an impression of how much insight the respondents already have into the company's strategy.

The time since when the respondents are working for the current company (question no. 9) matches with the young age of most of them (see above): 18% are working with the

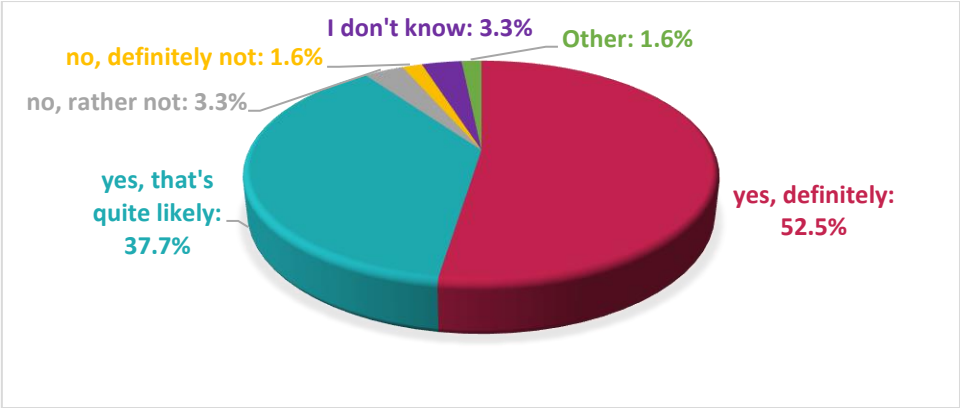
company less than 1 year. 57% are working 1-5 years with the same company. 10% report 6-10 years with the company; only 15% have an engagement with the same company since more than 10 years.

### 5.4 Content Evaluations

Questions no. 10-29 are content-related regarding the respondent’s personal opinion concerning the impact of COVID-19 on their company’s individual supply chains, as well as on global supply chains, as well as on the economy as a whole.

Question no. 10 (see below, figure 21, Q10) was designed to provide a general evaluation of the possible impact of the pandemic and lockdown on global supply chains by the respondents: "Do you believe the COVID-10 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?" The response is rather clear: 90% (or 55 out of 61 respondents) suppose an impact, either in the formulation "yes, definitely" (53%) or in the formulation "yes, that is quite likely" (38%). Only a small number of 5% expect no impact of the pandemic, be it in the formulation "rather not" or be it in the wording "definitely not". Another 5% were undecided (3.3% "I don’t know" and 1.6% "Other").

Figure 21. Q10: Perceived impact of COVID-19 on global supply chains



There is a chance that the respondents' opinion on the impact of the pandemic might differ with respect to the size of the company. Table 4 (see below) shows that the only group of respondents, who said anything other than: “yes, COVID-19 will have an impact on global supply chains” was the group working with companies of the middle size of 50-500 employees — within this group, 17% said the pandemic would not have an impact (11% rather not, 6% definitely not), and 12% were rather undecided (6% "I don’t know", 6% "other"). The fact that

respondents working for rather smaller companies (1-49 employees) seemed to be more concerned about the impact of the pandemic might be explained by the rather higher vulnerability of smaller firms (especially in times of crises, when smaller companies are experiencing a higher risk of going bankrupt), whereas 96% of employees working for rather large companies (>500 employees) regard an impact of the pandemic on the global supply chains as more or less inevitable, because large companies are generally more diversely intertwined with suppliers and are therefore more likely to be affected at several points in their supply chain.

Table 4. Perceived impact on global supply chains by size of company

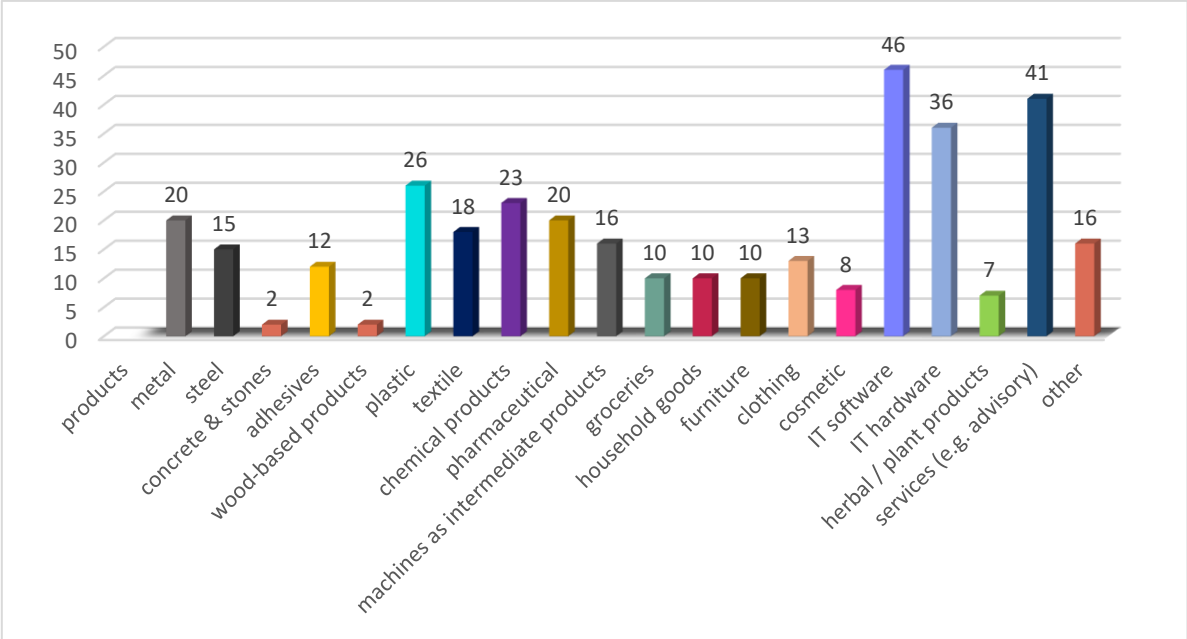
<b>Cross table with question no. 10 "Do you believe the COVID-10 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?" and question 6 (size of the company)</b>				
<b>Question 10 Response options</b>	<b>1-49 employees (14 respondents)</b>	<b>50-500 employees (18 respondents)</b>	<b>&gt;500 employees (29 respondents)</b>	<b>all (61 respondents)</b>
<b>yes, definitely</b>	64%	50%	48%	53%
<b>yes, quite likely</b>	36%	22%	48%	38%
<b>no, rather not</b>	-	11%	-	3%
<b>no, definitely not</b>	-	6%	-	2%
<b>I don't know</b>	-	6%	3%	3%
<b>Other</b>	-	6%	-	2%
<b>SUM</b>	100%	101%	99%	100%

In order to gain a clearer insight into the situations of the respective companies, some questions were designed to find out to which extent the supply chains are located abroad — and more precisely, in which regions of the world. Question no. 11 (see below, figure 22) focuses on "Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?" Among all possible categories of intermediate products, it is IT products that are mentioned most frequently by all respondents: 46% mentioned IT software, and 36% IT hardware. 41% of the companies the respondents are working with regularly purchase advisory services. Following in order: Plastic products (26%), chemical products (23%), pharmaceutical products (20%), metal products (20%), textile products (18%), clothing (13%), adhesives (12%), etc.

In order to examine, which industries purchase certain goods more than others, the results of question 11 (see below, figure 22) were broken down by four groups of industries (group 1: productive industries: metal, machine, construction, food, automotive, textile, chemical, and oil industry; group 2: pharmaceutical & medical sector; group 3: IT

development, consulting, banks & insurance; group 4: transport & logistics, energy supply, education, administration, retail, and tourism).

**Figure 22. Q11: Intermediate products purchased by the companies**



\* Columns in this chart represent numbers in percentage shares.

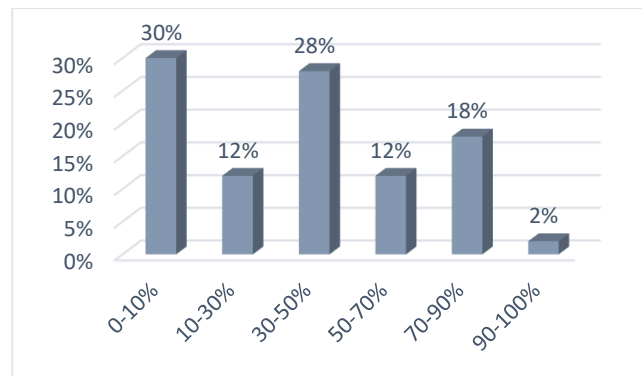
Table 5 (see below) shows again that the goods purchased the most are IT software, IT hardware, and services (advisory). Broken down into the four groups in table 5, as for group 3, these three products are the only ones they purchase (67% software, 40% hardware). As of group 4, IT products are also most frequently purchased goods (46% software, 36% hardware). Respondents working for the pharmaceutical or medical sector (group 2) obviously purchase pharmaceutical and medical products (73%), however, IT products and services, as well as chemical and plastic products are also among the products frequently needed in this group (between 27% and 40%). Merely for group 1 (productive sectors), the proportion of purchased goods is different from the other groups: The most frequently purchased goods in group 1 are metal products (48%), steel (38%), and plastic products (38%), followed by machines, IT software, IT hardware (each of which with 33%), as well as textile and chemical products, and services (each of which with 29%).

Table 5. Intermediate products purchased by industry

Cross table with question no. 11 "Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?" and question 7 (industries)					
Question 11	Question 7: industries				all (61 respondents)
	group 1 productive industries: metal, machine, construction, food, automotive, textile, chemical, oil (21respondents)	group 2 pharmaceutical & medical sector (15respondents)	group 3 IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
Response options					
metal products	48%	0%	0%	20%	20%
steel	38%	0%	0%	10%	15%
concrete and stones	5%	0%	0%	0%	2%
adhesives	24%	13%	0%	0%	12%
wood-based products	0%	0%	0%	10%	2%
plastic products	38%	33%	0%	30%	26%
textile products	29%	7%	0%	40%	18%
chemical products	29%	40%	0%	20%	23%
pharma./ medical prod.	0%	73%	0%	10%	20%
machines	33%	7%	0%	20%	16%
groceries	19%	7%	0%	10%	10%
household goods	10%	20%	0%	10%	10%
furniture	0%	13%	0%	40%	10%
clothing	19%	7%	0%	30%	13%
cosmetic products	14%	7%	0%	10%	8%
IT software	33%	40%	67%	50%	46%
IT hardware	33%	27%	40%	50%	36%
herbal/plant products	14%	7%	0%	0%	7%
services (advisory)	29%	27%	80%	30%	41%
other	19%	13%	20%	10%	16%
<b>SUM</b>	<b>434%</b>	<b>341%</b>	<b>207%</b>	<b>400%</b>	<b>351%</b>

Question no. 12 (see below, figure 23) focuses on the quota of products the companies buy abroad ("According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?"). 30% of the respondents explain that their company purchases less than 10% of its (intermediate) products abroad, including those cases where the share is zero. 28% of the respondents' state that their company purchases in between 30 and 50% abroad. And in 30% of the cases, the proportion of goods purchased abroad is between 50 and 90%.

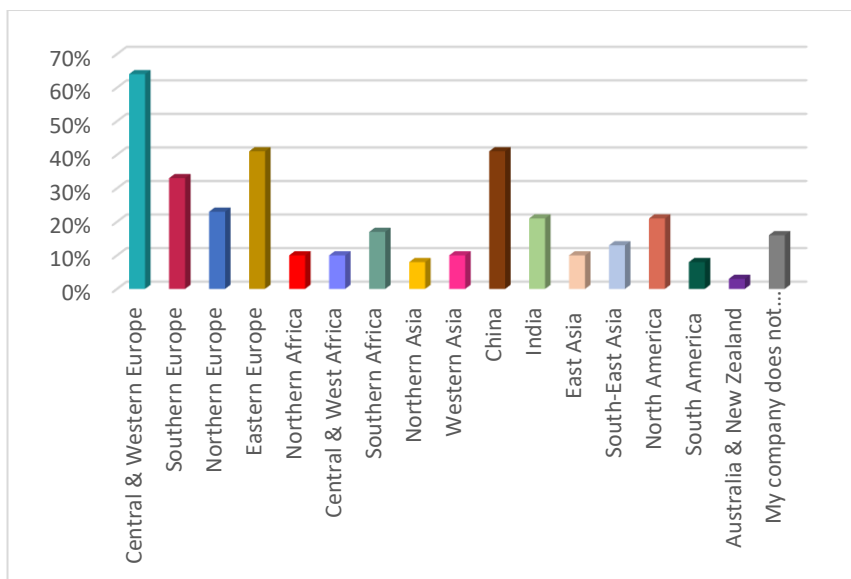
**Figure 23. Q12: Intermediate goods purchased from abroad**



\* Columns in this chart (y axis) represent the percentage share of total respondents (61). The x axis has to be understood as response options to question 12 concerning the percentage share of intermediate goods the companies purchase from abroad.

Question no. 13 (see below, figure 24) was designed in order to clarify the geographical distribution of the companies' supply chains: "In which countries does your company purchase (intermediate) products? Please select the region(s)." The countries in which (intermediate) products are purchased are spread all over the world — there is literally no region that has not been mentioned, and many companies buy products in several countries and regions — with certain focuses. The first focus is, of course, Europe — which was to be expected, as most of the companies in the present sample (56 out of 61) are based in Europe: 64% report Central and Western Europe; 41% Eastern Europe; 33% Southern Europe; and 23% Northern Europe. Another focus is China, where 41% of the companies purchase products; followed by India (21%), North America (21%), Southern Africa (16%) and South-East Asia (13%) (see figure 24).

**Figure 24. Q13: Countries of the suppliers**



\* Columns in this chart represent percentage shares of 61 respondents.



The situation hardly changes, regarding certain groups of sectors: metal industry, machine construction/mechanical engineering and automotive industry. Grouping these industries into one group, all of them buy goods around the world, however, the focus of purchasing geographically remains European countries, and China still comes second. Exactly the same applies to the group chemical, pharmaceutical industries and medical sector. Companies belonging to the productive industries report, on average, four regions in the world, where they are buying intermediate products. In contrast, regarding the group of service sectors like IT development, consulting and banks and insurances, the situation is different: Employees working in one of these service sectors, mentioned less regions in the world, and the focus slightly shifts: Europe is still absolutely in the lead, however, the second rank of the regions, where those sectors are purchasing intermediate products, is North America. Nevertheless, it has to be taken into account that the participants in this survey are working for different industries in different countries, thus, the sample is broadly diversified. Furthermore, with the pandemic still ongoing, this merely allows a first approximation.

Table 6 shows the countries, in which the companies from this sample are purchasing products, highlighting merely certain selected productive industries, as these industries are more interesting to investigate when it comes to global supply chains (the service industries barely purchase products from abroad — and if they do, it is mostly IT products). Table 6 demonstrates that the food industry is basically purchasing all over the world, whereas, for example, the textile industry is rather purchasing from Southern Europe (50%) and Western Asia (50%), China (100% of respondents from this industry state this as one of the regions their company is purchasing from) and India (50%), the automotive industry mainly purchases from Europe, China (75%), and North America (25%). As for the chemical industry, the main regions for procurement are situated in Europe, however, this industry also purchases from China (67%), India (67%), North America (33%), and Southern Africa (33%). As for machine construction, this industry mainly purchases goods from Europe, a great part from Asia, and to a certain extent from Africa.

**Table 6. Regions of suppliers by selected productive industries**

Cross table with Q13:"In which countries does your company purchase (intermediate) products?? and Q7 (industries)																	
Question 13 Response options	Question 7: selected productive industries																
	food industry (5 respondents)		metal industry (3 respondents)		machine construction (2 respondents)		automotive industry (4 respondents)		textile industry (2 respondents)		chemical industry (3 respondents)		SUM of selected productive sectors (19 respondents)		all (61 respondents)		
Central/Western Europe	5	100%	3	100%	2	100%	3	75%	-	0%	2	67%	15	79%	39	64%	
Southern Europe	4	80%	1	33%	2	100%	2	50%	1	50%	1	33%	11	58%	20	33%	
Northern Europe	3	60%	-	0%	2	100%	2	50%	-	0%	2	67%	9	47%	14	23%	
Eastern Europe	3	60%	2	67%	1	50%	2	50%	-	0%	2	67%	10	53%	25	41%	
Northern Africa	2	40%	-	0%	-	0%	-	0%	-	0%	-	0%	2	11%	6	10%	
Central/Western Africa	3	60%	-	0%	1	50%	-	0%	-	0%	-	0%	4	21%	6	10%	
Southern Africa	2	40%	1	33%	1	50%	-	0%	-	0%	1	33%	5	26%	10	16%	
Northern Asia	-	0%	2	67%	-	0%	-	0%	-	0%	-	0%	2	11%	5	8%	
Western Asia	1	20%	-	0%	-	0%	-	0%	1	50%	-	0%	2	11%	6	10%	
China	2	40%	1	33%	1	50%	3	75%	2	100%	2	67%	11	58%	25	41%	
India	1	20%	-	0%	1	50%	1	25%	1	50%	2	67%	6	32%	13	21%	
East Asia	-	0%	-	0%	2	100%	1	25%	1	50%	-	0%	4	21%	6	10%	
South-East Asia	3	60%	-	0%	1	50%	-	0%	-	0%	-	0%	4	21%	8	13%	
North America	2	40%	-	0%	-	0%	1	25%	-	0%	1	33%	4	21%	13	21%	
South America	3	60%	-	0%	-	0%	-	0%	-	0%	-	0%	3	16%	5	8%	
Australia & New Zealand	2	40%	-	0%	-	0%	-	0%	-	0%	-	0%	2	11%	2	3%	
not purchasing from abroad	-	0%	-	0%	-	0%	-	0%	-	0%	1	33%	1	5%	10	16%	

\*Total percentage shares exceed 100%, as respondents were allowed to choose multiple answers.

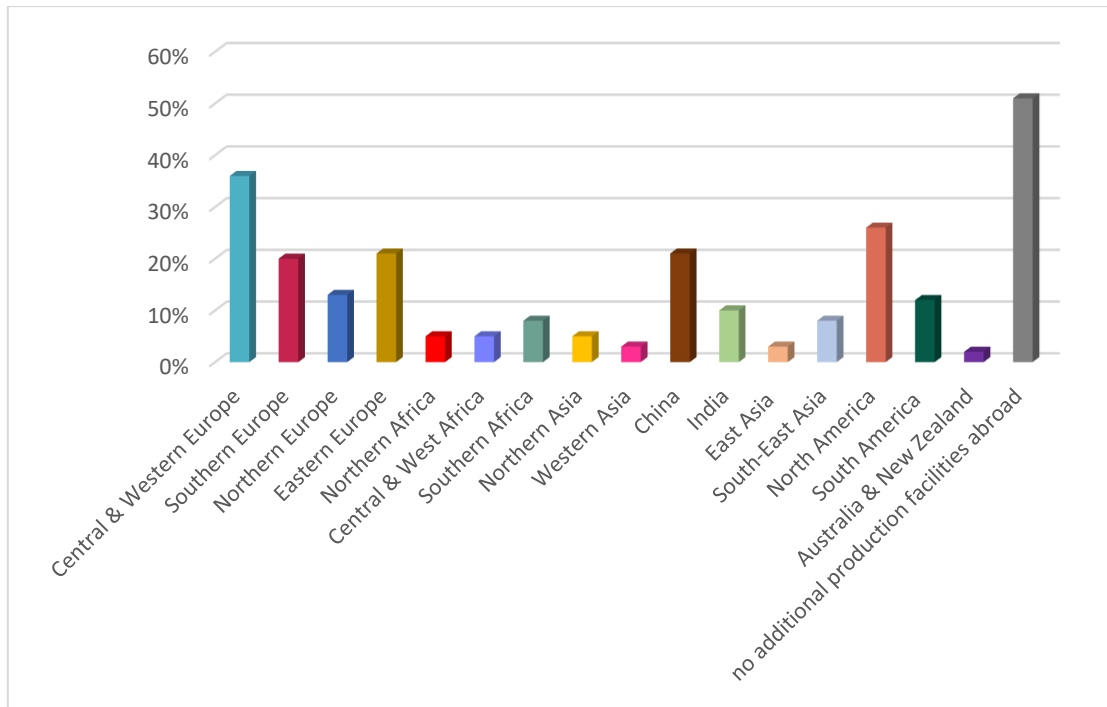
The regions of suppliers companies choose could be different in terms of trade traditions as well as geographical aspects. Therefore, question 13 (regions of suppliers) is analyzed regarding the countries of workplace. Table 7 shows that all companies situated in Europe have at least one main focus of procurement within European regions. High proportions of companies from Germany, Portugal, Italy, and France purchase intermediate goods in China as well. Companies from Portugal and Italy are also purchasing from South Africa to a certain extent. Furthermore, Italian companies purchase intermediate goods in East- and South-East Asia, as well as in North America. One example shows the importance of geographical proximity: The respondent working in Saud Arabia states that his company is purchasing goods from Western Asia, China, and India.

Table 7. Regions of suppliers by country of workplace

Cross table with Q13: "In which countries does your company purchase (intermediate) products?" with Q5 (country of workplace)																						
Question 13 Response options	Question 5: country of workplace																					
	Germany (36 respondents)	Portugal (8 respondents)	Italy (5 respondents)	France & La Réunion (2 respondents)	Switzerland (3 respondents)	United Kingdom (3 respondents)	United States (1 respondent)	Saudi Arabia (1 respondent)	Jordan (1 respondent)	Belgium (1 respondents)	all (61 respondents)											
Central/Western Europe	23	64%	6	75%	2	40%	1	50%	2	67%	3	100%	0	0%	0	0%	1	100%	1	100%	39	64%
Southern Europe	10	28%	6	75%	2	40%	1	50%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	20	33%
Northern Europe	8	22%	3	38%	1	20%	1	50%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	14	23%
Eastern Europe	15	42%	5	63%	2	40%	0	0%	1	33%	1	33%	1	100%	0	0%	0	0%	0	0%	25	41%
Northern Africa	5	14%	0	0%	1	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	6	10%
Central/Western Africa	3	8%	2	25%	1	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	6	10%
Southern Africa	3	8%	4	50%	2	40%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	10	16%
Northern Asia	3	8%	0	0%	1	20%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	5	8%
Western Asia	4	11%	0	0%	1	20%	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	6	10%
China	16	44%	4	50%	3	60%	1	50%	0	0%	0	0%	0	0%	1	100%	0	0%	0	0%	25	41%
India	6	17%	3	38%	1	20%	1	50%	1	33%	0	0%	0	0%	1	100%	0	0%	0	0%	13	21%
East Asia	1	3%	2	25%	2	40%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	6	10%
South-East Asia	4	11%	2	25%	2	40%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	8	13%
North America	6	17%	1	13%	2	40%	0	0%	1	33%	1	33%	1	100%	0	0%	1	100%	0	0%	13	21%
South America	2	6%	2	25%	1	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	5	8%
Australia & New Zealand	1	3%	0	0%	0	0%	1	50%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	3%
not purchasing from abroad	9	25%	0	0%	1	20%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	10	16%
TOTAL	36		8		5		2		3		3		1		1		1		1		61	

In order to receive a complete impression of the situation, the respondents were also asked whether their company has its own production facilities abroad, which deliver goods to the home country (question no. 14, see below, figure 25). As for this question, multiple answers were allowed. Exactly 50% of all companies in this sample have production facilities abroad, each of them, on average, in two different regions in the world. As for production facilities abroad, Europe is still the most important continent for all industries represented in the current sample, 36% of the respondents specified their company has production facilities in Central and Western Europe, followed by Eastern Europe with 21%, Southern Europe with 20%, and Northern Europe with 13%. 26% of the companies have facilities in North America, followed by China with 21%. Especially the group of service sectors: IT, consulting, banks and insurance companies have their own facilities in Europe and North America. As for the group of producing sectors, the situation changes slightly: First of all, these companies hold production facilities in Europe, followed by China, North America, and South America. Furthermore, a smaller number of companies also holds production facilities in India (10%), South-East Asia (12%), Southern Africa (8%), and others.

Figure 25. Q 14: Production facilities abroad



\*Columns in this chart represent percentage shares out of 61 respondents.

It has to be mentioned that 51% of all 61 respondents said their company holds "no additional production facilities abroad". As for the rest of the respondents, a few tendencies towards certain regions to invest in are visible. In order to investigate, which industries have production facilities in the respective regions, the most protruding regions (Central/Western Europe, Southern Europe, Northern Europe, Eastern Europe, China, India, South-East Asia, North America, and South America) were selected and crossed with the respective industries (see below, table 8). As for some sectors, e.g., construction industry, energy supply, and education/administration, it is obvious their 'companies' do not hold production facilities abroad. These very few respondents were rather included in the present sample, not so much because their companies would experience severe supply chain disruptions but rather because they might be able to provide their general view on the current situation.

As for Central and Western Europe, Northern Europe, and Eastern Europe, the main industries having production facilities in these regions are the automotive industry and the medical sector. Consulting and banks and insurance companies in the present sample also belong to the industries in this sample well represented with 'production facilities' in Europe and America, however, as for the consulting companies in this sample, it should be mentioned that these consultants are all working for large consulting corporations, which have subsidiaries all

over the world, advising large corporations worldwide. Thus, as consulting corporations do not produce goods but rather sell services, these ‘additional production facilities abroad’ mentioned by the consulting industry have to be understood as subsidiaries of their companies abroad. Having this in mind, the greatest share of additional production facilities abroad within Europe (the region where most of the respondents in this sample have their workplace) is to be found within the automotive industry and the medical sector.

**Table 8. Selected regions, in which certain industries have production facilities abroad**

Cross table with Q 14 (production facilities abroad and Q 7 (industries))																		
Question 7 :  industries	Question 14: regions of production facilities abroad																	
	Central/ Western Europe		Southern Europe		Northern Europe		Eastern Europe		China		India		South-East Asia		North America		South America	
construction industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
food industry	1	5%	-	-	-	-	1	8%	-	-	-	-	-	-	-	-	-	-
metal industry	2	9%	1	8%	-	-	1	8%	1	8%	1	17%	-	-	1	6%	-	-
machine construction	1	5%	1	8%	1	13%	1	8%	1	8%	-	-	-	-	-	-	1	14%
automotive industry	3	14%	2	17%	2	25%	2	15%	2	15%	1	17%	1	20%	3	19%	3	42%
textile industry	1	5%	1	8%	-	-	-	-	2	15%	1	17%	1	20%	1	6%	1	14%
chemical industry	2	9%	1	8%	-	-	1	8%	2	15%	1	17%	1	20%	1	6%	1	14%
pharmaceutical industry	2	9%	-	-	-	-	-	-	1	8%	1	17%	-	-	2	13%	-	-
medical sector	4	18%	-	-	2	25%	2	15%	3	23%	-	-	1	20%	2	13%	-	-
IT development	-	-	1	8%	-	-	1	8%	1	8%	-	-	1	20%	2	13%	-	-
consulting	3	14%	1	8%	1	13%	1	8%	-	-	1	17%	-	-	2	13%	-	-
energy supply	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
banks & insurances	2	9%	2	17%	1	13%	2	15%	-	-	-	-	-	-	2	13%	1	14%
tourism	-	-	1	8%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
retail	-	-	1	8%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
education / administration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
transport & logistics	1	5%	-	-	1	13%	1	8%	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>22</b>	<b>102%</b>	<b>12</b>	<b>98%</b>	<b>8</b>	<b>102%</b>	<b>13</b>	<b>101%</b>	<b>13</b>	<b>100%</b>	<b>6</b>	<b>102%</b>	<b>5</b>	<b>100%</b>	<b>16</b>	<b>102%</b>	<b>7</b>	<b>98%</b>

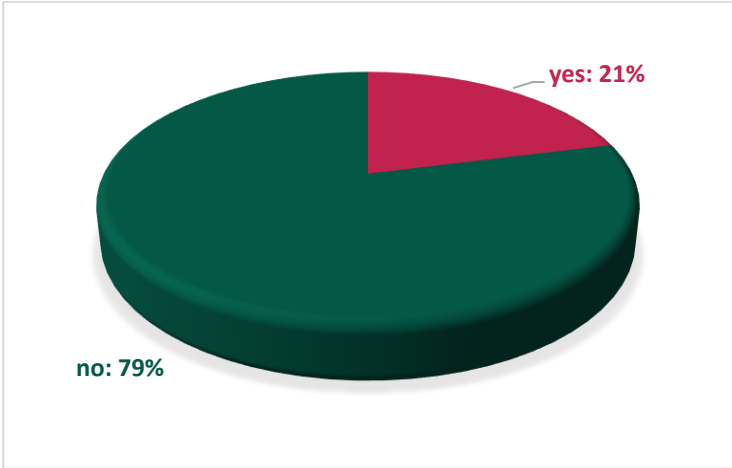
\* TOTAL sum might slightly exceed 100%, as numbers were rounded up

As for Southern Europe, the automotive industry and banks & insurances have the largest share of production facilities abroad. Similar to consulting, banks and insurances rather have subsidiaries abroad instead of actual ‘production facilities’, hence, the largest share of production facilities in Southern Europe is merely to be found with the automotive industry. In Northern Europe, the largest share of facilities abroad is again in the automotive industry, the medical sector, and banks and insurances. In China, the medical sector makes a large share of companies holding production facilities, followed by the automotive industry again (where certain companies belonging to the automotive industries have production facilities), as well as the textile industry, and the chemical industry. As for South America, the most important industry is again the automotive industry with 42% of all production facilities in South America from companies represented in the present sample. The automotive industry holds again a

great share of the total share of companies holding production facilities in North America, followed by the pharmaceutical industry, the medical sector, IT development (most likely Silicon Valley in San Francisco), consulting (most large consulting companies hold subsidiaries, i.a., in North America, as well as almost everywhere else in the world, especially the big four consulting companies), and banks and insurances, which also hold large subsidiaries all over the world.

The expectation (and planning) of changes in the supply chains due to disruptions by the pandemic should be distinguished from changes already planned longtime in advance before the pandemic. Thus, question no. 15 (see below, figure 26) was designed in order to distinguish this: "Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?" Every fifth of the 61 respondents affirmed this question.

Figure 26. Q15: Changes in SCM planned before COVID-19



This proportion varied, depending on the industries (see below, table 9), and it varied more clearly depending on the size of the enterprise. As for group 1 (productive industries), 24% (5 out of 21 in absolute figures) said there were supply chain changes planned even before COVID-19, within group 2 (pharmaceutical & medical sector), merely 20% (3 out of 15 in absolute figures) affirmed the question; as compared to 33% (5 out of 15) within group 3 (IT development, consulting and banks & insurances); whereas all of the respondents in group 4 (transport & logistics, energy supply, education, administration, retail, and tourism) said there were no changes planned in their company before COVID-19. (Even though the absolute figures are relatively low, the last finding could imply that these industries are more active to

Table 9. Changes in SCM planned before COVID-19 by industry

Cross table with question no. 15 "Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?" and question 7 (industries)					
Question 15  Response options	Question 7: industries				all  (61 respondents)
	group 1 productive industries: metal, machine, food, construction, automotive, textile, chemical, oil (21respondents)	group 2 pharmaceutical & medical sector (15respondents)	group 3 IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
yes	24%	20%	33%	0%	21%
no	76%	80%	67%	100%	79%
<b>SUM</b>	100%	100%	100%	100%	100%

find new suppliers in general. Another possible interpretation could be that the productive industries are simply more dependent on regular deliveries, in order to ensure productivity, hence, they have no other option than seeking out for new suppliers).

As the automotive industry is known to experience problems for a few years now, the automotive industry was extracted specifically, in order to find out the proportion of those in group 1 who said "yes" (there were changes before COVID-19). Hence, as table 10 (see below) shows, 75% of the respondents who are working in the automotive industry said there were changes planned already before COVID-19 (which makes 60% of the total number of respon-

Table 10. Changes in SCM before COVID-19 in the automotive industry

Cross table Q 15 and Q 7: Automotive industry and other productive sectors		
Question 15	automotive industry (4 respondents)	rest of the productive sector (17 respondents)
yes	75%	12%
no	25%	88%
<b>SUM</b>	100%	100%

dents who answered this question with "yes"), whereas only 12% of the other respondents in group 1 (productive sectors) said their companies had planned changes before COVID-19. Table 10 (see above) shows the distribution of the percentage of those respondents, who answered "yes" (there were changes before COVID-19) in question 15 — 3 of the 5 respondents, who answered "yes" belong to the automotive industry, which was already

suffering long before COVID-19, which means, a great share of respondents in group 1 in table 9 (see above) can be distributed to the automotive industry (see above, table 10).

Furthermore, a larger company size is obviously associated with particularly pronounced search for new suppliers. 35% of respondents working with companies with more than 500 employees affirmed question 15 (see below, table 11), as compared to 14% of respondents working with companies employing less than 50 employees (that is the average

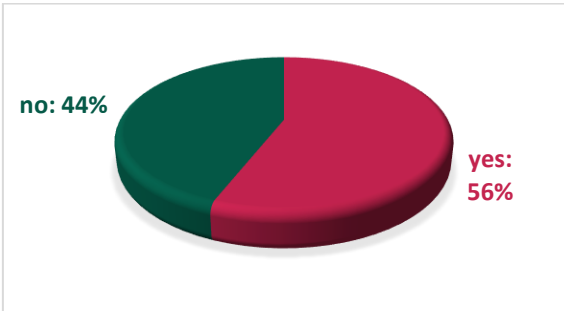
*Table 11. Changes in SCM planned before COVID-19 by size of the company*

Cross table with question no. 15 "Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?" and question 6 (company size)						
Question 15 Response options	1-9 employees (6 respondents)	10-49 employees (8 respondents)	50-249 employees (13 respondents)	250-500 employees (5 respondents)	>500 employees (29 respondents)	all (61 respondents)
yes	17%	13%	0%	20%	35%	21%
no	83%	87%	100%	80%	65%	79%
SUM	100%	100%	100%	100%	100%	100%

of the two smallest categories of companies taken together), and only 6% with companies employing 50-500 employees (what is the average of the two middle range categories taken together).

The COVID-19 pandemic has caused disruptions in the procurement of products, as figure 27 substantiates (question 16: "In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?"). A clear majority of 56% (34 out of 61 respondents) answered "yes" to this question.

*Figure 27. Q16: Changes in SCM in the course of the pandemic*



Nevertheless, seen together questions 15 and 16, the majority of companies did not plan changes in their supply chains before the pandemic (79%) (see below, table 12 (cross table Q15 and Q16 with Q7), whereas 56% stated a change or disruption in the procurement of certain products in the course of the pandemic. That means, as for the great majority of the



sample, the pandemic changed the situation of their company, they were surprised by a sudden need for a change in procurement.

Comparing the two cross tables in table 12 (see below, cross tables Q15 and Q16 with Q7), the results show most obviously there has been a considerable change of the companies' supply chains in the course of the pandemic in 2020. More than half of the respondents (56% of all 61 respondents) said there was a change due to the pandemic, as compared to 79% of all respondents who said their company had not planned any changes before COVID-19. 87% of the respondents working in the pharmaceutical or medical sector said they had disruptions in their supply chains during the pandemic. This can be explained by the fact that the medical and the pharmaceutical sectors were particularly affected by the pandemic in the first few months of 2020, when masks, drugs, hygiene products such as disinfection, and ventilators were urgently needed (as well as hospital beds, etc.).

Table 12. Changes in SCM before vs. during the pandemic by industry

Cross table with question no. 15 "Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?" and question 7 (industries)					
Question 15 Response options	Question 7: industries				all (61 respondents)
	group 1 productive industries: metal, machine, food, construction, automotive, textile, chemical, oil (21respondents)	group 2 pharmaceutical & medical sector (15respondents)	group 3 IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
yes	24%	20%	33%	0%	21%
no	76%	80%	67%	100%	79%
SUM	100%	100%	100%	100%	100%
Cross table with question no. 16 "In the context of the COVID-19 pandemic, has there been a change/ disruption of the procurement of certain products for your company in 2020?" and question 7 (industries)					
Question 16 Response options	group1	group2	group 3	group 4	all
yes	48%	87%	47%	40%	56%
no	52%	13%	53%	60%	44%
SUM	100%	100%	100%	100%	100%

Furthermore, this gives rise to the question whether there might be a correlation between the size of a company and the perceived need to find new suppliers. The data shows that larger companies with more than 500 employees are slightly more concerned by changes or disruptions of the supply chains (62% of this group answered "yes" to question no. 16) than

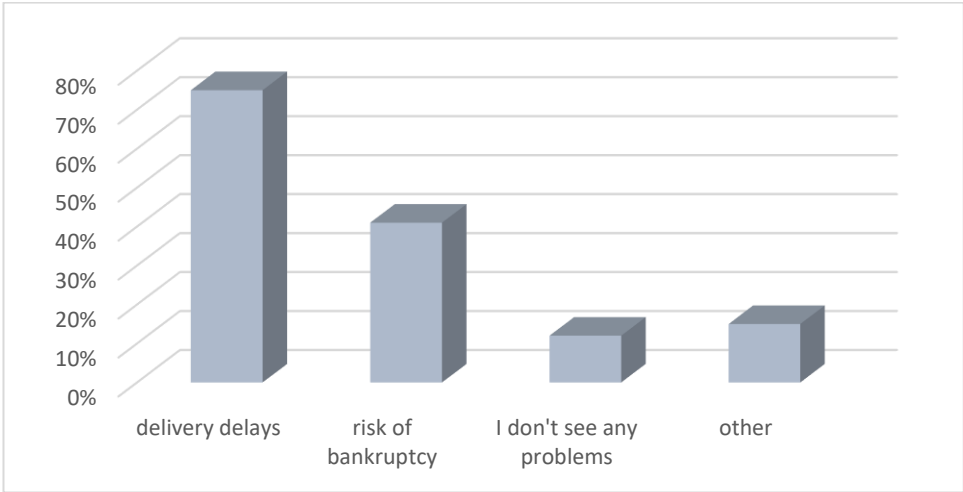
smaller companies of which 50% answer the question with "yes" – taken together the four smaller and medium-sized categories of enterprises. (see below, table 13, cross table Q16 and Q6). Another point of view is the affiliation to certain sectors: 61% of employees in the service sectors report a change or disruptions in the procurement, as compared to merely 50% in the productive sectors. As for the service sectors, it is the medical care, energy supply, tourism and retail that have experienced the most disruptions and changes in 2020.

*Table 13. Changes in SCM during the pandemic by size of enterprise*

Cross table with question no. 16 "In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?" and question 6 (size of the company)						
Question 16 Response options	1-9 employees (6 respondents)	10-49 employees (8 respondents)	50-249 employees (13 respondents)	250-500 employees (5 respondents)	>500 employees (29 respondents)	all (61 respondents)
yes	67%	38%	62%	20%	62%	56%
no	33%	63%	39%	80%	38%	44%
SUM	100%	101%	101%	100%	100%	100%

Question no. 17 ("In times of the current pandemic, which problems do you see concretely for the procurement of products / intermediate products for your company?") (see below, figure 28) was designed, in order to examine which scenario of effects the disruptions of supply chains might have on companies' procurement strategies in times of the pandemic,

*Figure 28. Q17: Problems with the procurement of products*

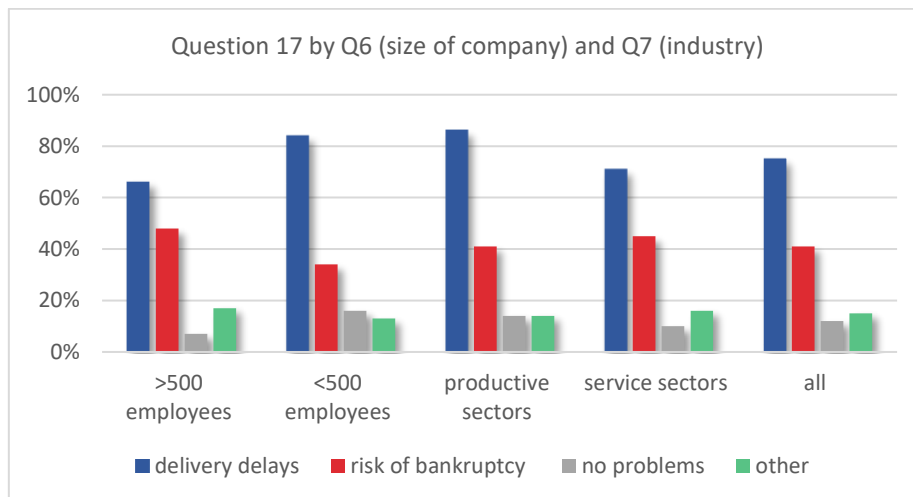


according to the respondents' personal opinion: a) "delivery delays — companies might not always be able to deliver on time."; b) "risk of bankruptcy — trading with smaller companies might be riskier these days because smaller companies have a higher risk to go bankrupt."

Delivery delays obviously are regarded as 'normal case' — 75% or 3 out of 4 respondents expect this case. The risk of bankruptcy of smaller companies is expected by another 41% of all respondents. 12% of the respondents don't see any problems, 15% have different arguments. According to the results of the current survey, respondents working for larger companies (> 500 employees) expect a higher risk of bankruptcy (48%), as compared to respondents working for smaller firms (< 500 employees) (34%).

This phenomenon that larger companies rather fear their suppliers going bankrupt could be explained by the fact that SMEs are the ones suffering the most from recessions, hence, MNEs would be affected by their suppliers (SMEs) going bankrupt, whereas smaller companies might not even have many suppliers who could go bankrupt. On the other hand, delivery delays appear to worry smaller companies even more than larger ones: 66% of respondents working with larger companies expect delivery delays as a consequence of the pandemic, nearly all respondents (84%) of smaller companies expect delivery delays. That means, smaller companies seem to expect delivery delays even more than bankruptcy, when it comes to problems with their suppliers, i.e., their supply chains.

Figure 29. Problems in procurement by industry and size of company



Nevertheless, the expectation was that not only the size of the companies would be of importance but also the sectors the respondents work for would influence the perception of the respondents (see below, Table 14). Group 1 and 2 seem to be especially concerned about delivery delays — however, most likely for different reasons: Group 1 (productive industries) experienced severe problems with delivery delays in 2020, this is the group which was expected to have the most severe disruptions in their supply chains — and this proved to be

true. However, the service industries seem to experience disruptions as well: 87% of respondents either working for the pharmaceutical or medical sector (group 2) said they see problems with delivery delays (which can be explained by the fact that this sector experienced very specific problems with delivery delays of pharmaceutical and hygiene products from China in 2020), 27% of them also said they see problems with smaller companies going bankrupt. As of group 3 — respondents working with IT development, consulting, banks and insurance companies — 13% did not see any problems for the procurement of products/intermediate products. This can be explained by the fact that the IT industry, as well as consulting companies and banks and insurances do not purchase intermediate goods, such as metal, steel, textile products, etc., but they rather buy and sell services, which are not severely affected by the pandemic. It is, in fact, astonishing that 60% of the respondents working for service sectors (group 3 and 4) said they see problems with delivery delays and 53% of group 3 said they see problems with smaller companies going bankrupt in the course of the pandemic. However, it is reasonable to assume that these respondents rather expect delays and bankruptcies with the suppliers of their clients and not with suppliers of their own companies (this group predominantly consists of consultants working with large MNEs, who are advising other large MNEs, partially, i.a., in the productive sector). Another possible option is that some of the respondents gave a rather general answer to this question, as it is widely known that a large number of companies worldwide is currently dealing with delivery delays as well as with bankruptcies.

*Table 14. Problems in procurement arising in times of the pandemic by industry*

<b>Cross table with question 17: "In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company?" and question 7 (industries):</b>					
<b>Question 17</b>	<b>Question 7: industries</b>				<b>all</b>  (61 respondents)
<b>Response options</b>	<b>group 1</b> productive industries: metal, machine construction, automotive, textile, chemical, oil (21respondents)	<b>group 2</b> pharmaceutical & medical sector (15respondents)	<b>group 3</b> IT development, consulting, banks & insurance (15 respondents)	<b>group 4</b> transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
<b>delivery delays</b>	86%	87%	60%	60%	75%
<b>risk of bankruptcy</b>	48%	27%	53%	30%	41%
<b>no problems</b>	14%	7%	13%	10%	12%
<b>other</b>	14%	7%	20%	20%	15%
<b>SUM</b>	162%	128%	146%	120%	143%

\*The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

Table 15. Problems in procurement by productive industries

Cross table with question 17: "In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company?" and question 7 (industries):									
Question 17 Response options	Question 7: productive industries								all (group 1) (21 respondents)
	construction	food	metal	machine	automotive	textile	chemical	oil	
delivery delays	0%	100%	100%	100%	100%	100%	33%	100%	86%
risk of bankruptcy	0%	60%	0%	50%	100%	0%	33%	100%	48%
no problems	100%	0%	0%	0%	0%	0%	67%	0%	14%
other	0%	20%	33%	50%	0%	0%	0%	0%	14%
<b>SUM</b>	100%	180%	133%	200%	200%	100%	133%	200%	162%

\* The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

Initially, regarding question 17, the expectation was that all respondents from the productive sectors would consistently say they have either delivery delays or risk of bankruptcy. The result was approximately as expected — 86% of respondents from group 1 (productive sector) said they had problems with delivery and 48% said they were concerned about smaller companies (as suppliers) going bankrupt. Nevertheless, rather astonishing was that – although a rather low number of respondents — 14% of this group 1 still said they wouldn't see any problems. Thus, those respondents from group 1, who said they would not see any problems were 'extracted' from group 1, examining which industries they belong to.

The outcome was that the only respondents who do not see any problems with procurement are working in construction (1 respondent) and in the chemical industry (3 respondents). 100% of respondents working in the construction industry (1 respondent) and 67% of respondents working in the chemical industry (2 out of 3 respondents) do not see any problems with procurement for their company. As two of these three respondents, who are grouped in the chemical sector and participated in this survey, are working with Company X, the situation of the chemical industry can be demonstrated by the example of this corporation: Company X does not seem to experience such severe problems in supply of goods in times of the pandemic. This can be explained by three different factors: First, a great part of Company X's suppliers is not situated in China — for example, the corporation also purchases a great amount of goods, i.e., silicones, tensides, and dyes from other corporations situated in Germany. Second, those products Company X purchases from China (mainly hair dyes) are not produced in Wuhan (the region most affected by the virus) but mainly in Hangzhou, which is geographically far away from Wuhan. Those products Company X purchases from China (e.g., intermediate products for hair dyes) were less in demand during

the pandemic, as hairdressers, who usually purchase a large amount of hair dyes from Company X, had to close their shops for several months in 2020.

Thus, the fact that Company X was not supplied as usual with hair dyes from China was not a problem, as the corporation could not distribute it on the market to the same amount as usual — production of these goods was scaled back. Then again, as for other products Company X manufactures, such as hygiene products and detergents (e.g., Persil and other cleaning products), demand was rising, hence, sales were rising for those products — production for these goods was increased during the pandemic. Thus, Company X was not so much experiencing a decrease but rather a shift in production, along with a shift in sales (as different products were more in demand during the pandemic and Company X was able to adapt its production to this shift in demand).

The only field of those products Company X manufactures, which was suffering from the pandemic, was industrial adhesives. This can be explained by the fact that Company X serves, to a certain extent, as a supplier for the automotive and aviation industry (e.g., Company X provides the automotive and aviation industry with industrial adhesives). As the automotive industry and the aviation industry were hit hard during the pandemic (partially with complete production stops), the field of adhesives, where Company X serves as a supplier, was the field suffering the most. As for all other fields of production, Company X was able to adapt its production to the shift in demand during the pandemic and, hence, did not experience delivery problems in procurement but rather problems with sales.

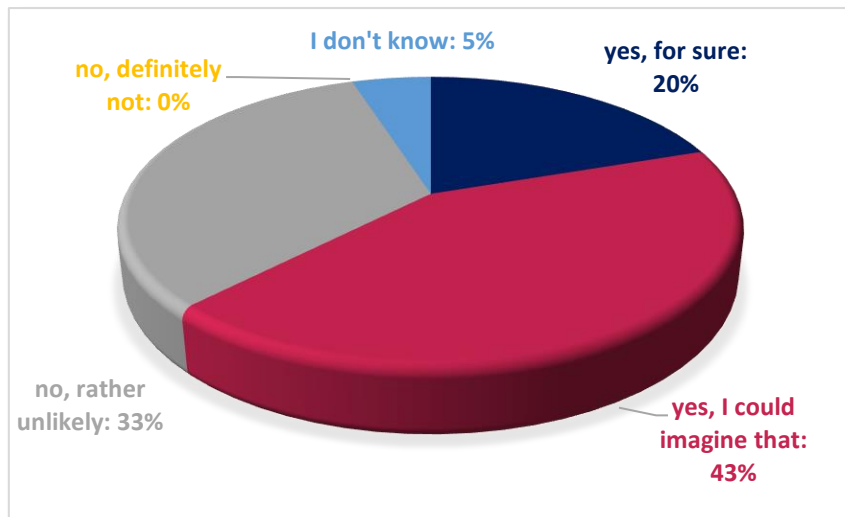
Except for respondents working in the construction industry (1 respondent, working in building construction and civil engineering), all other respondents working in productive industries consider delivery delays as a problem for the procurement of their company. As for the risk of bankruptcy of SMEs as suppliers, the majority of the respondents also agreed that this would be a problem (except for respondents working in construction, metal, and textile). 50% of those respondents working in machine construction (and mechanical engineering) said "prices of certain products will rise due to bottlenecks in delivery" (within the response option "other" for this question).

Thus, the expectation of delivery delays as well as bankruptcies of suppliers might lead to a re-consideration of the purchasing strategies. Question no. 18 (see below, figure 30) was designed in order to examine whether "a change in your company's procurement strategy for 2021 or subsequent year is likely"? is affirmed by the majority of respondents: Two out of

three respondents say "yes, for sure" (20%) or "Yes, I could imagine" (43%). Every third respondent says "no, rather unlikely" (33%). Nobody provides the answer "no, definitively not"; the rest (5%) say "I don't know".

The answers are, of course, influenced by the expectations of delivery delays and/or bankruptcies of smaller companies. There are merely slight differences in the answer to this question between those who fear delivery delays and those who fear bankruptcies (see above, the preceding question no. 17). However, those who expect both problems are very much inclined to predict a change in their company's procurement strategy in 2021 or one of the following years: 19% say "yes, for sure" and 71% (!) "yes, I could imagine", which sums up to 90% all together.

Figure 30. Q18: Perceived probability of changes in procurement



Expectations are one thing, yet the workplace another. Employees in service sectors are less likely to expect changes in procurement strategy than those working in the manufacturing sector. This proves to be correct. As for the service industries, group 3 and 4 are less convinced their company would implement changes in procurement, as compared to group 1 and 2, who can imagine changes.

Table 16. Perceived probability of changes in procurement by industry

Cross table with question 18 "Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?" and question 7 (industries)					
Question 18  Response options	Question 7: industries				all  (61 respondents)
	group 1 productive industries: metal, food, machine, construction, automotive, textile, chemical, oil (21respondents)	group 2 pharmaceutical & medical sector (15respondents)	group 3 IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
yes, for sure	14%	20%	27%	20%	20%
yes, I could imagine that	62%	53%	20%	20%	43%
no, rather unlikely	24%	27%	47%	40%	33%
no, definitely not	0%	0%	0%	0%	0%
I don't know	0%	0%	7%	20%	5%
<b>SUM</b>	100%	100%	101%	100%	101%

\*The number of SUM partially slightly exceeds 100%, as numbers were rounded up.

The expected changes in procurement have to be concretized, especially with regard to the strategy in terms of geographic allocation (question no. 19, see below, figure 31). The expectable answers to this question could be either relocations

- in the form of Reshoring:  
"partial Reshoring/Backshoring — the process of returning parts of the production and manufacturing of goods back to the company's original country"
- in the form of Nearshoring:  
"partial Nearshoring — the organization decides to transfer parts of the production to companies that are geographically closer to the company's original country"
- in the form of buying ahead:  
"buying ahead — in order to ensure to always have the products on stock"

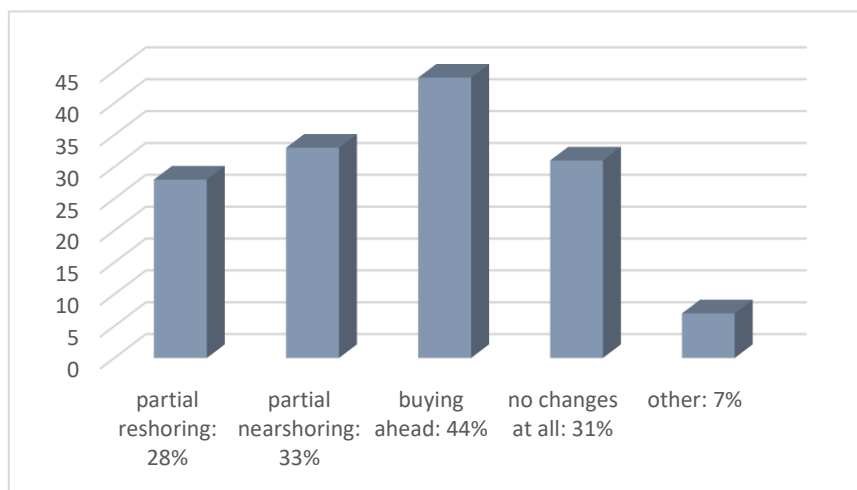
First of all, it has to be noted that every third respondent does not expect a change in the procurement strategy of the company at all (31%). The other respondents expect partial nearshoring in a number of cases (33%), and reshoring back to the company's original country (28%). Thus, the majority of respondents expect their companies will probably look for new suppliers located closer to the company's place of production. In every case it means a more or less significant shortcut of the trade route. Buying ahead and having more products on



stock obviously is an alternative for a considerable number of respondents (44%) to avoid difficulties in the production of goods and services. "Other" strategies are noted by 6%. In many cases, respondents combine two (or even three) of the strategies. In any case, the changes are becoming concrete for two out of three respondents.

Comparing the different sectors, it is group 2 (pharmaceutical and medical sector), imagining changes in the form of reshoring and or nearshoring. 40% resp. 47% of this group expect those changes. That's exactly the group, which was mostly affected by a change or disruption in the year 2020 (s. above, question 16), to a greater amount caused directly by the pandemic. Group 1, the productive industries, is the second in the rank: 43% of this group expect (partial) nearshoring, and 24 % reshoring (multiple answers were allowed, so these two numbers may not be added.). The productive industries feel most vulnerable to closed borders and prevented transportations as it had been the case during several weeks in 2020.

Figure 31. Q19: Expected changes in the procurement strategy



In order to examine whether certain of the productive industries (see below, table 17, group1) would reveal different results for question 19 (see above, figure 31), this question was crossed a second time with question 7, breaking down group 1 in table 17 (see below), into the different productive industries (construction, food, metal, machine, automotive, textile, chemical, and oil) (see below, table 18).

Table 17. Expected types of changes in procurement strategy by industry

Cross table with question 19: "Which changes in the procurement strategy of your company could you imagine?" and question 7 (industries)					
Question 19 Response options	Question 7: industries				all (61 respondents)
	group 1 productive industries: metal, machine construction, automotive, textile, chemical, oil (21respondents)	group 2 pharmaceutical & medical sector (15respondents)	group 3 IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
partial reshoring	24%	40%	27%	20%	28%
partial nearshoring	43%	47%	20%	10%	33%
buying ahead	57%	60%	7%	50%	44%
no changes at all	14%	27%	60%	30%	31%
other	5%	0%	13%	10%	6%
<b>SUM</b>	143%	174%	127%	120%	142%

\*The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

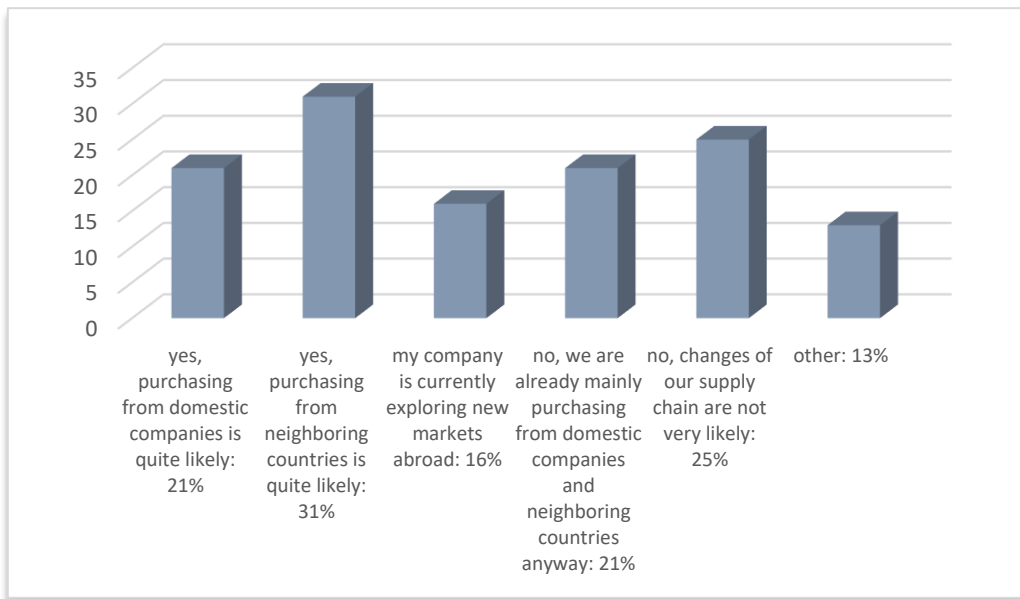
Table 18 demonstrates (although with merely few cases in each industry) the automotive industry — which experienced severe disruptions and partially production stops during the pandemic (cf. Beutnagel 2020) — is predominantly open to partial nearshoring (75%) but also to partial reshoring (50%), and buying ahead (50%). The table also demonstrates that the food industry — which also experienced severe disruptions during the pandemic (cf. Aday & Aday, 2020) — is open to partial nearshoring (60%) and buying ahead (100%). This is most likely due to the fact that the food industry — especially large supermarket chains — were experiencing a crucial surplus demand during the pandemic. Large multinationals were experiencing "insufficient quantity due to slower production in the chain" (see respondent 54, Annex — complete sample, excel sheet).

Table 18. Expected changes in procurement — productive sectors

Cross table with question 19: "Which changes in the procurement strategy of your company could you imagine?" by productive industries (question 7)									
Question 19 Response options	Question 7: productive industries								all (group 1) (21 respondents)
	construction	food	metal	machine	automotive	textile	chemical	oil	
partial reshoring	0%	20%	0%	0%	50%	50%	0%	100%	24%
partial nearshoring	0%	60%	33%	50%	75%	0%	33%	0%	43%
buying ahead	100%	100%	67%	50%	50%	0%	33%	0%	57%
no changes at all	0%	0%	33%	0%	0%	50%	33%	0%	14%
other	0%	0%	0%	0%	0%	0%	33%	0%	5%
<b>SUM</b>	100%	180%	133%	100%	175%	100%	132%	100%	143%

\*The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

Figure 32. Q20: Perceived probability of shifts in procurement



As for question no. 20 ("Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?", see figure 32), respondents were asked to provide their personal opinion on whether there was a tendency of their respective company to implement reshoring or nearshoring strategies (excluding those, who are already merely purchasing from domestic companies), or whether they expect supply chain changes to be rather unlikely in their company, or whether there might actually be another tendency of exploring new markets abroad.

The results are rather widely spread, however, it has to be noted that, as for this question, multiple answers were possible, thus, some respondents, for example, said they think "purchasing from domestic companies is quite likely" (21%), as well as "purchasing from neighboring countries is quite likely" (31%). Then again, merely 16% of the respondents said their companies are still exploring new markets abroad, whereas 25% said "no, changes of our supply chain are not very likely", and 13% said they see other problems: For example, one respondent, who is working with the most famous German bank said, "changes yes, however, not in the procurement strategy of our bank but rather in the form of cost-saving measures", another respondent, working as IT consultant in Germany, said "we mainly purchase IT and this sector is barely affected by the pandemic". Nevertheless, one respondent, working for the pharmaceutical industry, said "We are obligated to purchase finished pharmaceutical

products from Europe, as this is cheaper than purchasing the same products in Germany, whereas purchasing from companies outside of Europe is cumbersome due to legal regulations". These three commentaries of respondents demonstrate that not all industries might reassess their SCM. In fact, as for the service industries, some companies' supply chains might barely be affected at all. Most companies, however, might implement general cost-saving measures.

Table 19 (see below) shows that, as of group 2 (the pharmaceutical & medical sector), respondents seem to agree that they are purchasing from neighboring countries — 33% already to do so, while 47% believe their 'companies' (hospitals, pharmacies, and pharmaceutical corporations) would start purchasing from neighboring countries. This can be explained by the fact that the pharmaceutical industry will experience a shift in their procurement of pharmaceutical products, such as hygiene products and masks, etc., due to the political guidelines that were implemented by the European Commission in 2020. Ursula von der Leyen, President of the European Commission stated:

"The coronavirus pandemic has highlighted the vital need to strengthen our health systems. This includes access to safe, effective and high-quality medicines at an affordable price. In the challenging economic and social times the EU is currently facing, the strategy adopted today will ensure that Europe and Europeans will continue to benefit from such medicines. I call on Member States and the Parliament to endorse this approach which will be rolled out in the next three years, and beyond." (Leyen, von der, 2020, November 25).

*Table 19. Perceived probability of shifts in procurement by industry*

**Cross table with question 20: "Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?" and question 7 (industries)**

Question 20  Response options	Question 7: industries				all  (61 respondents)
	group 1 productive industries: metal, machine construction, automotive, textile, food, chemical, oil (21 respondents)	group 2  pharmaceutical & medical sector (15 respondents)	group 3  IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
<b>domestic</b>	14%	33%	20%	20%	21%
<b>neighboring</b>	38%	47%	20%	10%	31%
<b>exploring new markets</b>	33%	0%	13%	10%	16%
<b>no, already dom. &amp; neighb</b>	19%	33%	13%	20%	21%
<b>no changes likely</b>	33%	0%	40%	20%	25%
<b>other</b>	5%	7%	20%	30%	13%
<b>SUM</b>	142%	120%	126%	110%	127%

\*The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

As for group 1, both shifts towards purchasing from neighboring countries as well as exploring new markets abroad are estimated as probable solutions. In contrast, group 3 (IT development, banks & insurances, and consulting) rather assume their companies will not shift the supply chain — which is reasonable to assume, as IT and consulting, first, do not have extensive supply chains and, second, as these industries merely purchase IT products and advisory services (see question 11).

As for question no. 21 (see below, table 20), respondents were asked to provide their personal opinion on certain statements (for a more detailed version of each of the statements for this question, see question 21 in Appendix I, English version of the questionnaire). The five statements of this question describe different strategies of maintaining supply chains in difficult times. In the first statement, respondents were asked whether searching for other suppliers for certain products in these times would be strategy for their company. The second statement describes the strategy to minimize the risk of not having enough supplies on time by searching additional suppliers. Statement three implies the openness to suppliers anywhere in the world. Statement four and five describe strategies of risk.

Table 20. Q21: Statements on different strategic SCM options

Question 21 Response Options	no, I do not agree at all (1)	no, I do not agree so much (2)	I'm undecided (3)	yes, I agree to some extent. (4)	yes, I completely agree. (5)	I don't know. (0)	TOTAL	Ø
I think it is likely my company will shift the purchase of certain products to other suppliers.	15%	26%	7%	38%	7%	8%	101%	2.95
In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	13%	15%	10%	43%	12%	8%	101%	3.27
I do believe my company will search for suppliers in other countries anywhere in the world.	12%	25%	21%	26%	8%	8%	100%	2.95
I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	20%	21%	25%	15%	7%	13%	101%	2.62
I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	18%	20%	20%	20%	10%	13%	101%	2.81

\* The total percentage share might slightly exceed 100%, as numbers were rounded up

Table 20 merely shows slight differences between the five statements, concerning the respondents' agreement or disagreement to the respective statements. There are both

approving and disapproving votes for each statement. The general strategy of seeking out to other suppliers is scored less than 3 points (2.95 average value). The strategy of seeking additional suppliers as a precaution in these difficult times receives the most support, with an average value of 3.27. The cosmopolitan strategy of seeking suppliers in other countries somewhere in the world receives a balanced assessment, i.e., equal approval and disapproval with 2.95 points. The possibility of nearshoring, i.e., transferring the supply chain to neighboring countries, is rated less positively at 2.81 points. The relatively least favorable classification is given to the strategy of reshoring to the home country with 41% disapproving and only 22% approving respondents and an average of 2.62 points.

Overall, respondents seem to agree that the difficult economic situation of global trade in times of the pandemic necessitates a reaction. The majority of respondents seems to hold the view that their companies would search for new or additional suppliers, whereas merely a minority believes their companies would implement reshoring or nearshoring. There seems to be a tendency towards searching for new suppliers, however, rather in neighboring countries or even further abroad, not so much in the company's original country.

With regard to question 21, two imaginable factors were investigated more detailed: a) the size of the enterprise; and b) the different sectors the respondents are working with — assuming that productive sectors would need a more widespread network of suppliers than service sectors would aim at. Investigating the first possible factor, the size of the company, no significant difference was found. Respondents working with larger companies did not provide answers differing from the average of all respondents.

Investigating the different sectors (see below, table 21), however, some interesting details could be found: Group 3 — consisting of IT development, consulting, banks and insurances — seems to aim less at new SCM strategies, the sum of points for all five statements is considerably lower compared to the other three groups. The statement aiming at additional suppliers, in order to mitigate the risk of delivery delays is well appreciated in the three remaining groups (group 1: 3.35 points, group 2: 3.53 points, group 4: 3.63 points; see table 21). Respondents of group 2 — pharmaceutical sector and medical sector — emphasize as well the strategy of reshoring to the home country, which is in line with the argumentation of European governments to settle the production of pharmaceutical and medical products at home (cf. Leyen, von der, 2020, November 25), in order to avoid delivery delays in times of the pandemic. The opposite applies to group 1 (productive sectors) and

group 4 (other service sectors): As for these two groups, the statement endorsing the reshoring strategy gets the lowest average value. As for group 4 — other service sectors, such as logistics, energy supply, education, administration, etc. —, it is most obvious that this group simply does not have a large supply chain and, thus, does not experience problems. As for group 1 — productive industries — most respondents have a rather reserved attitude towards reshoring. This is most likely due to the fact that purchasing from abroad is substantially more cost-effective. Nevertheless, this group still seems to be searching for new suppliers, however, not in the company’s home country but rather in neighboring countries or even further away: The statement "suppliers in other countries anywhere in the world" received the highest score (3.53) by group 1 (productive sectors). This can be interpreted as the need of productive sectors — even in times of the pandemic and difficulties in global trade — to find a sufficient number of suppliers at the best possible economic conditions, ensuring the lowest prices.

Table 21. Statements on different strategic options by sectors

Cross table with question 21: Statements on different strategic SCM options and question 7 (industries)					
Question 21  Response options	Question 7: industries				all  (61 respondents)
	group 1 industries: metal, machine construction, automotive, textile, chemical, oil (21 respondents)	group 2  pharmaceutical & medical sector (15 respondents)	group 3  IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
shift to other suppliers	3.10	3.33	2.46	2.63	2.95
additional suppliers	3.35	3.53	2.62	3.63	3.27
suppliers worldwide	3.53	2.53	2.62	2.89	2.95
reshoring	2.44	3.36	2.23	2.38	2.62
nearshoring	2.80	3.00	2.64	2.75	2.81

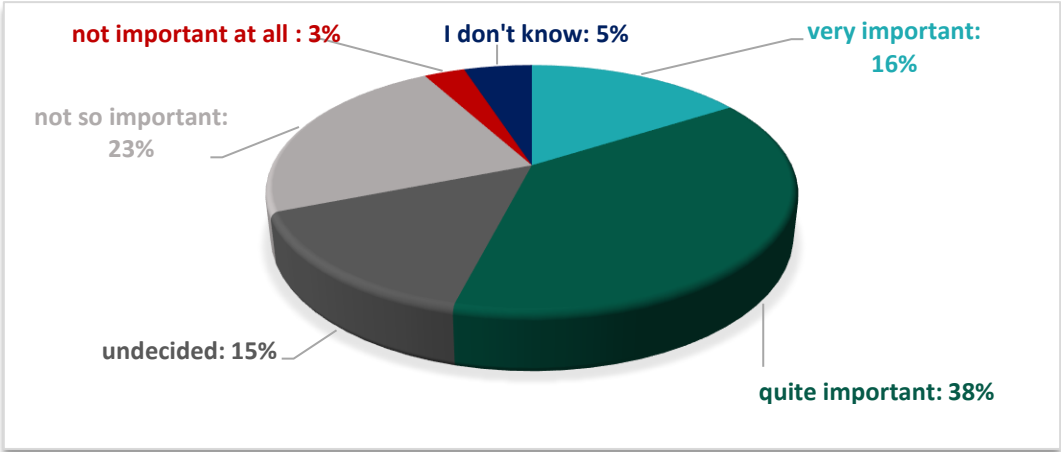
\*The numbers are average values

Questions 22 and 23 were designed, in order to investigate whether sustainability was or was not a decisive factor for companies to implement reshoring or nearshoring strategies. The expectation was that sustainability was not a decisive factor for companies to implement reshoring or nearshoring but rather the problematic situation of the supply chains and delivery delays in times of the pandemic.

The results of questions 22 and 23 show exactly that. First of all, figure 33 (see below) shows the overall results of answers of all 61 respondents to question 22: 23% think

sustainability is "not so important" for their company, 38% think it is "quite important", 16% think it is "very important", and 15% are "undecided", 3% think sustainability was "not important at all" to their company. The respondents had to choose the answer to question 22 on a scale (see below, figure 33), ranging from 1 (not important at all) to 5 (very important). Assuming those respondents who answered "undecided" in the middle of the scale (see figure 33) do not attach too much importance towards sustainability (or do not think their company does), then it can be argued that 41% of the respondents think their company does not attach much importance towards sustainability and 54% think their company does attach importance towards sustainability (and 5% do not know).

Figure 33. Q22: Perceived importance of sustainability for the company



Having this in mind, it is interesting to examine which of the respondents, who said in Q19 they could imagine the implementation of reshoring or nearshoring, also said in Q22 their company does attach importance towards sustainability, in order to find out whether there was a correlation between the tendency towards reshoring or nearshoring and importance of sustainability. In order to be able to exclude that part of the respondents, who said their company would show tendencies towards (partial) reshoring or (partial) nearshoring merely due to the fact that their company attaches importance towards sustainability (which could also be a reason to implement reshoring or nearshoring), therefore, questions 22 and 23 were generated on sustainability.

Table 22 (see below) proves there is no correlation between "importance of sustainability" (Q 22) and the tendency towards "partial reshoring" or "partial nearshoring" (Q19): In total, merely two respondents stated sustainability was "not important at all" to their



company, 1 out of those 2 respondents (50%) said "partial reshoring" and "partial nearshoring" was conceivable, the other one did expect "no any changes at all".

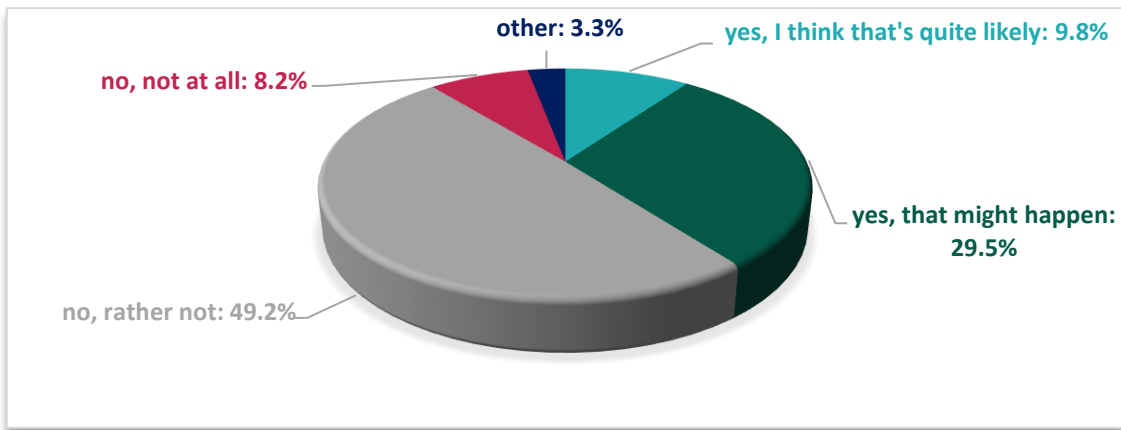
In total, 14 respondents said sustainability was "not so important" to their company, 29% of them said "partial reshoring" was conceivable, 43% of them said partial nearshoring was conceivable, and 71% stated they could rather imagine their company buying goods ahead. 9 respondents stated they were "undecided" concerning how much importance their company attaches to sustainability, 44% of them could imagine "partial reshoring" and 67% of them partial nearshoring, as well as 67% of them stated "buying ahead". The proportion of those respondents who stated sustainability was either "quite important" or "very important" to their company could less imagine their company to implement reshoring or nearshoring (see above, table 22). Reshoring and nearshoring tend to be driven less by reasons of sustainability but rather by pragmatic, i.e., economic considerations.

**Table 22. Importance of sustainability and tendency towards reshoring and nearshoring**

Cross table with question 19: "Which changes in the procurement strategy of your company could you imagine?" and question 22 ("According to your personal perception, how much importance does your company attach to sustainability")						
Question 19 Response options	Question 22: importance of sustainability					all (61 respondents)
	not important at all (2 respondents)	not so important (14 respondents)	undecided (9 respondents)	quite important (23 respondents)	very important (10 respondents)	
partial reshoring	50%	29%	44%	26%	10%	28%
partial nearshoring	50%	43%	67%	30%	0%	33%
buying ahead	0%	71%	67%	30%	40%	44%
no changes at all	50%	14%	11%	39%	40%	31%
other	0%	0%	0%	9%	20%	6%
<b>SUM</b>	150%	157%	189%	134%	110%	142%

As already mentioned before, questions 22 and 23 were merely generated in order to examine whether sustainability was an influencing factor for companies to implement reshoring or nearshoring. Question 22 was designed in order to examine which companies do attach importance towards sustainability, whereas question 23 was designed in order to examine whether those companies who do attach importance towards sustainability (Q22), would also be willing to pay for it (Q23).

Figure 34. Q23: Disposition to invest in more sustainable SCM



It is obvious the questions concerning sustainability are closely related. Respondents who believe sustainability is important are also more likely to believe that the company is willing to pay more for products produced either in the home country or in neighboring countries, in order to achieve a greater degree of sustainability. Those who do not believe their company is as attached to sustainability are consistently (93%) convinced their company would not invest in sustainability (see below, table 23).

Table 23. Correlation of importance of sustainability and readiness to pay for it

Cross table with question 22: "According to your personal perception, how much importance does your company attach to sustainability" and question 23: "Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?"						
Question 23 Response options	Question 22: importance of sustainability					all (61 respondents)
	not important at all (2 respondents)	not so important (14 respondents)	undecided (9 respondents)	quite important (23 respondents)	very important (10 respondents)	
yes, quite likely	0%	0%	0%	9%	40%	10%
yes, might happen	0%	7%	11%	52%	30%	30%
no, rather not	0%	93%	78%	30%	20%	49%
no, not at all	100%	0%	0%	9%	0%	8%
other	0%	0%	11%	0%	10%	3%
<b>SUM</b>	100%	100%	100%	100%	100%	100%

Table 24 (see below) shows the correlation of respondents believing their company might face changes in procurement and their company's readiness to pay for sustainability. The table shows that, e.g., 50% of respondents who answered "no, rather not" to Q 23 said at the same time that their company was implementing partial nearshoring. This gives rise to the assumption that sustainability might not be an important factor for companies to implement nearshoring strategies.

Table 24. Expected changes in procurement and readiness to pay for sustainability

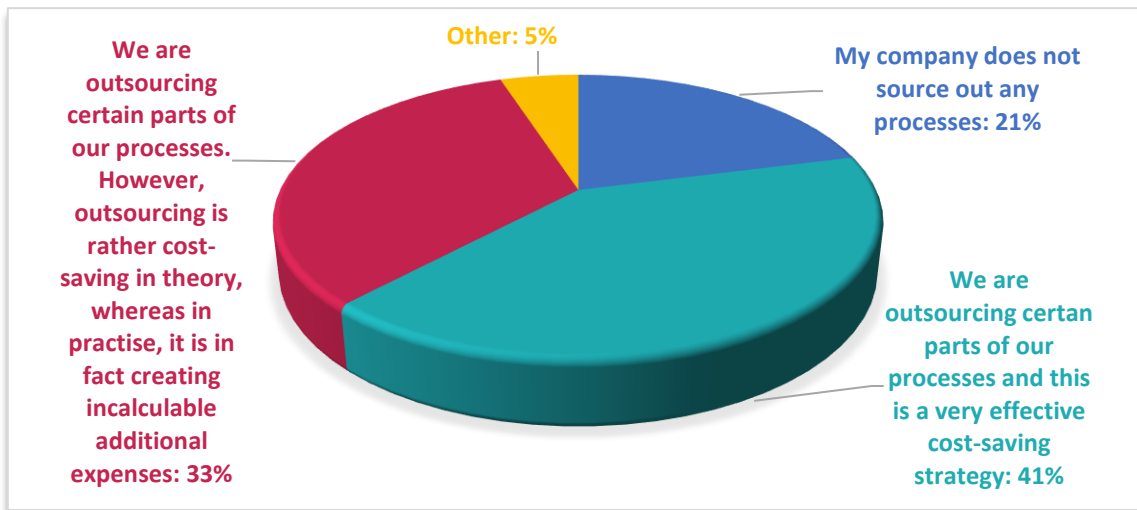
Cross table with question 19: "Which changes in the procurement strategy of your company could you imagine?" and question 23: "Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability? "					
Question 19 Response options	Question 23: readiness to pay for sustainability				all (61 respondents)
	yes, quite likely (6 respondents)	yes, might happen (18 respondents)	no, rather not (30 respondents)	no, not at all (5 respondents)	
partial reshoring	17%	28%	30%	40%	28%
partial nearshoring	0%	22%	50%	20%	33%
buying ahead	33%	44%	57%	0%	44%
no changes at all	33%	22%	27%	60%	31%
other	17%	11%	0%	0%	6%
<b>SUM</b>	100%	127%	164%	120%	142%

\*In each column, number of answers might exceed 100%, as respondents were allowed to provide multiple answers to Q19.

Question 24 ("According to your personal opinion, how beneficial is the process of outsourcing in your company?") was designed, in order to examine, first, how many of the companies in the present sample are outsourcing certain parts of their supply chain and, second, whether a possible reason to implement reshoring or nearshoring might be due to the simple fact that some companies might not be satisfied with the parts they are outsourcing.

Most of the companies are outsourcing at least parts of their supply chain, merely 21% said "My company does not source out any processes". Three fourths of all respondents state their company is outsourcing certain parts of the chain. The major part of them (41%) is convinced that "this is a very effective and cost-saving strategy". Nevertheless, 33% are rather skeptical and believe that this strategy was "rather cost saving in theory, whereas in practice, it is in fact creating incalculable additional expenses" (however, as a great amount of respondents was also interviewed in person — on top of the online questionnaire — it should be mentioned that a great majority of those respondents, who believe outsourcing was rather creating incalculable additional expenses, are rather outsourcing parts of their supply chain within their country of origin or in neighboring countries, thus, in Europe, where workforce is still much more expensive as opposed to workforce in Asia, for example).

Figure 35. Q24: Perceived benefits of outsourcing



On the whole, the companies involved in this investigation are not only purchasing intermediate goods but a great part of them also sells goods (some of them sell final products to the end consumer, others sell their goods to other companies, who use these products as intermediate goods). With regard to the perspective of sales, respondents were asked two questions: One question concerning the regional destinations of the companies' sales markets (Q25: "In which regions does your company sell its products/services?") and another question concerning decreases in sales in times of the pandemic ("Q26: "In the course of the COVID-19 pandemic, did you perceive a decrease in sales?"). The first question (Q25) shows: Europe is the main sales region, even more clearly than with the procurement. Nearly all companies in this sample (79%) are selling their products in Central/Western Europe (where the majority of the companies involved are based). The other European regions — Southern, Northern and Eastern Europe — are named by one in two respondents.

The following rank order shows some differences to the geographical distribution of the same companies concerning the procurement of their (intermediate) products: European regions are followed by North and South America, the Southern African region and countries in Western Asia. China is less important as a destination for selling goods (28% of the respondents name China), as compared to China's position as a region where European companies are purchasing intermediate products (41% of respondents).

Figure 36. Q25: Regions in which the companies sell products/services

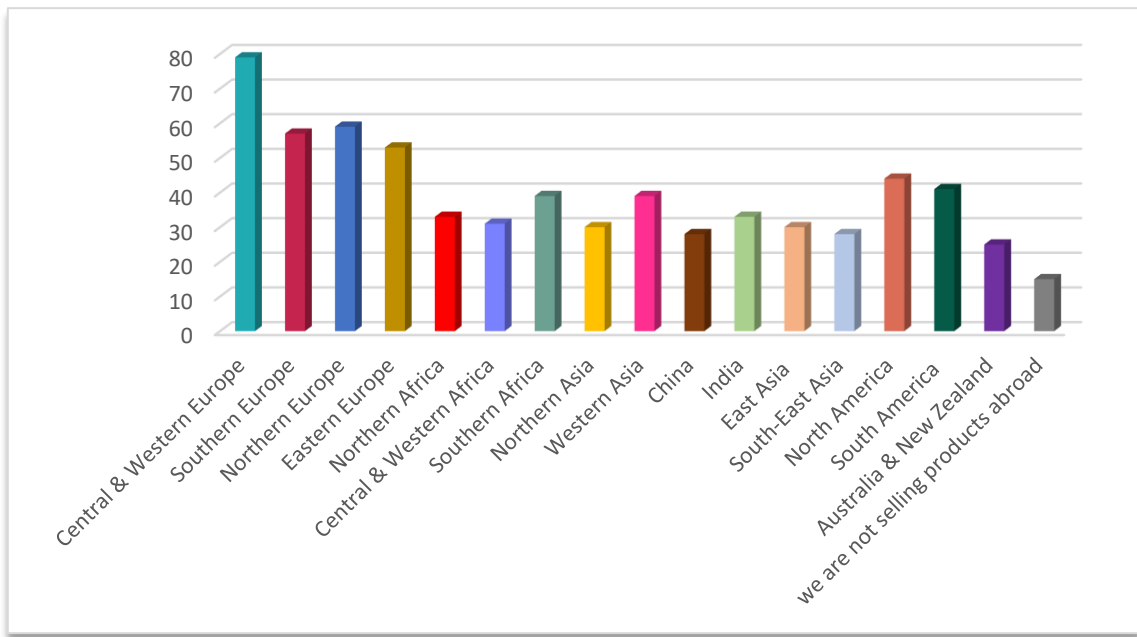


Table 25. Sales markets by industries

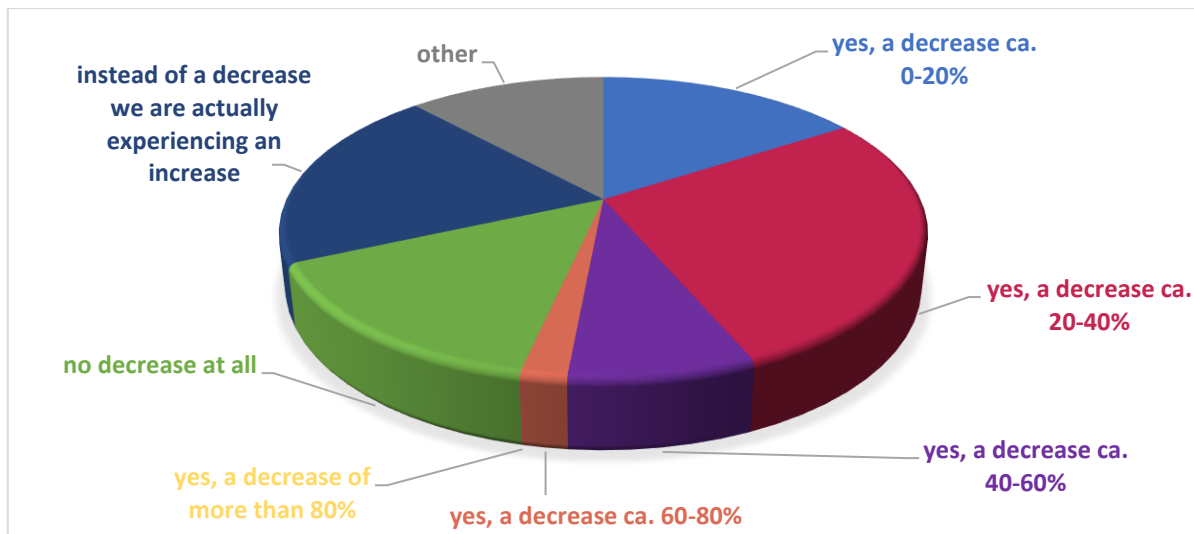
Cross table with Q25:"In which regions does your company sell its products/services?" and Q7 (industries)					
Question 25  Response options	Question 7: industries				all  (61 respondents)
	group 1 productive industries: metal, machine construction, automotive, textile, food, chemical, oil (21 respondents)	group 2  pharmaceutical & medical sector (15 respondents)	group 3  IT development, consulting, banks & insurance (15 respondents)	group 4 transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
Central/Western Europe	91%	60%	87%	70%	79%
Southern Europe	71%	47%	53%	50%	57%
Northern Europe	67%	53%	53%	60%	59%
Eastern Europe	57%	47%	53%	50%	53%
Northern Africa	48%	40%	13%	20%	33%
Central/Western Africa	33%	40%	27%	20%	31%
Southern Africa	52%	40%	27%	30%	39%
Northern Asia	33%	40%	20%	20%	30%
Western Asia	48%	47%	33%	20%	39%
China	43%	27%	13%	20%	28%
India	43%	40%	20%	20%	33%
East Asia	38%	40%	13%	20%	30%
South-East Asia	33%	33%	20%	20%	28%
North America	48%	40%	60%	20%	44%
South America	57%	33%	33%	30%	41%
Australia & New Zealand	29%	20%	27%	20%	25%
not selling abroad	0%	33%	7%	30%	15%

\*The number of SUM exceeds 100%, as respondents were allowed to choose multiple answers.

Nevertheless, this is less procurement from China than expected, however, it has to be taken into account that a great amount of respondents are working in service sectors and, thus, their companies logically do not purchase a large amount of goods in China. Therefore, question 25 was crossed with question 7 (industries), in order to find out whether the productive sectors would sell more goods to China — and this proved to be only partially true (see below, table 25): Sales markets by industries: Although China is an important sales market for the productive sector (43% of group 1 are selling goods to China), Western Asia seems to be slightly more important (48%). A rather important sales market for the productive sector is South America (57% respondents of group 1 are selling there), North America (48%). It is reasonable to assume that a great part of this percentage share can be traced to the automotive industry, as this industry has production facilities in both South and North America.

Dividing the sample into the four groups of sectors, Europe still remains the most important sales market for all of the four groups. The clearest example is the following: Central-/Western Europe is the most important sales market for group 1 (productive sectors), mentioned by 91% of the respondents in this group. In total, the number of sales regions abroad is much higher in the productive sectors as compared to the other groups. Strong sales regions for the productive sectors are especially South America (57%) and Southern Africa (52%), as well as Northern Africa (48%) and North America (48%). As for group 3 (IT development, consulting, banks and insurances), the main focus also lies on Europe, and, second, on North America. A possible explanation to this could be that IT companies, as well as consulting firms and banks, are often MNEs and have strong traditional ties to North America.

Figure 37. Q26: Perceived decrease in sales due to the pandemic



Question 26, 27, and 28 were designed, in order to investigate the severity of the impact of COVID-19 on the respective companies represented in this sample. Question 26 mainly focuses on the decrease in sales the companies experienced in the course of the pandemic. That the pandemic would bring a drop in sales was certain. Individual companies have suffered considerable losses: 1 respondent (2%) states a decrease in sales of approximately 60-80% (see figure 37). Furthermore, 8% of respondents state a decrease in sales of 40-60%, whereas the majority of respondents (28% of respondents) say they were experiencing a decrease in sales of 20-40%. Another 16% (of all respondents) notice a decrease of 0-20%. Nevertheless, some companies did not have a decrease in sales at all (other: 15% of all respondents), and a remarkable share of 20% of all respondents said their companies were actually experiencing an increase in sales (see above, figure 37).

The majority of respondents (27 out of 61) said their company was experiencing a decrease in sales of around 0-40% (see below, table 26). In a comparison of the countries, it is noticeable that in Germany there is a far below-average proportion of respondents (2.7%) who estimate the decrease in sales in a range of 40-80%. In other words, the situation in Germany is viewed more optimistically than in the other European countries. On the one hand, it can be assumed that this is due to a more stable economic situation in Germany. On the other hand, however, it is also due to the sectors represented in the group of German respondents. Among the German respondents, the pharmaceutical and medical sector is relatively well represented (15 respondents out of 36 respondents in Germany).

Table 26. Cross table Q26 und Q5

Cross table Q26: "In the course of the COVID-19 pandemic, did you perceive a decrease in sales?" and Q5 (country of workplace)												
Country of workplace	yes, 0-40%		yes, 40-80%		no decrease		increase		other		all respondents	
	Portugal	4	50,0%	1	12,5%	1	12,5%	1	12,5%	1	12,5%	8
Italy	4	80,0%	1	20,0%	-	-	-	-	-	-	5	100%
France & La Réunion	1	50,0%	1	50,0%	-	-	-	-	-	-	2	100%
Switzerland	-	-	1	33,3%	2	66,6%	-	-	-	-	3	100%
United Kingdom	-	-	1	33,3%	1	33,3%	-	-	1	33,3%	3	100%
United States	-	-	-	-	-	-	1	100,0%	-	-	1	100%
Saudi Arabia	1	100,0%	-	-	-	-	-	-	-	-	1	100%
Jordan	-	-	1	100,0%	-	-	-	-	-	-	1	100%
Belgium	-	-	-	-	-	-	1	100,0%	-	-	1	100%
Germany	17	47,2%	1	2,7%	5	13,8%	9	25,0%	4	11,1%	36	100%
<b>TOTAL</b>	<b>27</b>	<b>44,3%</b>	<b>7</b>	<b>11,5%</b>	<b>9</b>	<b>14,8%</b>	<b>12</b>	<b>19,7%</b>	<b>6</b>	<b>9,8%</b>	<b>61</b>	<b>100%</b>

Indeed, table 27 (see below) shows that the pharmaceutical and medical sector is by far the most "optimistic" when broken down by industry: a decrease in sales is only recorded in the lowest range, i.e., between 0-20%, and no respondent working in the pharmaceutical or medical sector states a higher percentage value for decreases in sales. Furthermore, no other industry has as many "increases in sales" statements. With 40% the pharmaceutical and medical sector is twice as strongly represented as on average. The explanation for this is obvious: In times of pandemic, products from this sector are particularly in demand.

Part of the food industry (3 respondents) noted increases in sales as well. It is reasonable to assume this is due to the fact that a great part of the population is spending more time in their own households ever since the outbreak of the pandemic and the lockdowns that went along with it. With all bars, restaurants, and cafés closed and working from home, there is a shift in demand from spending money on eating out, going on holidays, and eating at work towards purchasing household goods (at least this is the case for the so-called 'end consumer').



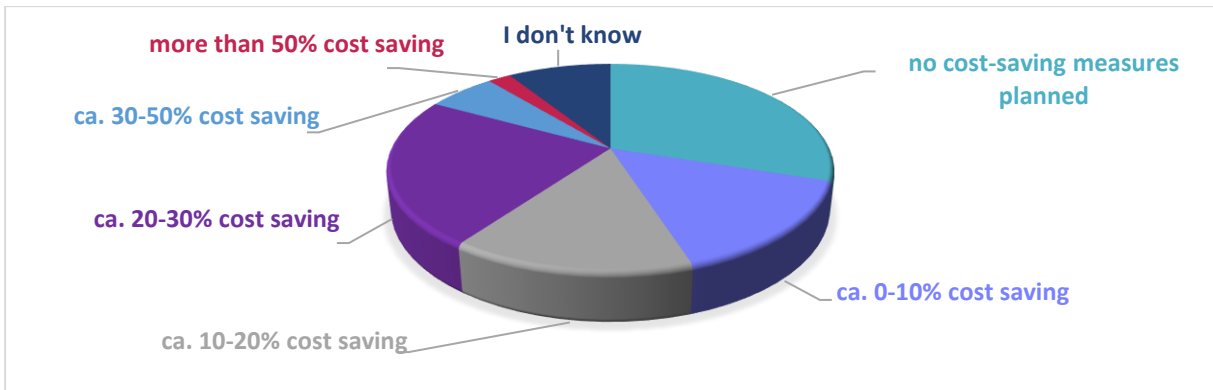
Table 27. Decrease in sales by industries

Cross table with question 26 ("In the course of the COVID-19 pandemic, did you perceive a decrease in sales?" and question 7 (industries)					
Question 26  Response options	Question 7: industries				all  (61 respondents)
	group 1 productive industries: metal, machine construction, automotive, textile, chemical, oil (21respondents)	group 2  pharmaceutical & medical sector (15respondents)	group 3  IT development, consulting, banks & insurance (15 respondents)	group 4  transport & logistics, energy supply, education, administration, retail, tourism (10 respondents)	
yes, 0-20%	10%	27%	13%	20%	16%
yes, 20-40%	38%	0%	40%	30%	28%
yes, 40-60%	14%	0%	13%	0%	8%
yes, 60-80%	5%	0%	0%	0%	2%
yes, more than 80%	0%	0%	0%	0%	0%
no decrease	10%	13%	27%	10%	15%
increase in sales	19%	40%	7%	10%	20%
other	5%	20%	0%	30%	12%
<b>SUM</b>	<b>101%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>101%</b>

\*The number of SUM might slightly exceed 100%, as numbers were rounded up.

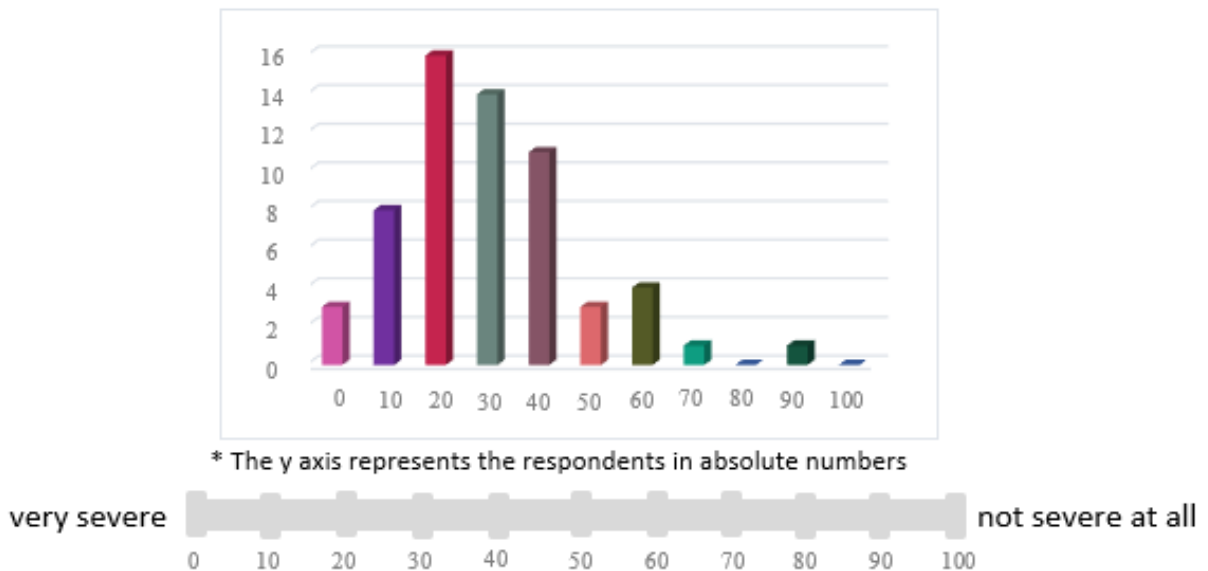
Question 27 (see figure 38) was designed, in order to examine the cost-saving measures the companies represented in the sample are implementing due to the pandemic. 30% of all respondents stated there were "no cost-saving measures planned", 15% of respondents say 0-10% cost-saving measures are implemented by their company, another 15% say their company is planning to implement 10-20% cost-saving measures, 23% of all respondents say their cost-saving might sum up to 20-30% in their company, 6% say it will be between 30-50% cost-saving, merely 2% say cost-saving measures might exceed 50% and another 9% do not seem to dare to give an opinion on this ("I don't know": 9% of all respondents).

Figure 38. Q27: Cost-saving measures due to the pandemic



The previous questions were all designed, in order to investigate the respondents' perception concerning the situation of his/her respective company in times of the pandemic. Questions 28 and 29 were rather designed, in order to gain insight into the respondents' general perception of the severity of long-term effects the pandemic might have — on global supply chains (question 28) and on respondents' individual national economy (as respondents in this sample are working in different countries), as well as on global economy (question 29). As for question 28, respondents were asked to evaluate the severity of the pandemic on global supply chains on a scale from 0-100 (with 0 corresponding to "very severe" and 100 corresponding to "not severe at all").

Figure 39. Q28: Perceived severity of long-term effects of COVID-19 on global supply chains



The result clearly shows: long-term effects on the global supply chains are regarded as rather severe. In total, respondents estimate the severity on the average with 29.67 points (arithmetic mean), corresponding to "rather severe". (30 points being nearer to 0 points =

"very severe", on a scale with 0-100 points, with 100 points corresponding to "not severe at all"). Merely a minority of 6 respondents are rating this question with 60 points or more (60 points = "less severe"). None of the respondents rate the situation as = "not severe at all".

Overall, respondents estimate remarkable long-term effects of COVID-19 on global supply chains. This estimation also implies skepticism whether the world could find back to conditions as before the virus and — on the long run — without pandemics with severe consequences. At least that is the estimation in autumn of the year 2020.

*Table 28. Perceived severity of the effects of the pandemic by size of company*

Cross table Q 28: "According to your personal opinion, how severe might be the long-term effects of the pandemic?" by Q6 (size of enterprise)			
<b>1-49 employees (14 respondents)</b>	<b>50-500 employees (18 respondents)</b>	<b>&gt; 500 employees (29 respondents)</b>	<b>all (61 respondents)</b>
21,43	28,33	34,48	29,67

\* numbers in this table represent arithmetic means, higher numbers represent a more favorable estimation and lower numbers a more severe estimation of the effects of the pandemic

The result of the preceding cross-table is: The larger the company, the fewer concerns employees seem to have about the long-term effects of the pandemic.

In the course of the present survey, questions 1-28 were multiple choice questions, asking the respondents concerning their personal opinion on the current situation with COVID-19 and its impact on economy and their respective company. All these 28 questions were mandatory for the respondents, in order to proceed with the questionnaire. Question 29 ("What do you think might be long-term effects of COVID-19 for the supply chain of your company, your national economy, and global trade?") was an open question, which was not mandatory. As for this question, respondents were invited to express their thoughts on the impact of the pandemic on global economy, national economy, as well as on their company and its supply chain. As the answers of many respondents were quite similar, the answers were grouped and classified (see below, table 29)<sup>1</sup>. Many respondents provided several remarks on different issues, hence, the answers were encoded in a similar way as answers in former questions, when respondents were able to provide multiple answers to one question.

<sup>1</sup> For a detailed documentation of these commentaries, please see Appendix II, transcription of answers of all respondents to Q29.

Table 29. Evaluation of Q29 — answers of respondents

<b>Foci of answers of all respondents to question 29</b>	
<b>General evaluation of severity and duration of the pandemic</b>	
no changes	12
not so severe	1
very severe	8
recovery 1-2 years	4
recovery 3-5 years	5
merely short-term changes in SCM	7
longer-term/long-term changes in SCM	6
<b>Micro- and macroeconomic level</b>	
global economy will not suffer	5
global economy will suffer	10
national economy will not suffer	3
national economy will suffer	8
companies will not suffer	1
companies will suffer	7
<b>Effects</b>	
shifts in demand in certain industries	9
SMEs insolvency	4
decrease in revenues / purchasing power	3
job losses / drop in income / short-time work	7
cost-cutting measures	4
<b>Strategic SCM changes</b>	
extension of outsourcing	2
perpetuation of offshoring	2
procurement more local	12
a) thereof merely nearshoring	6
b) thereof merely reshoring	3
buying ahead / on stock	2
extension of supplier network	1
reduction of supplier network	2
<b>External effects</b>	
governmental interference	4
positive effect of vaccination	4
<b>Other</b>	
I don't know	11

With regard to the uncertainty of the current situation of pandemic and a possible vaccination (which was not for certain in the fourth quarter of 2020, when most of the respondents answered to this questionnaire), it is not surprising that a certain amount of respondents — 11 (in absolute figure) out of 61 — states: "I don't know" or does not give an answer at all. Part of the respondents provide a rather general evaluation of the severity and duration of the pandemic. Others provide their impression of the impact on economy on both

macro- and microeconomic level. Another part is rather concerned about their respective companies, affected industries, and changes in supply chains. Finally, some of the respondents debate governmental policy in times of the pandemic as well as possible effects of vaccination (which did not yet start at the time the present survey was carried out at the end of the year 2020).

Within the group of answers providing a general evaluation of the pandemic (see table 29), there were optimistic views as well as hesitating estimations, and pessimistic views. Respondents with a rather optimistic view do not seem to expect changes at all (in absolute numbers: 12 out of 61 respondents). One respondent even believes the pandemic was "not so severe", others merely expect short-term changes for the economy in general, as well as for SCM (7 respondents). In contrast, some respondents hold rather pessimistic views, regarding the pandemic and its impact on economy as very severe (8 respondents). They expect a recovery of the economy at earliest in 3-5 years (5 respondents), some anticipate the need for long-term changes in SCM (6 respondents). Or in the wording of one respondent: "Businesses and governments are already shifting their operations to accommodate for the effects of COVID-19 and I don't see everything going back to normal even if the pandemic ends." (respondent no. 10). Those respondents speaking out about economy — either on a micro- or on a macroeconomic level — seem to be more doubtful in general. 10 out of 61 respondents said the global economy will suffer (some of which believe severely), as compared to merely 5 respondents stating the opposite. Same applies to the level national economy and the level of company — thus, the majority of respondents rather believe the impact was severe.

Part of the respondents discuss concrete developments concerning the working conditions: short-time work, job losses, drops in income (7 respondents). Others perceive or expect shifts in demand in certain industries (9 respondents). The expectancies regarding changes in SCM were differentiated: extension vs. reduction of supplier network, offshoring or buying ahead (purchasing on stock). The most prominent expectation in this regard is a change to more local procurement (12 respondents mentioned this), partially substantiated as nearshoring or reshoring. In total, the respondents' perception could be characterized as a mixture of hope and careful skepticism. Or in the wording of a respondent: "National economies will recover in the foreseeable future. Some countries that are not in such a strong economic position will still have to work for some time to make up for declines in production.

The globality of trade will decline by a few percent in the long term." (see Annex, respondent no. 46).

A handful respondents were also concerned about other things, e.g., one respondent believed the pandemic would increase social disparities (see Annex, respondent 43, working in La Réunion). This is also true for other parts of the world. For example, in Brazil, the coronavirus disease even aggravated the inequality between rich and poor: "Coronavirus death rates expose Brazil's deep racial inequalities." (Kamps, 2020, p. 457). The situation in Great Britain appears to be similar: "People living in the poorest areas of England and Wales have been twice as likely to die from Covid-19 as those in less deprived areas, according to figures from the Office for National Statistics." (Devlin & Barr, 2020). Also, in the U.S. scientists are concerned: "The coronavirus disease 2019 (COVID-19) pandemic has exposed the consequences of inequality in the US." (Metzl, Maybank & de Maio, 2020, June 4).

## **5.5 Main results of the survey**

The group of respondents is predominantly composed of young adults (half 18-30-year old, one third 30-40-year old). 15 different nationalities are represented, half are German respondents. They work in companies of various sizes; almost every second person is employed in a company with more than 500 employees.

Almost all respondents (90%) expect an impact of the pandemic on global SCs. The dependence of the companies on supplies from abroad is clear: in 60% of all cases, the companies purchase at least one third of the intermediate goods from abroad - with suppliers all over the world, with a clear focus on Europe, but also on Asia (China and India).

The majority of respondents answered in the affirmative to the question of whether the pandemic caused a disruption and/or a change in procurement in 2020. The problems were primarily delivery delays, less frequently the risk of bankruptcy of a supplier. It is rather the small companies that fear delivery delays (84% of the respondents in this group); possibly because they have only a few suppliers and are therefore particularly dependent on the few existing business relationships. A majority of all respondents consequently expect a change in procurement (20%: yes, for sure; 43%: I could imagine that). Employees in service sectors are less likely to expect changes in procurement strategy than those working in the manufacturing sector.

Important expected changes in strategy are reshoring and nearshoring on the one hand, and the strategy of integrating additional suppliers on the other. Sustainability still seems to play a minor role in the companies, however, this topic was only addressed with a few questions in the survey.

The impact of the pandemic is not only reflected in procurement but also in the sales of the companies. More than half of the respondents experienced a decrease in sales in their company. However, one in five also reported an increase in sales, especially in the pharmaceutical and medical sectors (40% report an increase in sales), but also in productive industries (19%).

At the end of the survey, respondents were asked to provide their personal opinion on possible long-term effects of COVID-19 on the supply chain of their respective company, their economy as well as on global economy. The answers showed clearly that the population believes global and national economies will definitely suffer from the pandemic. Shifts in demand in certain industries are anticipated. Concerning procurement strategies of the companies, the respondents expect a greater geographical proximity in the organization of the supply chains.

## **6. Conclusion**

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There have been economic crises and health pandemics in previous decades and centuries. Hardly any crisis has been so comprehensive in both aspects. The health aspect has become global and seems to be designed for a longer duration. The economic consequences are obvious: In 2020 GDP fell significantly in most developed and in developing countries. In many countries there were and still are millions of unemployed. Many governments followed the advice of Keynes: If there is not enough private demand when the economy slumps, the state should intervene in order to break a vicious circle (Keynes, 2017).

Falling GDP and rising unemployment rates are triggered by the pandemic, the subsequent lockdowns, and finally by the disruptions of the supply chains. Social inequality within countries appears to be on the rise. Low-paid and precarious jobs are the first to be affected by the lockdowns. Cultural events and gastronomy are severely hampered by curfews. With repeated border closures, tourism is affected, but so is the cross-border

transport of goods. In 2020/21 supply chains for certain primary products such as steel or semiconductors, lumber or food and a lot of others suffered from interruptions.

Supply chains have become much more important in recent decades in the context of globalization. But even before the pandemic, questions were being raised in national economies about which forms of sourcing strategies could be truly beneficial for which industries and companies. In this paper, an attempt has been made to analyze these concepts and to interrogate them as to what advantages and what disadvantages are associated with the various strategies.

At the same time, the public discussion about ways to mitigate climate change has gained momentum in recent years. Economies need to be prepared for both, a policy to contain climate change as well as a policy to deal with the pandemic in one form or another. In part, lockdown strategies have already been helpful in slowing climate change. During lockdowns, drastic restrictions were imposed on tourist travel and transport of goods. As a result of the restrictions, less fuel was used for months around the world and thus less CO<sub>2</sub> was emitted.

Developing new forms of SCM, it will be useful to consider environmental aspects at the same time. This is done comprehensively in Closed Loop Supply Chain Management (Kumar & Kumar, 2013), which strives to combine economic success, social aspects and ecological aspects. The aspect of environmental awareness concerns logistics, above all the possibility of recycling products.

The fragility and the already experienced disruptions of the global supply chains cause employees in the productive economy to think about changing the strategies of the supply. In the survey conducted in this work, many respondents were in favor of the reorganization of supply chains. In their opinion, suppliers should be located closer to their own company. This should be achieved by reshoring or by nearshoring from the outset. Another way to increase a company's resilience is expected to be through the strategy of increasing the number of suppliers in any case. A good proportion of respondents, albeit from a small sample, see the need for systematic supply chain management after their experiences during the pandemic.

The attempt to recruit stakeholders from the business community for this study had its limitations: As a student, it is not easy to find responsible interview partners in large industrial companies and trade organizations. For this reason, access to respondents was informal - i.e., via acquaintances and snowball system. Employees from various industries



were invited to participate in a written survey. A systematic sample, covering the different industries, would be desirable for further investigation. Involving actors from business organizations (chambers of commerce, business associations), e.g., with intensive interviews, could be useful.

As the pandemic is still ongoing, the results of this dissertation cannot provide a final result on the impact of the pandemic on global supply chains for the future – however, this dissertation provides a first insight into the current situation, caused by the pandemic, and the consequences for global SCs.

There is hope that the pandemic has given societies pause to think about the future for "a fairer, greener future" (Maleret & Schwab 2020, p. 57). The discussion on supply chains, both globally and nationally, is supported by political initiatives for sustainability in terms of environmental protection, compliance with social standards in production, and appropriate corporate governance. Protection of the environment encompasses various aspects in order to stop climate change and conserve resources. Social standards include in particular occupational health and safety, pay equity and diversity. The governance aspect includes acceptable compensation for the company's Supervisory Board and Management Board, as well as anti-corruption measures. These goals are currently being put into practice in Germany with the "Supply Chain Sourcing Obligations Act" ("Lieferkettensorgfaltspflichtengesetz"), passed by parliament in June 2021 (BMZ 2021). It is hoped that this will be followed by a European initiative. Thus, periods of upheaval caused by the pandemic could contribute to the realization of ESG (environmental, social, governance) goals. It should be the time to rethink the way the global economy works.

At present, a positive and a negative development of the situation can be anticipated: The positive development is that the vaccinations could be implemented much faster than it was predictable at the beginning of the pandemic in 2020. The negative development is that the pandemic continues, first, because part of the population does not want to be vaccinated, as some do not trust the various vaccines (Biontech, Moderna, Astrazeneca, Johnson & Johnson, etc.). Second, the pandemic lasts longer than expected, since modified and even more aggressive variants of the virus have appeared in the course of the pandemic. Thus, the further development is not yet clearly predictable at the current time.

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## Appendix I. Questionnaire in English



### The Conceivable Impact of COVID-19 on Global Supply Chains — A Survey

Hello! Thank you very much for participating in my survey! The aim of this questionnaire is to find out how professional staff assesses the impact of the current pandemic on global supply chains. As for this survey, concerning the effects of the pandemic on global trade and global supply chains, your personal opinion is important. We guarantee the anonymity and confidentiality of your responses.

#### 1. Please select your age.

- 18-30 years     30-40 years     40-50 years     50-60 years     > 60 years

#### 2. Please select your gender.

- female     male

#### 3. What is your educational background?

- High school degree  
 Apprenticeship  
 Bachelor's degree  
 Master's degree  
 Doctor / PhD

#### 4. Please enter your nationality or nationalities, in case you have more than one.

\_\_\_\_\_

#### 5. In which country do you work? \_\_\_\_\_

#### 6. What is the size of your enterprise?

- 1-9 employees     10-49 employees     50-249 employees     250-500 employees     > 500 employees

**7. What industry is your company primarily associated with?**

- construction industry
- food industry
- metal industry
- automotive industry
- machine construction/mechanical engineering
- textile industry
- IT development
- chemical industry
- pharmaceutical industry
- medical sector
- energy supply
- consulting (IT-consulting, management consulting, tax consulting, audit, etc.)
- tourism
- banks and insurance companies
- education / administration
- transport & logistics
- retail
- other: \_\_\_\_\_

**8. Which of the following best describes your department?**

- Accounting & Finance
- Advisory
- Human Resources
- IT
- Marketing
- Medical Care
- Procurement
- Production
- Research & Development
- Sales
- Other: \_\_\_\_\_

**9. Since when are you working for your current company?**

- < 1 year
- 1-5 years
- 5-10 years
- > 10 years

**10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?**

- yes, definitely
- no, rather not
- I don't know
- yes, that's quite likely
- no, definitely not
- Other: \_\_\_\_\_

**11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?** *Multiple answers are possible.*

- metal products
- adhesives
- textile products
- furniture
- IT software
- machines as intermediate products (e.g. motors)
- steel
- wood-based products
- chemical products
- groceries
- clothing
- concrete & stones
- IT hardware
- services (e.g. advisory)
- plastic products
- pharmaceutical/medical products
- household goods
- cosmetic products
- herbal/plant products
- Other: \_\_\_\_\_

**12. According to your personal estimation, what might be the percentage share of intermediate goods your company purchases from abroad?** *Please estimate.*

- 0-10%
- 10-30%
- 30-50%
- 50-70%
- 70-90%
- 90-100%

**13. In which countries does your company purchase (intermediate) products? Please select the region(s).** *Multiple answers are possible.*

- CENTRAL and WESTERN EUROPE (Germany, France, Great Britain, Ireland, Netherlands, Belgium, Luxemburg, Switzerland, Austria)
- SOUTHERN EUROPE (Portugal, Spain, Italy, Greece)
- NORTHERN EUROPE (Norway, Sweden, Finland, Denmark, Latvia, Lithuania, Estonia)
- EASTERN EUROPE (Poland, Belarus, Slovenia, Serbia, Croatia, Bosnia, Romania, Bulgaria, Ukraine, Czech Republic, Slovakia, etc.)



- NORTHERN AFRICA (Tunisia, Algeria, Egypt, Libya, Morocco)
- CENTRAL and WEST AFRICA
- SOUTHERN AFRICA (South Africa, Botswana, Mozambique, Namibia, Zimbabwe, Madagascar, etc.)
- NORTHERN ASIA (Russia, Kazakhstan, Mongolia)
- WESTERN ASIA (Turkey, Syria, Lebanon, Iraq, Iran, Afghanistan, Pakistan, Saudi-Arabia, etc.)
- China     India
- EAST ASIA (Japan and Korea)
- EAST ASIA (Thailand, Indonesia, Philippines, Malaysia, Papua New Guinea, Vietnam, Cambodia, Bangladesh, Taiwan, etc.)
- NORTH AMERICA (U.S.A. and Canada)
- SOUTH AMERICA (Latin America including Mexico)
- Australia & New Zealand
- MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD

**14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.**

Multiple answers are possible.

- CENTRAL and WESTERN EUROPE     SOUTHERN EUROPE     NORTHERN EUROPE
- EASTERN EUROPE     NORTHERN AFRICA     CENTRAL and WESTERN AFRICA
- SOUTHERN AFRICA     NORTHERN ASIA     WESTERN ASIA     CHINA     INDIA
- EAST ASIA     SOUTH-EAST ASIA     NORTH AMERICA     SOUTH AMERICA
- AUSTRALIA & NEW ZEALAND     NO ADDITIONAL PRODUCTION FACILITIES ABROAD

**15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?**

- yes     no

**16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?**

- yes     no

**17. In times of the current pandemic, which problems do you see concretely for the procurement of products/intermediate products for your company?**

Multiple answers are possible. Please provide your personal opinion.

- delivery delays — companies might not always be able to deliver on time
- risk of bankruptcy — trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt

- I don't see any problems
- Other: \_\_\_\_\_

**18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?** (e.g. purchase of certain products, which were previously imported e.g. from overseas, might be purchased from the domestic market or from neighboring countries in the future)

- yes, for sure     no, rather unlikely     I don't know
- yes, I could imagine that     no, definitely not

**19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/ intermediate products from abroad to the domestic market or to neighboring countries).** Multiple answers are possible. Please provide your personal opinion.

- partial Reshoring/Backshoring/Inshoring/Onshoring — the process of returning parts of the production and manufacturing of goods back to the company's original country.
- partial Nearshoring — the organization decides to transfer parts of the production to companies that are geographically closer to the company's original country.
- buying ahead — in order to ensure to always have the products on stock
- no changes at all    ■ Other: \_\_\_\_\_

**20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?** Multiple answers are possible. Please provide your personal opinion.

- Yes, I think it is quite likely that my company will start purchasing more from domestic companies.
- Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.
- My company is currently exploring new markets abroad.
- No, we are already mainly purchasing from domestic companies and neighboring countries anyway.
- No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.
- Other: \_\_\_\_\_

**21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. Please provide your personal opinion.**

	no, I don't agree at all	no, I don't agree so much	I'm undecided	yes, I agree to some extent	yes, I completely agree	I don't know
I think it is likely my company will shift the purchase of certain products to other suppliers.	●	●	●	●	●	●
In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	●	●	●	●	●	●
I do believe my company will search for suppliers in other countries anywhere in the world.	●	●	●	●	●	●
I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	●	●	●	●	●	●
I believe it is rather likely will transfer parts of the production to companies in neighboring countries (Nearshoring).	●	●	●	●	●	●

**22. According to your personal perception, how much importance does your company attach to sustainability? Please provide your personal estimation.**

	not important at all	not so important	undecided	quite important	very important	I don't know
importance of sustainability	●	●	●	●	●	●

**23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?**

- yes, I think that's quite likely
- no, rather not
- Other: \_\_\_\_\_
- yes, that might happen
- no, not at all

**24. According to your personal opinion, how beneficial is the process of outsourcing in your company?**

a) Outsourcing is the business strategy of hiring another company to perform services and create goods that were originally performed in-house by the company's own employees.

b) Which of the following statements best matches with your opinion?

- My company does not source out any processes.
- We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.
- We are outsourcing certain parts of our processes. However, outsourcing is rather cost saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.
- Other: \_\_\_\_\_

**25. In which regions does your company sell its products / services?**

Multiple answers are possible.

- CENTRAL and WESTERN EUROPE
- SOUTHERN EUROPE
- NORTHERN EUROPE
- EASTERN EUROPE
- NORTHERN AFRICA
- CENTRAL and WESTERN AFRICA
- SOUTHERN AFRICA
- NORTHERN ASIA
- WESTERN ASIA
- CHINA
- INDIA
- EAST ASIA
- SOUTH-EAST ASIA
- NORTH AMERICA
- SOUTH AMERICA
- AUSTRALIA & NEW ZEALAND
- we are not selling products abroad

**26. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?**

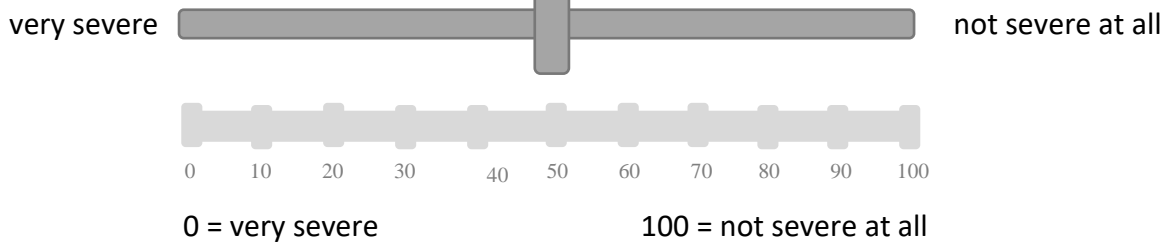
- yes, a decrease in sales of approximately 0-20%
- yes, a decrease in sales of approximately 20-40%
- yes, a decrease in sales of approximately 40-60%
- yes, a decrease in sales of approximately 60-80%
- yes, a decrease in sales of more than 80%
- no decrease in sales at all
- instead of a decrease we are actually experiencing an increase in sales
- Other: \_\_\_\_\_

**27. Is your company currently planning general cost-saving measures as a result of the pandemic?** Please estimate.

- no cost-saving measures planned
- approximately 0-10 % cost-saving measures
- approximately 10-20 % cost-saving measures
- approximately 20-30 % cost-saving measures
- approximately 30-50 % cost-saving measures
- more than 50 % cost-saving measures
- I don't know

**28. According to your personal opinion, how severe might be the long-term effects of COVID-19 on global supply chains?**

Please rate on the scale below.



**29. What do you think might be long-term effects of COVID-19 for the supply chain of your company, your national economy, and global trade?**

Please provide your personal opinion

You have completed the survey. Thank you very much for your participation.

You can now close the window.

## Appendix II. Transcription of answers of all respondents to Q29

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See below the answers of the 61 respondents for question 29 (partially translated from German, Portuguese and French into English):

1. "Products are increasingly being sourced and manufactured locally again. Especially
2. medicines."
3. "Hard to know."
4. "GDP loss by 3-7%, which may be reduced over the next 5 years."
5. "Will be very difficult to recover from this."
6. "On the one hand limited, with vaccine again positive."
7. "Review of the current distribution and sourcing processes; Validation of more suppliers to prevent the risk of back order situations."
8. "Overall severe and process changing."
9. "Will not have long term effects (at least directly) on the supply chain which is well consolidated. Issues may arise from decrease in revenues which might bring the company to reconsider its current supply chain."
10. "Supply chains will change, with more pharmaceutical and especially hygiene products, such as masks and disinfectants, being manufactured domestically and in neighboring countries to be better positioned in the event of another pandemic wave."
11. "It has and will definitely continue to reshape our company's supply chain, national economy, and global economy. Businesses and governments are already shifting their operations to accommodate for the effects of COVID-19 and I don't see everything going back to normal even if the pandemic ends."
12. "---"
13. "After the introduction of the vaccine, the general situation will calm down somewhat — the economic consequences will initially still be clearly visible, but in the medium term we expect a significant improvement in the financial sector — at least in Germany. For many citizens, however, the pandemic will mean a significant drop in income and an increase in unemployment."
14. "- more focus on cost-saving strategies, thus also adjustment of existing supply chains; - increasing purchasing from domestic companies or neighboring countries; - more re- and nearshoring; - increase in inventories or stock purchases"
15. "A shortage of raw ingredients and components due to temporary closures of ports & factories in several countries will force manufacturers to seek new sources. Shifts in demand patterns, as already consumers worldwide are focusing more on essential goods, due to the financial impact which reflected on several jobs.; COVID-19 span uncertainty could lead manufacturers and service providers to introduce new strategies to avoid breaching contracts and SLA penalties."
16. "The drop in oil prices due to the lockdown had a severe impact on our industry."

17. "- Pharmaceutical products will soon be manufactured by law to a greater extent in the EU to ensure a constant supply; - The economy as a whole will suffer greatly from the pandemic - also in the coming years."
18. "."
19. "Sales reduction, consequently, elimination of jobs"
20. "I don't know"
21. "-"
22. "Depends on the industry and the further duration of the pandemic."
23. "No deterioration in the pharmaceutical industry, only a shift in the supply chain of the pharmaceutical industry (increase in manufacturing of pharmaceutical products in the EU). In overall economic terms, we will recover from the recession in the coming year."
24. "For the economy, the pandemic is a severe blow in 2020, but hopefully in 2021, vaccination will change everything and the economy can recover. "
25. "I think that some companies will have financial losses. Others, depending on the industry they come from, will make a higher profit."
26. "In my view the long-term implications cannot yet be predicted."
27. "Long-term is relative. The next 1-2 years will certainly be even more strenuous in terms of global procurement. But it could be that the whole thing will have calmed down again in 2-3 years."
28. "In the next 3-4 years, the economy will recover nationally/as well as internationally. Global trade will then continue as before."
29. "The impact on global economy will be severe. Concerning supply chains, I believe companies might reassess their procurement."
30. "Global trade will diminish in any case. Nevertheless, our national economy will maintain the course more or less — provided Brexit will not interfere trade between GB and Europe too much. Supply chains will depend on our relations with European countries."
31. "In the course of the pandemic, we have already initiated changes in the procurement of certain products - and these changes are to remain so indefinitely. Due to the pandemic-related supply difficulties, we have had to buy more from regional suppliers — at more expensive prices and therefore we have to cut costs despite increased sales."
32. "Attempt to be less dependent on the non-European market (production of active ingredients almost exclusively in Asia); better stockpiling of hygiene products; after the crisis has passed, everything will quickly "normalize" so that global trade will increase in volume again, as it is often simply unbeatable to obtain products or "preliminary products" from abroad."
33. "We are currently seeing a trend toward production capacities increasingly being relocated from Germany. I assume that this trend will continue, with corresponding negative consequences for the German economy."

34. "I think the market will decrease in many countries."
35. "It could be that not all goods are always available."
36. "---"
37. "More regional procurement in the short term, but this cancels out in the long term, since in most cases it is cheaper to procure abroad."
38. "Above all, small and medium-sized enterprises will increasingly disappear, the offer to shop independently of large corporations will become significantly less, retailing apart from food will only exist to a very limited extent, delivery corporations will be very strongly favored → the city centers will be significantly less attractive (= dead), overall, significantly less diversity in the offer."
39. "Slightly"
40. "Many of our clients are working in the construction industry, food industry, and chemical industry. All of them are suffering from the pandemic severely."
41. "Losses in GDP, smaller companies in particular are going bankrupt more quickly, larger companies have to implement extensive cost-cutting measures, global trade has suffered, but the situation will recover after the pandemic."
42. "Losses in every respect, insecure jobs, increased temporary contracts, temporary work etc."
43. "As investors the entire value chain question is not directly relevant to us. It however is very relevant to some of the companies we invest in. For sure Europe will rethink (has already) it's outsourcing / procurement strategy related to health products. A lot of nearshoring is to be expected. However: the mid-term effect of COVID-19 will by no means be as important as the geopolitical tensions btw China and the US and potentially the EU too/in the middle of it."
44. "Unemployment; Increasing social disparities"
45. "The gross national product of many countries will decline. France's gross national product will also recover only slowly. World trade will be lower for longer."
46. "The COVID-19 pandemic will deepen the global financial and economic crisis that has already existed for years. All countries will be affected to varying degrees, but especially those that are already in a worse situation. Small businesses have already closed at the beginning of the pandemic. States will no longer be able to financially support citizens (who have lost their jobs or are on short-time work). The only hope is the development of an effective and efficient vaccine."
47. "National economies will recover in the foreseeable future. Some countries that are not in such a strong economic position will still have to work for some time to make up for declines in production. The globality of trade will decline by a few percent in the long term."
48. "I see the long-term effects as rather minor. As soon as the pandemic is largely under control again, global trade will spread completely. I doubt whether production and trade will then really become more sustainable."
49. "N/A"



50. "The company I work for is very optimistic about the future overall. Despite the pandemic, sales figures were up on the previous year. This is mainly due to the fairly high average age and high average income of the target group, which is only marginally affected by the economic consequences of the Corona pandemic. Fundamental changes on the procurement side are not expected in my companies as a result of the pandemic. I also consider a relocation of production to Germany or neighboring countries due to the COVID-19 to be unlikely, as the German textile industry has been undergoing structural change for decades and this has been accompanied by strong outsourcing. German textile production has almost died out.; Basically, it can be observed within the textile trade that a further shift to the already very dominant online trade and a further weakening of the stationary trade is taking place."
51. "All economies will suffer the consequences of the pandemic, but the impact on emerging economies may be dramatic in my opinion."
52. "The Portuguese economy is composed of about 95% of small and medium enterprises. Some of the sectors have been very affected and will have catastrophic consequences. Many companies are facing a scenario of insolvency and state support is not enough. It will lead to a high unemployment rate. The general economic fabric will certainly suffer greatly due to a large reduction in the number of companies and the loss of purchasing power of consumers to encourage survivors."
53. "I don't know."
54. "I think people might be going more local than before and they will probably move away from bottle necks. We have actually been giving advice to companies which struggled and their core problem had often been a sole supplier abroad; That will definitely change and be covered with local backup plans."
55. "Severe decrease of HORECA businesses (which represent 40% of the business); It will take couple of years before coming back to grow in that segment"
56. "More conservative and sustainable trade"
57. "."
58. "It is needed to transform traditional supply chain models and look ahead to the longer-term solution of digital supply networks."
59. "Temporary impact for the supply chains, but after the pandemic has receded, purchasing is expected to return to similar levels as before the pandemic. Merely in addition to the previous markets we will probably also include the local markets from time to time so that there will not be a renewed production stop in the event of another pandemic or similar."
60. "Predominantly negative"
61. "One year"
62. "- lower labor costs; - less competition"

## Appendix III. Questionnaire in Portuguese

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### O Impacto Conceitual da COVID-19 nas Cadeias de Abastecimento Globais — Um Questionário

Bom dia! Muito obrigada pela sua participação no meu questionário! O objetivo deste questionário é descobrir como o pessoal profissional percebe o impacto da pandemia correntemente na cadeia de fornecimento global. Para este questionário sobre os efeitos da pandemia no comércio global e nas cadeias de fornecimento global, a sua opinião pessoal é importante para nós. Garantimos o anonimato e a confidencialidade das suas respostas.

#### 1. Escolha a sua idade se faz favor.

- 18-30 anos     30-40 anos     40-50 anos     50-60 anos     >60 anos

#### 2. Escolha o seu género se faz favor.

- feminino     masculino

#### 3. Qual é a sua formação se faz favor?

- Grau de ensino secundário  
 Aprendizagem  
 Licenciatura  
 Mestrado  
 Doutoramento / PhD

#### 4. Escolha a sua nacionalidade se faz favor. \_\_\_\_\_

#### 5. No qual país trabalha? \_\_\_\_\_

#### 6. Qual é a dimensão da empresa para a qual trabalha?

- 1-9 empregados     10-49 empregados     50-249 empregados  
 250-500 empregados     > 500 empregados

**7. A que indústria a sua empresa está principalmente associada?**

- indústria da construção
- indústria alimentar
- indústria metalúrgica
- construção de máquinas/engenharia mecânica
- indústria automóvel
- indústria têxtil
- indústria química
- indústria farmacêutica
- sector médico
- desenvolvimento de TI
- fornecimento de energia
- turismo
- retalho
- consultoria (consultoria de TI, consultoria de gestão, consultoria fiscal, auditoria, etc.)
- bancos e companhias de seguros
- educação / administração
- transporte & logística
- Outros: \_\_\_\_\_

**8. Por favor, escolha o departamento para o qual trabalha.**

- Contabilidade e Finanças
- Consultoria
- Recursos Humanos
- TI
- Marketing
- Cuidados médicos
- Aquisições
- Produção
- Vendas
- Investigação e desenvolvimento
- Outros: \_\_\_\_\_

**9. Desde quando é que trabalha para a sua empresa atual?**

- < 1 ano
- 1-5 anos
- 5-10 anos
- > 10 anos

**10. Acredita que o encerramento da COVID-19, ou seja, a pandemia, já tem ou terá um impacto nas cadeias de abastecimento globais?**

- sim, definitivamente
- não, antes não
- não sei
- sim, isso é bastante provável
- não, definitivamente não
- Outros: \_\_\_\_\_

**11. Qual produto(s) (intermediário/s) a sua empresa compra a outras empresas (de empresas nacionais ou do estrangeiro)?** Respostas múltiplas são possíveis.

- produtos metálicos
- adesivos
- produtos têxteis
- mobiliário
- aço
- vestuário
- máquinas como produtos intermédios (por exemplo, motores)
- alimentação
- IT software
- IT hardware
- produtos farmacêuticos/médicos
- produtos plásticos
- produtos químicos
- produtos a base de madeira
- serviços (por exemplo, consultoria)
- betão e pedras
- produtos cosméticos
- bens domésticos
- produtos fitoterápicos/plantas
- Outros: \_\_\_\_\_

**12. De acordo com a sua estimativa pessoal, qual poderá ser a percentagem de produtos intermédios que a sua empresa compra ao estrangeiro?** Por favor, faça uma estimativa.

- 0-10%
- 10-30%
- 30-50%
- 50-70%
- 70-90%
- 90-100%

**13. Em que países a sua empresa compra produtos (intermédios)? Por favor, selecione a(s) região(ões).** Respostas múltiplas são possíveis.

- EUROPA CENTRAL e OCIDENTAL (Alemanha, França, Grã-Bretanha, Irlanda, Países Baixos, Bélgica, Luxemburgo, Suíça, Áustria)
- EUROPA DO SUL (Portugal, Espanha, Itália, Grécia)
- EUROPA DO NORTE (Noruega, Suécia, Finlândia, Dinamarca, Letónia, Lituânia, Estónia)
- EUROPA ORIENTAL (Polónia, Bielorrússia, Eslovénia, Sérvia, Croácia, Bósnia, Roménia,

- Bulgária, Ucrânia, República Checa, Eslováquia, etc.)
- ÁFRICA DO NORTE (Tunísia, Argélia, Egito, Líbia, Marrocos)
  - ÁFRICA CENTRAL e OCIDENTAL
  - ÁFRICA DO SUL (África do Sul, Botsuana, Moçambique, Namíbia, Zimbabué, Madagáscar, etc.)
  - ÁSIA DO NORTE (Rússia, Cazaquistão, Mongólia)
  - ÁSIA OCIDENTAL (Turquia, Síria, Líbano, Iraque, Irão, Afeganistão, Paquistão, Arábia Saudita, etc.)
  - China    ■ Índia
  - ÁSIA ORIENTAL (Japão e Coreia)
  - SUDESTE DA ÁSIA (Tailândia, Indonésia, Filipinas, Malásia, Papua Nova Guiné, Vietname, Camboja, Bangladesh, Taiwan, etc.)
  - AMÉRICA DO NORTE (E.U.A. e Canadá)
  - AMÉRICA DO SUL (América Latina incluindo o México)
  - Austrália & Nova Zelândia
  - A minha empresa não compra produtos do estrangeiro

**14. A sua empresa tem instalações de produção no estrangeiro em uma ou várias destas regiões, enviando produtos para o seu país de residência? Em caso afirmativo, por favor especifique onde.** Respostas múltiplas são possíveis.

- EUROPA CENTRAL e OCIDENTAL    ■ EUROPA DO SUL    ■ EUROPA DO NORTE
- EUROPA ORIENTAL    ■ ÁFRICA DO NORTE    ■ ÁFRICA CENTRAL e OCIDENTAL
- ÁFRICA DO SUL    ■ ÁSIA DO NORTE    ■ ÁSIA OCIDENTAL    ■ CHINA    ■ ÍNDIA
- ÁSIA ORIENTAL    ■ SUDESTE DA ÁSIA    ■ AMÉRICA DO NORTE
- AMÉRICA DO SUL    ■ AUSTRALIA & NOVA ZELÂNDIA
- sem instalações de produção adicionais no estrangeiro

**15. Houve alguma mudança na cadeia de abastecimento da sua empresa que tinha sido planeada muito antes da COVID-19 e que deveria ser implementada em 2020?**

- sim     não

**16. Houve alguma alteração/deslocalização da aquisição de certos produtos na sua empresa em 2020, no contexto da pandemia COVID 19?**

- sim     não

**17. Em tempos de pandemia atual, que problemas vê concretamente para a aquisição de produtos/pré-produtos para a sua empresa?**

Respostas múltiplas são possíveis. Dê a sua opinião pessoal se faz favor.

- atrasos na entrega — as empresas podem nem sempre ser capazes de entregar a tempo
- risco de falência — o comércio com empresas mais pequenas pode ser mais arriscado hoje em
- dia porque as empresas mais pequenas têm um risco mais elevado de ir à falência
- não vejo nenhum problema
- outros: \_\_\_\_\_

**18. Considera provável uma mudança na estratégia de aquisições da sua empresa para 2021 ou anos subsequentes?**

(por exemplo, a compra de certos produtos, que anteriormente eram importados, por exemplo, do estrangeiro, poderá ser adquirida no mercado interno ou de países vizinhos no futuro)

- sim, com certeza     não, bastante improvável     não sei
- sim, poderia imaginar     não, definitivamente não

**19. Que mudanças na estratégia de aquisição da sua empresa poderia imaginar? (por exemplo, deslocar a aquisição de certos produtos/produtos intermédios do estrangeiro para o mercado interno ou para países vizinhos).**

Respostas múltiplas são possíveis. Forneça a sua opinião pessoal se faz favor.

- Reshoring/Backshoring/Inshoring/Onshoring parcial — o processo de devolução de partes da produção e fabrico de bens de volta ao país de origem da empresa.
- Nearshoring parcial — a organização decide transferir partes da produção para empresas que estão geograficamente mais próximas do país de origem da empresa.
- comprar antecipadamente — a fim de garantir que os produtos estejam sempre em stock
- sem alterações
- Outros: \_\_\_\_\_

**20. Acha ser possível que a sua empresa mude ligeiramente a cadeia de abastecimento, comprando a outros fornecedores, a fim de mitigar o risco de não receber os produtos a tempo?** Respostas múltiplas são possíveis. Por favor, dê a sua opinião pessoal.

- Sim, acho que é bastante provável que a minha empresa comece a comprar mais a empresas nacionais.
- Sim, acho que é bastante provável que a minha empresa comece a comprar mais a empresas de países vizinhos.
- A minha empresa está atualmente a explorar novos mercados no estrangeiro.
- Não, de qualquer forma já estamos a comprar principalmente a empresas nacionais e países vizinhos.
- Não, as mudanças da nossa cadeia de abastecimento não são muito prováveis – continuaremos a abastecer-nos no estrangeiro, tal como antes.
- Outros: \_\_\_\_\_

**21. Na sua opinião pessoal, qual a probabilidade de considerar as seguintes opções estratégicas para a sua empresa em tempos da pandemia COVID-19? Por favor, avalie as declarações numa escala de quinto níveis. Por favor, forneça a sua opinião pessoal.**

	não concordo de forma nenhum	não concordo tanto	estou indeciso	sim, concordo até certo ponto	sim, concordo completamente	não sei
Acho que é provável que a minha empresa transfira a compra de certos produtos para outros fornecedores.	●	●	●	●	●	●
Na minha opinião, é provável que a minha empresa compre a fornecedores adicionais, a fim de mitigar o risco de não receber os produtos a tempo.	●	●	●	●	●	●
Acredito que a minha empresa irá procurar fornecedores em outros países em qualquer parte do mundo.	●	●	●	●	●	●
Acho que é provável que a minha empresa devolva partes da nossa cadeia de abastecimento ao país de origem da empresa (Reshoring).	●	●	●	●	●	●
Acredito que é bastante provável que a minha empresa transfira partes da produção para empresas em países vizinhos (Nearshoring).	●	●	●	●	●	●

**22. De acordo com a sua perceção pessoal, quanta importância atribui a sua empresa à sustentabilidade? Por favor, forneça a sua estimativa pessoal.**

	não tem qualquer importância	não tão importante	indeciso	bastante importante	muito importante	não sei
importância da sustentabilidade	●	●	●	●	●	●

**23. Acha que a sua empresa estaria disposta a pagar mais por produtos produzidos no seu país ou num país vizinho, a fim de alcançar um maior grau de sustentabilidade?**

- sim, acho que isso é bastante provável
- não é provável
- sim, isso pode acontecer
- não, de modo nenhum
- outros: \_\_\_\_\_

**24. De acordo com a sua opinião pessoal, até que ponto é benéfico o processo de externalização na sua empresa?**

a) Outsourcing é a estratégia empresarial de contratar outra empresa para executar serviços e criar bens que foram originalmente executados internamente pelos próprios empregados da empresa).

b) Qual das seguintes declarações melhor corresponde à sua opinião?

- A minha empresa não recorre a nenhum processo.
- Estamos a subcontratar certas partes dos nossos processos e esta é uma estratégia muito eficaz de poupança de custos.
- Estamos a subcontratar certas partes dos nossos processos. No entanto, a externalização é bastante económica em teoria, enquanto que na prática, está de facto a criar despesas adicionais incalculáveis.
- Outros: \_\_\_\_\_

**25. Em que regiões a sua empresa vende os seus produtos / serviços?**

Respostas múltiplas são possíveis.

- EUROPA CENTRAL e OCIDENTAL
- EUROPA DO SUL
- EUROPA DO NORTE
- EUROPA ORIENTAL
- AFRICA DO NORTE
- ÁFRICA CENTRAL e OCIDENTAL
- ÁFRICA DO SUL
- ÁSIA DO NORTE
- ÁSIA OCIDENTAL
- CHINA
- ÍNDIA
- ÁSIA ORIENTAL
- SUDESTE DA ÁSIA
- AMÉRICA DO NORTE
- SOUTH AMERICA
- AUSTRÁLIA & NOVA ZELÂNDIA
- não estamos a vender produtos no estrangeiro

**26. No decurso da pandemia da COVID-19, apercebeu-se de uma diminuição das vendas?**

- sim, uma diminuição nas vendas de aproximadamente 0-20 %
- sim, uma diminuição nas vendas de aproximadamente 20-40%
- sim, uma diminuição nas vendas de aproximadamente 40-60%
- sim, uma diminuição nas vendas de aproximadamente 60-80%
- sim, uma diminuição das vendas de mais de 80%
- sem qualquer diminuição nas vendas
- em vez de uma diminuição, estamos de facto a experimentar um aumento nas vendas
- outros: \_\_\_\_\_

**27. A sua empresa está atualmente a planear medidas gerais de poupança de custos como resultado da pandemia?** Por favor, faça uma estimativa.

- nenhum previstas de medidas de poupança de custos
- aproximadamente 0-10 % de medidas de poupança de custos
- aproximadamente 10-20 % de medidas de poupança de custos
- aproximadamente 20-30 % de medidas de poupança de custos
- aproximadamente 30-50 % de medidas de poupança de custos
- mais do que 50 % de medidas de poupança de custos
- não sei

**28. De acordo com a sua opinião pessoal, quais são os efeitos ao longo prazo da COVID-19 nas cadeias de abastecimento globais?**

Por favor, classifique na escala abaixo.



**29. Na sua opinião pessoal, quais são as implicações ao longo prazo da COVID-19 para a sua economia nacional ou para a economia e comércio global?**

Dê a sua opinião pessoal se faz favor.

Terminou a pesquisa. Muito obrigado pela sua participação.

Agora pode fechar a janela.



## Appendix IV. Questionnaire in German



### The Conceivable Impact of COVID-19 on Global Supply Chains — A Survey

Hallo! Vielen lieben Dank für Ihre Teilnahme an meiner Umfrage! Ziel dieser Umfrage ist es, wie Fachkräfte die Auswirkungen der derzeitigen Pandemie auf globale Lieferketten wahrnehmen. Für diese Umfrage über die Auswirkungen der Pandemie auf globalen Handel und globale Lieferketten ist uns Ihre persönliche Meinung wichtig. Wir garantieren die Anonymität und Vertraulichkeit Ihrer Antworten.

#### 1. Bitte geben Sie Ihr Alter an.

- 18-30 Jahre     30-40 Jahre     40-50 Jahre     50-60 Jahre     > 60 Jahre

#### 2. Bitte geben Sie Ihr Geschlecht an.

- weiblich     männlich

#### 3. Was ist Ihr höchster Bildungsabschluss?

- Abitur  
 Ausbildung  
 Bachelor  
 Master  
 Doktor / PhD

#### 4. Bitte tragen Sie Ihre Nationalität bzw. Nationalitäten in dem Feld ein. \_\_\_\_\_

#### 5. In welchem Land arbeiten Sie? \_\_\_\_\_

#### 6. Wie groß ist das Unternehmen, für das Sie arbeiten?

- 1-9 Mitarbeiter     10-49 Mitarbeiter     50-249 Mitarbeiter  
 250-500 Mitarbeiter     > 500 Mitarbeiter

### 7. In welcher Branche ist Ihr Unternehmen tätig?

- Baugewerbe
- Lebensmittelindustrie
- Metallindustrie
- Textilindustrie
- Einzelhandel
- Automobilindustrie
- Maschinenbau / elektronische Geräte
- Chemieindustrie
- Tourismus
- Pharmaindustrie
- Medizinischer Sektor
- IT-Entwicklung
- Energieversorgung
- Banken und Versicherungen
- Consulting (IT-Consulting, Unternehmensberatung, Steuerberatung, Wirtschaftsprüfung)
- Bildung / Verwaltung
- Transport & Logistik
- Andere: \_\_\_\_\_

### 8. In welcher Abteilung sind Sie für Ihre Firma tätig?

- Accounting & Finance
- Beratung
- Human Resources
- IT
- Marketing
- Medizinische Versorgung
- Beschaffung/Einkauf
- Sales
- Produktion
- Research & Development (Entwicklung)
- Andere: \_\_\_\_\_

### 9. Seit wann arbeiten Sie schon für Ihre aktuelle Firma??

- < 1 Jahr
- 1-5 Jahre
- 5-10 Jahre
- > 10 Jahre

### 10. Glauben Sie, dass der COVID-19-Lockdown bzw. die Pandemie Auswirkungen auf Global Supply Chains hat oder haben wird?

- ja, mit Sicherheit
- nein, eher nicht
- weiß nicht
- ja, das ist wahrscheinlich
- nein, auf gar keinen Fall
- Andere: \_\_\_\_\_

### 11. Welche(s) (Zwischen-) Produkt(e) kauft Ihr Unternehmen von anderen Unternehmen (von nationalen Unternehmen oder aus dem Ausland)? Mehrfachnennungen sind möglich.

- Metallprodukte
- Klebstoffe
- Textilprodukte
- Möbel
- Pharmaprodukte
- Maschinen als Vorprodukt (z.B. Motoren)
- Beratung (e.g. advisory)
- Beton & Steine
- Stahl
- Produkte auf Holzbasis
- Plastikprodukte
- Chemieprodukte
- Lebensmittel
- Kleidung
- IT Software
- IT Hardware
- Haushaltswaren
- Kosmetikprodukte
- pflanzliche Produkte
- Andere: \_\_\_\_\_

### 12. Wie hoch ist Ihrer persönlichen Einschätzung nach der prozentuale Anteil von Vorprodukten, die Ihre Firma aus dem Ausland bezieht? Bitte schätzen Sie.

- 0-10%
- 10-30%
- 30-50%
- 50-70%
- 70-90%
- 90-100%

**13. In welchen Ländern kauft Ihr Unternehmen (Zwischen-) Produkte ein? Bitte wählen Sie die Region(en) aus.** Mehrfachnennungen sind möglich.

- ZENTRAL- und WESTEUROPA (Deutschland, Frankreich, Großbritannien, Irland, Niederlande, Belgien, Luxemburg, Schweiz, Österreich)
- SÜDEUROPA (Portugal, Spanien, Italien, Griechenland)
- NORDEUROPA (Norwegen, Schweden, Finnland, Dänemark, Lettland, Estland, Litauen)
- OSTEUROPA (Polen, Belarus, Slowenien, Serbien, Kroatien, Bosnien, Rumänien, Bulgarien, Ukraine, Tschechien, Slowakei)
- NORDAFRIKA (Tunesien, Algerien, Ägypten, Libyen, Marokko)
- ZENTRAL- und WESTAFRIKA
- SÜDLICHES AFRIKA (Südafrika, Botswana, Mosambik, Namibia, Simbabwe, Madagaskar etc.)
- NORDASIEN (Russland, Kasachstan, Mongolei)
- WESTASIEN (Türkei, Syrien, Libanon, Irak, Iran, Afghanistan, Pakistan, Saudi-Arabien, etc.)
- China     Indien
- OSTASIEN (Japan und Korea)
- SÜDOSTASIEN (Thailand, Indonesien, Philippinen, Malaysia, Papua-Neuguinea, Vietnam, Kambodscha, Bangladesch, Taiwan, etc.)
- NORDAMERIKA (U.S.A. und Kanada)
- SÜDAMERIKA (Lateinamerika inklusive Mexiko)
- Australien & Neuseeland
- MEIN UNTERNEHMEN KAUFTE KEINE PRODUKTE IM AUSLAND

**14. Verfügt Ihr Unternehmen in einer oder mehreren dieser Regionen über Produktionsstätten im Ausland, die Produkte in das Land Ihres Wohnsitzes liefern? Falls ja, bitte geben Sie an, wo.** Mehrfachnennungen sind möglich.

- ZENTRAL- UND WESTEUROPA     SÜDEUROPA     NORDEUROPA     OSTEUROPA
- NORDAFRIKA     ZENTRAL- UND WESTAFRIKA     SÜDLICHES AFRIKA
- NORDASIEN     WESTASIEN     CHINA     INDIEN     OSTASIEN     SÜDOSTASIEN
- NORDAMERIKA     SÜDAMERIKA     AUSTRALIEN & NEUSEELAND
- keine zusätzlichen Produktionsstätten im Ausland

**15. Gab es schon lange (vor COVID-19) geplante Änderungen der Supply Chain Ihrer Firma, die in 2020 umgesetzt werden sollten?**

- ja     nein

**16. Hat sich in 2020 im Rahmen der COVID-19-Pandemie eine Veränderung/Verschiebung der Beschaffung bestimmter Produkte in Ihrer Firma ergeben?**

- ja     nein

**17. Welche Probleme sehen Sie aktuell in Zeiten der Pandemie für Ihr Unternehmen bei der Beschaffung von Produkten/Vorprodukten?** Mehrfachnennungen sind möglich. Bitte teilen Sie uns Ihre persönliche Meinung mit.

- Lieferverzögerungen — Unternehmen sind möglicherweise nicht immer in der Lage, pünktlich zu liefern
- Konkursrisiko — der Handel mit kleineren Unternehmen könnte heutzutage riskanter sein, weil kleinere Unternehmen ein höheres Risiko haben, bankrott zu gehen
- ich sehe keinerlei Probleme
- Andere: \_\_\_\_\_

**18. Halten Sie für 2021 oder die darauffolgenden Jahre eine Veränderung der Beschaffungsstrategie Ihrer Firma für wahrscheinlich?** (z.B. Einkauf bestimmter Produkte, die bisher bspw. aus Übersee importiert wurden, nun aus dem Inland oder aus Nachbarländern zu beziehen.)

- ja, ganz bestimmt       nein, eher unwahrscheinlich       weiß nicht
- ja, könnte ich mir vorstellen       nein, definitiv nicht

**19. Welche Veränderungen in der Beschaffungsstrategie Ihres Unternehmens könnten Sie sich vorstellen (z.B. Verlagerung der Beschaffung bestimmter Produkte/Vorprodukte aus dem Ausland auf den Binnenmarkt oder in Nachbarländer)?** Mehrfachnennungen sind möglich. Bitte teilen Sie uns Ihre persönliche Meinung mit.

- partielles Reshoring/Backshoring/Inshoring/Onshoring — der Prozess der Rückführung von Teilen der Produktion und Herstellung von Waren zurück in das Ursprungsland des Unternehmens.
- partielles Nearshoring — die Organisation beschließt, Teile der Produktion in Unternehmen zu verlagern, die geographisch näher am Ursprungsland des Unternehmens liegen.
- auf Vorrat kaufen — um sicherzustellen, dass die Produkte immer auf Lager sind
- überhaupt keine Änderungen       Andere: \_\_\_\_\_

**20. Halten Sie es für möglich, dass Ihr Unternehmen die Lieferkette leicht verlagert und bei anderen Lieferanten einkauft, um das Risiko zu mindern, dass Produkte nicht rechtzeitig geliefert werden?** Mehrfachnennungen sind möglich. Bitte teilen Sie uns Ihre persönliche Meinung mit.

- Ja, ich halte es für sehr wahrscheinlich, dass mein Unternehmen anfangen wird, mehr von inländischen Unternehmen zu kaufen.
- Ja, ich halte es für sehr wahrscheinlich, dass mein Unternehmen anfangen wird, mehr von Unternehmen in den Nachbarländern zu kaufen.
- Mein Unternehmen erkundet derzeit neue Märkte im Ausland.
- Nein, wir kaufen ohnehin schon hauptsächlich bei inländischen Unternehmen und in Nachbarländern ein.
- Nein, Veränderungen in unserer Lieferkette sind nicht sehr wahrscheinlich — wir werden weiterhin wie bisher aus dem Ausland beziehen.       Andere: \_\_\_\_\_

**21. Für wie wahrscheinlich halten Sie die folgenden strategischen Optionen für Ihr Unternehmen in Zeiten der COVID-19-Pandemie? Bitte bewerten Sie die Aussagen auf einer fünfstufigen Skala. Bitte teilen Sie Ihre persönliche Meinung mit.**

	nein, ich stimme überhaupt nicht zu	Nein, ich bin nicht ganz einverstanden	Ich bin unentschieden	ja, ich stimme bis zu einem gewissen Grad zu	ja, ich bin völlig einverstanden	Ich weiß nicht
Ich halte es für wahrscheinlich, dass mein Unternehmen den Einkauf bestimmter Produkte auf andere Anbieter verlagern wird.	●	●	●	●	●	●
Meiner Meinung nach ist es wahrscheinlich, dass mein Unternehmen von zusätzlichen Lieferanten kaufen wird, um das Risiko zu mindern, dass Produkte nicht rechtzeitig geliefert werden.	●	●	●	●	●	●
Ich glaube, dass mein Unternehmen nach Lieferanten in anderen Ländern überall auf der Welt suchen wird.	●	●	●	●	●	●
Ich halte es für wahrscheinlich, dass mein Unternehmen Teile unserer Lieferkette wieder in das Ursprungsland des Unternehmens zurückführen wird (Reshoring).	●	●	●	●	●	●
Ich halte es für ziemlich wahrscheinlich, dass mein Unternehmen Teile der Produktion an Unternehmen in den Nachbarländern verlagern wird (Nearshoring).	●	●	●	●	●	●

**22. Wieviel Bedeutung misst Ihr Unternehmen Ihrer Meinung nach dem Thema Nachhaltigkeit bei??** Bitte teilen Sie Ihre persönliche Einschätzung mit.

	gar nicht wichtig	nicht so wichtig	unentschieden	ziemlich wichtig	sehr wichtig	Ich weiß nicht
Bedeutung der Nachhaltigkeit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

**23. Glauben Sie, dass Ihr Unternehmen bereit wäre, für Produkte, die entweder in Ihrem Land oder in einem Nachbarland hergestellt werden, mehr zu bezahlen, um einen höheren Grad an Nachhaltigkeit zu erreichen?**

- ja, ich denke, das ist sehr wahrscheinlich       nein, eher nicht  
 ja, das könnte passieren       nein, definitiv nicht       Andere: \_\_\_\_\_

**24. Wie vorteilhaft ist Ihrer persönlichen Meinung nach der Prozess des Outsourcing in Ihrem Unternehmen?**

a) Unter Outsourcing versteht man die Geschäftsstrategie, ein anderes Unternehmen mit der Erbringung von Dienstleistungen und der Herstellung von Waren zu beauftragen, die ursprünglich von den eigenen Mitarbeitern des Unternehmens intern erbracht wurden.

b) Welche der folgenden Aussagen trifft Ihre Meinung am ehesten??

- In meinem Unternehmen werden Prozesse überhaupt nicht ausgelagert.
- Wir lagern bestimmte Teile unserer Prozesse aus und das ist eine sehr effektive Strategie zur Kosteneinsparung.
- Wir lagern bestimmte Teile unserer Prozesse aus. Allerdings ist die Auslagerung in der Theorie eher kostensparend, während sie in der Praxis unkalkulierbare zusätzliche Kosten verursacht.
- Andere: \_\_\_\_\_

**25. In welchen Regionen verkauft Ihr Unternehmen seine Produkte / Dienstleistungen?**

Mehrfachnennungen sind möglich.

- ZENTRAL- UND WESTEUROPA       SÜDEUROPA       NORDEUROPA       OSTEUROPA
- NORDAFRIKA       ZENTRAL- UND WESTAFRIKA       SÜDLICHES AFRIKA
- NORDASIEN       WESTASIEN       CHINA
- INDIEN       OSTASIEN       SÜDOSTASIEN       NORDAMERIKA
- SÜDAMERIKA       AUSTRALIEN & NEUSEELAND
- wir verkaufen keine Produkte im Ausland

**26. Haben Sie im Verlauf der COVID-19-Pandemie einen Rückgang der Verkäufe festgestellt?**

- ja, ein Umsatzrückgang von etwa 0-20 %
- ja, ein Umsatzrückgang von etwa 20-40%
- ja, ein Umsatzrückgang von etwa 40-60%

- ja, ein Umsatzrückgang von etwa 60-80%
- ja, ein Umsatzrückgang von mehr als 80%
- überhaupt kein Rückgang der Verkäufe
- statt eines Rückgangs erleben wir tatsächlich einen Anstieg der Verkäufe
- Andere: \_\_\_\_\_

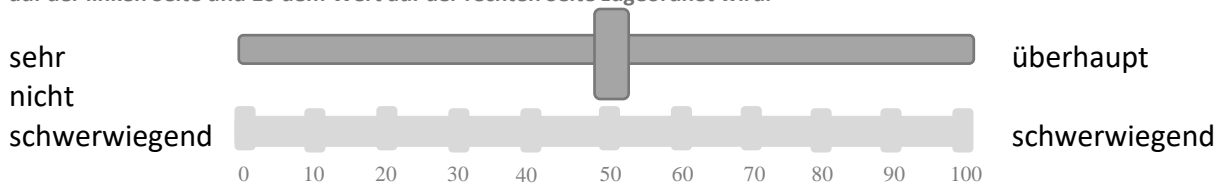
**27. Plant Ihr Unternehmen derzeit allgemeine Sparmaßnahmen als Folge der Pandemie?**

Bitte schätzen Sie.

- keine Kosteneinsparungsmaßnahmen geplant
- etwa 0-10 % Kosteneinsparungsmaßnahmen
- etwa 10-20 % Kosteneinsparungsmaßnahmen
- etwa 20-30 % Kosteneinsparungsmaßnahmen
- etwa 30-50 % Kosteneinsparungsmaßnahmen
- mehr als 50 % Kosteneinsparungsmaßnahmen
- ich weiß nicht

**28. Wie schwerwiegend könnten Ihrer Meinung nach die langfristigen Auswirkungen von COVID-19 auf die globalen Lieferketten sein?**

Bitte bewerten Sie auf der untenstehenden Skala. Bitte geben Sie einen Wert zwischen 0 und 10 ein, wobei 0 dem Wert auf der linken Seite und 10 dem Wert auf der rechten Seite zugeordnet wird.



0 = sehr schwerwiegend

100 = überhaupt nicht schwerwiegend

**29. Wie sehen Ihrer Meinung nach die langfristigen Auswirkungen von COVID-19 für Ihre nationale Wirtschaft bzw. für die globale Wirtschaft und den globalen Handel aus?**

Bitte geben Sie Ihre persönliche Einschätzung.

Die Umfrage ist beendet. Vielen Dank für die Teilnahme.

Das Fenster kann nun geschlossen werden.

## Appendix V. Questionnaire in French

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### L'impact concevable de COVID-19 sur les chaînes d'approvisionnement mondiales - un sondage

Bonjour ! Merci beaucoup de participer à mon sondage! L'objectif de ce questionnaire est de savoir comment le personnel professionnel évalue l'impact de la pandémie actuelle sur les chaînes d'approvisionnement mondiales. En ce qui concerne ce sondage concernant les effets de la pandémie sur le commerce mondiale et les chaînes d'approvisionnement, votre opinion personnelle est importante pour nous. Nous garantissons l'anonymat et la confidentialité de vos réponses.

#### 1. Veuillez sélectionner votre âge, s'il vous plaît.

- 18-30 années     30-40 années     40-50 années     50-60 années     > 60 années

#### 2. Veuillez sélectionner votre genre, s'il vous plaît.

- féminin     masculin

#### 3. Quelle est votre formation?

- Baccalauréat  
 Apprentissage  
 Licence (Bac+3)  
 Master (Bac+5)  
 Doctorat / PhD

#### 4. Veuillez indiquer votre nationalité(s), s'il vous plaît. \_\_\_\_\_

#### 5. Dans quel pays travaillez-vous? \_\_\_\_\_

#### 6. Quelle est la taille de votre entreprise ?

- 1-9 employés     10-49 employés     250-500 employés  
 50-249 employés     > 500 employés



**7. À quel secteur votre entreprise est-elle principalement associée ?**

- l'industrie de la construction/ingénierie civile
- l'industrie alimentaire
- l'industrie métallurgique
- l'industrie chimique
- l'industrie automobile
- construction de machines / ingénierie mécanique
- l'approvisionnement en énergie
- l'industrie textile
- développement informatique
- les banques et les compagnies
- l'industrie pharmaceutique
- secteur médical d'assurance
- commerce de détail
- Consulting (conseil en informatique, conseil en gestion, conseil fiscal, audit, etc.)
- éducation / administration
- tourisme
- transport & logistique
- autres: \_\_\_\_\_

**8. Veuillez choisir le service pour lequel vous travaillez, s'il vous plaît.**

- comptabilité et finances
- service de conseil
- ressources humaines
- IT
- marketing
- achats
- production
- ventes
- recherche et développement
- les soins médicaux
- autres: \_\_\_\_\_

**9. Depuis quand travaillez-vous pour votre entreprise actuelle?**

- < 1 an
- 1-5 ans
- 5-10 ans
- > 10 ans

**10. Pensez-vous que le confinement lié au COVID-19 a déjà eu ou aura un impact sur les chaînes d'approvisionnement mondiales??**

- oui, définitivement
- non, plutôt pas
- je ne sais pas
- oui, c'est probable
- non, définitivement pas
- autres:

**11. Quel(s) produit(s) (intermédiaire(s)) votre entreprise achète-t-elle auprès d'autres entreprises (nationales ou étrangères)? Plusieurs réponses sont possibles.**

- produits métallurgiques
- adhésifs
- produits textiles
- meubles
- acier
- les machines en tant que produits intermédiaires (par exemple, les moteurs)
- béton & pierres
- alimentation
- produits chimiques
- vêtements
- produits en plastique
- logiciels informatiques
- matériel informatique
- produits à base de bois
- les services (par exemple, le conseil)
- produits cosmétiques
- les biens domestiques
- produits pharmaceutiques/médicaux
- produits à base d'herbes / de plantes
- autres: \_\_\_\_\_

**12. Selon votre estimation personnelle, quelle pourrait être la part en pourcentage des produits intermédiaires que votre entreprise achète à l'étranger? Veuillez estimer s'il vous plaît.**

- 0-10%
- 10-30%
- 30-50%
- 50-70%
- 70-90%
- 90-100%

**13. Dans quels pays votre entreprise achète-t-elle des produits (intermédiaires) ? Veuillez sélectionner la/les région(s). Plusieurs réponses sont possibles.**

- EUROPE CENTRALE et OCCIDENTALE (Allemagne, France, Grande-Bretagne, Irlande, Pays-Bas, Belgique, Luxembourg, Suisse, Autriche)
- EUROPE DU SUD (Portugal, Espagne, Italie, Grèce)
- EUROPE DU NORD (Norvège, Suède, Finlande, Danemark, Lettonie, Lituanie, Estonie)

- EUROPE DE L'EST (Pologne, Belarus, Slovénie, Serbie, Croatie, Bosnie, Roumanie, Bulgarie, Ukraine, République tchèque, Slovaquie, etc.)
- AFRIQUE DU NORD (Tunisie, Algérie, Égypte, Libye, Maroc)
- AFRIQUE CENTRALE et OCCIDENTALE
- AFRIQUE DU SUD (Afrique du Sud, Botswana, Mozambique, Namibie, Zimbabwe, Madagascar, etc.)
- ASIE DU NORD (Russie, Kazakhstan, Mongolie)
- ASIE OCCIDENTALE (Turquie, Syrie, Liban, Irak, Iran, Afghanistan, Pakistan, Arabie Saoudite, etc.)
- Chine     Inde     ASIE DE L'EST (Japon et Corée)
- ASIE DU SUD-EST (Thaïlande, Indonésie, Philippines, Malaisie, Papouasie-Nouvelle-Guinée, Vietnam, Cambodge, Bangladesh, Taiwan, etc.)
- AMÉRIQUE DU NORD (États-Unis et Canada)
- AMÉRIQUE DU SUD (Amérique latine, y compris le Mexique)     Australie et Nouvelle-Zélande
- MON ENTREPRISE N'ACHÈTE PAS DE PRODUITS DE L'ÉTRANGER

**14. Votre entreprise possède-t-elle des installations de production à l'étranger dans une ou plusieurs de ces régions, qui expédient des produits vers votre pays de résidence ? Si oui, veuillez préciser où.** Plusieurs réponses sont possibles.

- EUROPE CENTRALE et OCCIDENTALE                       EUROPE DU SUD
- EUROPE DU NORD     EUROPE DE L'EST                       AFRIQUE DU NORD
- AFRIQUE CENTRALE et OCCIDENTALE                       AFRIQUE AUSTRALE
- ASIE DU NORD     ASIE OCCIDENTALE                       CHINE                       INDE
- ASIE DE L'EST     ASIE DU SUD-EST                       AMÉRIQUE DU NORD
- AMÉRIQUE DU SUD     AUSTRALIE & NOUVELLE-ZÉLANDE
- pas d'installations de production supplémentaires à l'étranger

**15. Est-ce qu'il y avait des changements dans la chaîne d'approvisionnement de votre entreprise qui sont été planifiés bien avant COVID-19 et devaient être mis en œuvre en 2020?**     oui     non

**16. Est-ce qu'il y avait une modification/déplacement de l'approvisionnement de certains produits dans votre entreprise en 2020 dans le contexte de la pandémie COVID 19?**

- oui     non

**17. En période de pandémie actuelle, quels problèmes voyez-vous concrètement pour l'approvisionnement en produits/pré produits de votre entreprise?** Plusieurs réponses sont possibles. Veuillez donner votre avis personnel s'il vous plaît.

- les retards de livraison — les entreprises ne sont pas toujours en mesure de livrer à temps

- risque de faillite — le commerce avec les petites entreprises peut être plus risqué de nos jours car les petites entreprises ont un risque plus élevé de faire faillite
- je ne vois aucun problème
- autres: \_\_\_\_\_

**18. Pensez-vous qu'un changement dans la stratégie d'achat de votre entreprise pour 2021 ou les années suivantes serait probable?** (par exemple, l'achat de certains produits, qui étaient auparavant importés, par exemple de l'étranger, peuvent maintenant être acheté sur le marché intérieur ou dans les pays voisins)

- oui, c'est sûr
- non, ce n'est pas si probable
- je ne sais pas
- oui, je peux imaginer ça
- non, définitivement pas

**19. Quels changements dans la stratégie d'achat de votre entreprise pourriez-vous imaginer (par exemple, déplacer l'achat de certains produits/pré produits de l'étranger vers le marché intérieur ou vers les pays voisins)?** Plusieurs réponses sont possibles. Veuillez donner votre avis personnel s'il vous plaît.

- Reshoring partiel / Backshoring / Inshoring/Onshoring — processus consistant à renvoyer des parties de la production et de la fabrication de biens dans le pays d'origine de l'entreprise.
- Nearshoring partiel — l'organisation décide de transférer des parties de la production à des entreprises qui sont géographiquement plus proches du pays d'origine de l'entreprise.
- acheter à l'avance — afin de s'assurer de toujours avoir les produits en stock
- aucun changement
- autres: \_\_\_\_\_

**20. Pensez-vous qu'il soit possible que votre entreprise modifie légèrement la chaîne d'approvisionnement, en achetant auprès d'autres fournisseurs, afin de réduire le risque de ne pas recevoir les produits à temps ??** Plusieurs réponses sont possibles. Veuillez donner votre avis personnel s'il vous plaît.

- Oui, je pense qu'il est très probable que mon entreprise commencera à acheter davantage aux entreprises nationales.
- Oui, je pense qu'il est très probable que mon entreprise commencera à acheter davantage aux entreprises des pays voisins.
- En effet, mon entreprise explore actuellement de nouveaux marchés à l'étranger.
- Non, de toute façon, nous achetons déjà principalement auprès d'entreprises nationales et de pays voisins.
- Non, des changements dans notre chaîne d'approvisionnement ne sont pas très probables – nous continuerons à nous approvisionner à l'étranger comme auparavant.
- autres: \_\_\_\_\_

**21. Selon vous, quelle est la probabilité que les options stratégiques suivantes soient envisagées pour votre entreprise en période de pandémie COVID-19 ? Veuillez évaluer les déclarations sur une échelle à Cinq niveaux. Veuillez donner votre avis personnel s'il vous plaît.**

	non, je ne suis pas du tout d'accord	non, je ne suis pas tellement d'accord	je suis indécis	oui, je suis d'accord dans une certaine mesure	oui, je suis tout à fait d'accord	je ne sais pas
Je pense qu'il est probable que mon entreprise transfère l'achat de certains produits à d'autres fournisseurs.	●	●	●	●	●	●
À mon avis, il est probable que mon entreprise s'approvisionnera auprès de fournisseurs supplémentaires, afin d'atténuer le risque de ne pas recevoir les produits à temps.	●	●	●	●	●	●
Je pense que mon entreprise va chercher des fournisseurs dans d'autres pays, partout dans le monde.	●	●	●	●	●	●
Je pense qu'il est probable que ma société renverra certaines parties de notre chaîne d'approvisionnement dans son pays d'origine (Reshoring).	●	●	●	●	●	●
Je pense qu'il est assez probable que mon entreprise transfère une partie de la production à des entreprises de pays voisins (Nearshoring).	●	●	●	●	●	●

**22. Selon votre perception personnelle, quelle importance votre entreprise accorde-t-elle à la durabilité?**

Veuillez fournir votre estimation personnelle.

	pas du tout important	pas si important	indécis	assez important	oui très important	Je ne sais pas
l'importance de la durabilité	●	●	●	●	●	●

**23. Pensez-vous que votre entreprise serait prête à payer plus cher pour des produits fabriqués dans votre pays ou dans un pays voisin, afin d'atteindre un plus grand degré de durabilité ?**

- oui, je pense que c'est assez probable
- non, plutôt pas
- oui, cela pourrait arriver
- non, pas du tout
- autres: \_\_\_\_\_

**24. Selon votre opinion personnelle, dans quelle mesure le processus d'externalisation est-il bénéfique pour votre entreprise?**

a) L'externalisation est la stratégie commerciale consistant à engager une autre entreprise pour fournir des services et créer des biens qui étaient à l'origine réalisés en interne par les propres employés de l'entreprise).

b) Laquelle des affirmations suivantes correspond le mieux à votre opinion?

- Ma société ne se fournit pas du tout en processus.
- Nous externalisons certaines parties de nos processus et c'est une stratégie de réduction des coûts très efficace.
- Nous externalisons certaines parties de nos processus. Cependant, l'externalisation est plutôt une économie de coûts en théorie, alors qu'en pratique, elle engendre des dépenses supplémentaires incalculables.
- autres: \_\_\_\_\_

**25. Em que regiões a sua empresa vende os seus produtos / serviços?**

Plusieurs réponses sont possibles.

- EUROPE CENTRALE et OCCIDENTALE
- EUROPE DU SUD
- EUROPE DU NORD
- EUROPE DE L'EST
- AFRIQUE DU NORD
- AFRIQUE CENTRALE et OCCIDENTALE
- AFRIQUE AUSTRALE
- ASIE DU NORD
- ASIE OCCIDENTALE
- CHINE
- INDE
- ASIE DE L'EST
- ASIE DU SUD-EST
- AMÉRIQUE DU NORD
- AMÉRIQUE DU SUD
- AUSTRALIE & NOUVELLE-ZÉLANDE
- nous ne vendons pas de produits à l'étranger

**26. Au cours de la pandémie COVID-19, avez-vous perçu une diminution des ventes ??**

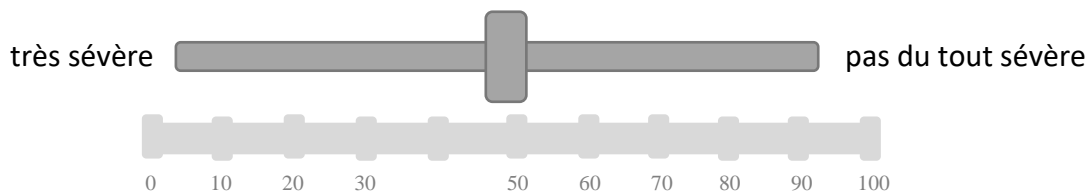
- oui, une diminution des ventes d'environ 0 à 20%
- oui, une diminution des ventes d'environ 20-40%
- oui, une diminution des ventes d'environ 40-60%
- oui, une diminution des ventes d'environ 60-80%
- oui, une diminution des ventes de plus de 80
- aucune diminution des ventes
- au lieu d'une diminution, nous constatons en fait une augmentation des ventes
- autres: \_\_\_\_\_

**27. Votre entreprise prévoit-elle actuellement des mesures générales de réduction des coûts en raison de la pandémie?** Veuillez faire une estimation s'il vous plaît.

- aucune mesure d'économie n'est prévue
- environ 0-10 % de mesures de réduction des coûts
- environ 10-20 % de mesures de réduction des coûts
- environ 20-30 % de mesures de réduction des coûts
- environ 30-50 % de mesures de réduction des coûts
- plus de 50 % de mesures de réduction des coûts
- je ne sais pas

**28. Selon votre opinion personnelle, quelle pourrait être la gravité des effets à long terme de COVID-19 sur les chaînes d'approvisionnement mondiales?**

Veuillez noter sur l'échelle ci-dessous s'il vous plaît.



**29. Selon vous, quelles sont les implications à long terme de COVID-19 pour votre économie nationale ou pour l'économie et le commerce mondiaux?**

Veuillez donner votre opinion personnel s'il vous plaît.

Le sondage est terminé. Merci beaucoup pour votre participation.

La fenêtre peut être fermée.

**Annex: Complete Sample, including all answers of each individual respondent**

Please find attached the excel sheet Complete Sample, including each answer of every individual respondent

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?	13. In which countries does your company purchase (intermediate) products? Please select the region(s).	14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.	15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?	16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?	17. In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company? a) delivery delays - companies might not always be able to deliver on time b) risk of bankruptcy - trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt c) I don't see any problems	18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?
1	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, definitely	services (e.g. advisory)	0-10%	CENTRAL and WESTERN EUROPE , EASTERN EUROPE	no additional production facilities abroad	ja	nein	"Wenig Probleme da Dienstleistungssektor"	no, rather unlikely
2	Deutsch	30-40 years	male	Doctor/PhD	Ägypter	Deutschland	> 500 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical /medical products	0-10%	CENTRAL and WESTERN EUROPE , China	CENTRAL and WESTERN EUROPE	ja	ja	b)	yes, for sure
3	Deutsch	18-30 years	female	Master's degree	Deutsch	Schweiz	250-500 employees	banks and insurance companies	IT	1-5 years	yes, definitely	IT software, services (e.g. advisory), "Schadenbearbeitung"	0-10%	EASTERN EUROPE, India	no additional production facilities abroad	nein	nein	a)	no, rather unlikely
4	Deutsch	30-40 years	male	Bachelor's degree	Schweiz	Schweiz	10-49 employees	construction industry	Production	6-10 years	yes, that is quite likely	services (e.g. advisory)	0-10%	CENTRAL and WESTERN EUROPE	no additional production facilities abroad	nein	nein	c)	no, rather unlikely
5	Deutsch	18-30 years	male	High school degree	Deutsch	Deutschland	50-249 employees	medical sector	Quality Management	< 1 year	yes, definitely	"Keine"	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
6	English	30-40 years	female	Master's degree	French	Germany	> 500 employees	medical sector	Marketing	1-5 years	yes, definitely	adhesives, plastic products, chemical products, machines as intermediate products (e.g. motors), household goods, furniture, IT software, services (e.g. advisory)	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, SOUTHERN AFRICA, WESTERN ASIA	CENTRAL and WESTERN EUROPE, CHINA, EAST ASIA, NORTH AMERICA	ja	ja	a) and b)	yes, I could imagine that
7	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	50-249 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Kundenkommunikation	1-5 years	no, rather not	IT software	10-30%	EASTERN EUROPE	no additional production facilities abroad	nein	nein	a) and b)	no, rather unlikely
8	English	18-30 years	male	Master's degree	Italian	Italy	> 500 employees	textile industry	Production	1-5 years	yes, definitely	steel, machines as intermediate products (e.g. motors), IT software, IT hardware	10-30%	China, EAST ASIA	CENTRAL and WESTERN EUROPE, CHINA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	nein	ja	a)	yes, I could imagine that
9	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	pharmaceutical industry	Marketing	1-5 years	yes, definitely	pharmaceutical /medical products	70-90%	CENTRAL and WESTERN EUROPE , EASTERN EUROPE, NORTHERN ASIA , China, EAST ASIA , India, NORTH AMERICA	CENTRAL and WESTERN EUROPE, CHINA, INDIA, NORTH AMERICA	nein	ja	a)	yes, for sure
10	English	18-30 years	male	Bachelor's degree	Jordanian	Jordan	1-9 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	50-70%	CENTRAL and WESTERN EUROPE , NORTH AMERICA	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
11	English	18-30 years	male	Master's degree	Italian	Italy	1-9 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	< 1 year	yes, definitely	IT software, IT hardware, services (e.g. advisory)	70-90%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	nein	a) and b)	yes, for sure
12	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	> 500 employees	banks and insurance companies	Sales	> 10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory), "Wertpapiere, Aktien, Real Estate"	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, NORTH AMERICA, SOUTH AMERICA	nein	nein	b)	no, rather unlikely
13	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	energy supply	Accounting & Finance	< 1 year	yes, that is quite likely	metall products, textile products, chemical products, pharmaceutical /medical products, machines as intermediate products (e.g. motors), furniture, IT software, IT hardware, services (e.g. advisory)	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	ja	a)	yes, I could imagine that
14	English	30-40 years	male	Master's degree	Egyptian	Germany	> 500 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	70-90%	CENTRAL and WESTERN EUROPE , EASTERN EUROPE, China, NORTH AMERICA	SOUTHERN EUROPE, CHINA, SOUTH-EAST ASIA, NORTH AMERICA	ja	ja	a) and b)	yes, for sure



Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?	13. In which countries does your company purchase (intermediate) products? Please select the region(s).	14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.	15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?	16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?	17. In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company? a) delivery delays - companies might not always be able to deliver on time b) risk of bankruptcy - trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt c) I don't see any problems	18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?
15	English	50-60 years	male	Master's degree	Indian	Saudi Arabia	> 500 employees	oil industry	Production	> 10 years	yes, that is quite likely	metall products, plastic products, machines as intermediate products (e.g. motors)	30-50%	WESTERN ASIA, China, India	no additional production facilities abroad	nein	ja	a) and b)	no, rather unlikely
16	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	chemical products, pharmaceutical / medical products	70-90%	CENTRAL and WESTERN EUROPE , EASTERN EUROPE, China, SOUTH-EAST ASIA	CENTRAL and WESTERN EUROPE, EASTERN EUROPE, CHINA, SOUTH-EAST ASIA	nein	ja	a)	yes, for sure
17	Français	30-40 years	female	Master's degree	Française	Allemagne	> 500 employees	medical sector	Marketing	1-5 years	yes, that is quite likely	adhesives, plastic products, chemical products, pharmaceutical / medical products, services (e.g. advisory)	10-30%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, China, India, SOUTH-EAST ASIA , NORTH AMERICA	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, NORTHERN ASIA, CHINA, NORTH AMERICA	nein	nein	a) and b)	yes, I could imagine that
18	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	retail	Apelo ao cliente	< 1 year	yes, definitely	textile products, clothing	90-100%	SOUTHERN EUROPE , EASTERN EUROPE,	no additional production facilities abroad	nein	nein	a)	no, rather unlikely
19	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	tourism	Marketing	1-5 years	yes, definitely	wood-based products, plastic products, textile products, furniture, IT software, IT hardware	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , EASTERN EUROPE, SOUTHERN AFRICA, India, SOUTH AMERICA	SOUTHERN EUROPE	nein	ja	a) and b)	yes, for sure
20	Português	18-30 years	female	Master's degree	Brasileira	Portugal	50-249 employees	chemical industry	Marketing	1-5 years	yes, definitely	metall products, plastic products, chemical products, machines as intermediate products (e.g. motors), IT software, herbal / plant products	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, China, India	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, SOUTHERN AFRICA, CHINA	nein	ja	a) and b)	yes, I could imagine that
21	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	plastic products, pharmaceutical / medical products, household goods, furniture, IT software, IT hardware, services (e.g. advisory)	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	ja	a)	no, rather unlikely
22	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutsch	> 500 employees	medical sector	Medical Care	< 1 year	yes, that is quite likely	chemical products, pharmaceutical / medical products, IT software, IT hardware, herbal / plant products	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL and WEST AFRICA, SOUTHERN AFRICA, NORTHERN ASIA , WESTERN ASIA	NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA	nein	nein	a)	no, rather unlikely
23	Deutsch	18-30 years	female	Bachelor's degree	Iran	Deutschland	50-249 employees	medical sector	Human Resources	1-5 years	yes, that is quite likely	textile products, IT software	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	ja	c) ("wir kaufen nichts aus dem Ausland ein")	yes, I could imagine that
24	Deutsch	18-30 years	female	Bachelor's degree	Deutsch/ kroatisch	Deutschland	> 500 employees	medical sector	Advisory	< 1 year	yes, definitely	pharmaceutical / medical products, IT software, IT hardware, services (e.g. advisory), "Medizinprodukte"	0-10%	CENTRAL and WESTERN EUROPE , China	no additional production facilities abroad	ja	ja	a)	yes, I could imagine that
25	Português	18-30 years	male	Bachelor's degree	portuguesa	Portugal	> 500 employees	Consulting (IT- Consulting, management consulting, tax consulting, audit, etc.)	IT	< 1 year	yes, definitely	services (e.g. advisory)	30-50%	China	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WESTERN AFRICA	ja	ja	a)	yes, for sure
26	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Procurement	1-5 years	yes, that is quite likely	metall products, steel, adhesives, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, NORTH AMERICA	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
27	Deutsch	30-40 years	female	High school degree	deutsch	Deutschland	10-49 employees	metal industry	Human Resources	1-5 years	yes, definitely	textile products	0-10%	CENTRAL and WESTERN EUROPE , NORTHERN ASIA	CENTRAL and WESTERN EUROPE	nein	nein	a)	yes, I could imagine that
28	English	18-30 years	male	Master's degree	Italian	Italy	10-49 employees	retail	Marketing	< 1 year	yes, definitely	plastic products, textile products	10-30%	SOUTHERN EUROPE , SOUTHERN AFRICA, China, SOUTH-EAST ASIA	SOUTHERN EUROPE, no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
29	English	40-50 years	male	Bachelor's degree	British	United Kingdom	50-249 employees	machine construction / mechanical engineering	Procurement	> 10 years	yes, that is quite likely	metall products, steel, IT hardware	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EAST ASIA	NORTHERN EUROPE, EASTERN EUROPE	nein	ja	a) ("Prices of certain products will rise due to bottlenecks in delivery")	yes, for sure

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?	13. In which countries does your company purchase (intermediate) products? Please select the region(s).	14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.	15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?	16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?	17. In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company? a) delivery delays - companies might not always be able to deliver on time b) risk of bankruptcy - trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt c) I don't see any problems	18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?
30	Deutsch	18-30 years	male	Master's degree	Spanien	Deutschland	> 500 employees	food industry	Procurement	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware	30-50%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN AFRICA, CENTRAL and WEST AFRICA, SOUTH-EAST ASIA, SOUTH AMERICA, Australia & New Zealand	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
31	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	1-9 employees	pharmaceutical industry	Medical Care	1-5 years	yes, that is quite likely	pharmaceutical /medical products	0-10%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, China	no additional production facilities abroad	nein	ja	a)	yes, I could imagine that
32	Deutsch	40-50 years	male	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Advisory	1-5 years	yes, definitely	metall products, steel, plastic products, chemical products	30-50%	EASTERN EUROPE, China	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CHINA, INDIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA	ja	nein	a) and b)	yes, for sure
33	English	18-30 years	female	Bachelor's degree	Romanian	Belgium	50-249 employees	transport & logistics	Accounting & Finance	1-5 years	no, definitely not	metall products, machines as intermediate products (e.g. motors), household goods, furniture, clothing, cosmetic products	30-50%	CENTRAL and WESTERN EUROPE	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE	nein	nein	c)	no, rather unlikely
34	Deutsch	18-30 years	female	Master's degree	deutsch	Deutschland	250-500 employees	food industry	Procurement	1-5 years	yes, that is quite likely	groceries, herbal / plant products, "Roh- und Halbwaren Obst und Gemüse in Bioqualität"	30-50%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL and WEST AFRICA, SOUTHERN AFRICA, WESTERN ASIA, China, India, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA	no additional production facilities abroad	nein	nein	a)	yes, I could imagine that
35	Portugies	30-40 years	male	Bachelor's degree	Portuguesa	Portugal	50-249 employees	food industry	Marketing	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, herbal / plant products	50-70%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WEST AFRICA, SOUTHERN AFRICA, SOUTH-EAST ASIA, SOUTH AMERICA	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
36	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	transport & logistics	Project Management	1-5 years	Kurzfristig ja, aber nicht auf lange Sicht	steel, "Container"	50-70%	China	no additional production facilities abroad	nein	nein	a)	no, rather unlikely
37	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	> 500 employees	chemical industry	Research and Development	> 10 years	yes, that is quite likely	plastic products, chemical products, clothing, cosmetic products, IT software, IT hardware, services (e.g. advisory)	50-70%	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CHINA, INDIA, NORTH AMERICA	CENTRAL and WESTERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CHINA, INDIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA	nein	nein	c)	yes, I could imagine that
38	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	chemical industry	Retail	1-5 years	yes, that is quite likely	"Keins, wir produzieren selber"	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	nein	c)	no, rather unlikely
39	English	18-30 years	male	Bachelor's degree	Italian	Italy	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, that is quite likely	services (e.g. advisory)	50-70%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL and WEST AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, EAST ASIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA	no additional production facilities abroad	nein	ja	a) and b)	yes, I could imagine that
40	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	tourism	Accounting & Finance	1-5 years	yes, definitely	furniture, clothing, IT software, IT hardware, services (e.g. advisory)	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	nein	"Ich sehe die Probleme des Konkursrisikos eher bei unseren Kunden - wodurch wir indirekt auch betroffen sind"	no, rather unlikely
41	Deutsch	40-50 years	female	Apprenticeship	Deutsch, Schweizerin	Deutschland	1-9 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical /medical products	50-70%	China	no additional production facilities abroad	nein	ja	a)	yes, I could imagine that

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?	13. In which countries does your company purchase (intermediate) products? Please select the region(s).	14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.	15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?	16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?	17. In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company? a) delivery delays - companies might not always be able to deliver on time b) risk of bankruptcy - trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt c) I don't see any problems	18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?
42	English	40-50 years	male	Master's degree	Swiss	Switzerland and UK	10-49 employees	IT development	Investment	> 10 years	yes, that is quite likely	IT software	70-90%	CENTRAL and WESTERN EUROPE , NORTH AMERICA	no additional production facilities abroad	nein	nein	c)	no, rather unlikely
43	Français	18-30 years	female	Doctor/PhD	French	Réunion Island	1-9 employees	food industry	Sales	1-5 years	yes, definitely	adhesives, plastic products	50-70%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, China, Australia & New Zealand	no additional production facilities abroad	nein	nein	a) and b)	yes, I could imagine that
44	Français	50-60 years	female	High school degree	Française	France	> 500 employees	education / administration	Accounting & Finance	> 10 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	30-50%	India	no additional production facilities abroad	nein	nein	b)	I don't know
45	Deutsch	30-40 years	female	Doctor/PhD	Zyprien	Deutschland	> 500 employees	medical sector	Medical Care	1-5 years	yes, definitely	plastic products, chemical products, pharmaceutical /medical products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware,	30-50%	CENTRAL and WESTERN EUROPE , EASTERN EUROPE, China	no additional production facilities abroad	nein	ja	a)	yes, I could imagine that
46	Deutsch	30-40 years	female	High school degree	deutschland	Deutschland	> 500 employees	banks and insurance companies	Advisory	> 10 years	yes, definitely	services (e.g. advisory)	0-10%	CENTRAL and WESTERN EUROPE , MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA	nein	nein	"keine Vorprodukte"	I don't know
47	Deutsch	50-60 years	male	Apprenticeship	Deutsch	Deutschland	> 500 employees	metal industry	Procurement	1-5 years	yes, that is quite likely	metal products, steel, plastic products	10-30%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , EASTERN EUROPE, China	CHINA, INDIA, NORTH AMERICA	ja	nein	a) ("Erhöhung der Lagerbestände notwendig")	yes, I could imagine that
48	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	> 500 employees	pharmaceutical industry	Production	6-10 years	yes, that is quite likely	plastic products, chemical products	0-10%	CENTRAL and WESTERN EUROPE	CENTRAL and WESTERN EUROPE, EAST ASIA, NORTH AMERICA	nein	ja	a)	no, rather unlikely
49	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	50-249 employees	textile industry	Procurement	1-5 years	yes, definitely	textile products, clothing	70-90%	SOUTHERN EUROPE , WESTERN ASIA, China, India	SOUTHERN EUROPE, WESTERN ASIA, CHINA, INDIA	nein	nein	a)	no, rather unlikely
50	Português	30-40 years	female	Master's degree	brasileira	Alemanha	> 500 employees	education / administration	Educação	1-5 years	I don't know	groceries, IT software, IT hardware	0-10%	MY COMPANY DOES NOT PURCHASE PRODUCTS FROM ABROAD	no additional production facilities abroad	nein	ja	"Temos que dar aulas online para os estudantes"	I don't know
51	Português	18-30 years	male	Master's degree	Português	Portugal	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Serviços Financeiros Actuariais	< 1 year	yes, definitely	"Produtos tecnológicos (IT)"	30-50%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTH AMERICA	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, INDIA, NORTH AMERICA	nein	ja	b)	no, rather unlikely
52	Português	>60 years	male	Doctor/PhD	Português	Portugal	> 500 employees	machine construction / mechanical engineering	Research and Development	> 10 years	yes, that is quite likely	metal products, steel, concrete & stones, adhesives, textile products, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)	70-90%	CENTRAL and WESTERN EUROPE , SOUTHERN EUROPE , NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WEST AFRICA, SOUTHERN AFRICA, China, India, EAST ASIA , SOUTH-EAST ASIA	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, CHINA, SOUTH AMERICA	ja	ja	a) and b)	yes, I could imagine that
53	English	40-50 years	male	Bachelor's degree	German American	United States	1-9 employees	IT development	Sales	> 10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	10-30%	EASTERN EUROPE, NORTH AMERICA	EASTERN EUROPE, NORTH AMERICA	ja	ja	a) and b) ("A lot of contractors had to completely reorganize their structure, therefore even our account managers changed")	yes, I could imagine that

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal estimation, what might be the percentage share of intermediate products your company purchases from abroad?	13. In which countries does your company purchase (intermediate) products? Please select the region(s).	14. Does your company have production facilities abroad in one or several of these regions, shipping products to your country of residence? If yes, please specify where.	15. Were there any changes in your company's supply chain that had been planned long before COVID-19 and were to be implemented in 2020?	16. In the context of the COVID-19 pandemic, has there been a change/disruption of the procurement of certain products for your company in 2020?	17. In times of the current pandemic, which problems do you see concretely for the procurement of products/pre-products for your company? a) delivery delays - companies might not always be able to deliver on time b) risk of bankruptcy - trading with smaller companies might be more risky these days because smaller companies have a higher risk to go bankrupt c) I don't see any problems	18. Do you think a change in your company's procurement strategy for 2021 or subsequent years is likely?
54	English	18-30 years	male	Master's degree	Italian	Italy	250-500 employees	food industry	Marketing	1-5 years	no, rather not	groceries, services (e.g. advisory), "Various ingredients"	30-50%	CENTRAL and WESTERN EUROPE, EASTERN EUROPE, NORTH AMERICA	CENTRAL and WESTERN EUROPE, EASTERN EUROPE	nein	nein	a) ("insufficient quantity due to slower production in the chain")	no, rather unlikely
55	English	30-40 years	female	Doctor/PhD	Brazilian, Italian	UK	250-500 employees	education / administration	Research und Development	1-5 years	yes, definitely	plastic products, chemical products	70-90%	CENTRAL and WESTERN EUROPE, NORTH AMERICA	no additional production facilities abroad	nein	nein	a)	yes, for sure
56	English	30-40 years	female	High school degree	Brazilian	England	50-249 employees	metal industry	IT	1-5 years	I don't know	metall products	70-90%	CENTRAL and WESTERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, NORTHERN ASIA	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA	nein	nein	a)	yes, for sure
57	English	30-40 years	male	Master's degree	Indian	Germany	250-500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Sales	1-5 years	yes, definitely	IT software, services (e.g. advisory)	30-50%	CENTRAL and WESTERN EUROPE	CENTRAL and WESTERN EUROPE	ja	ja	a)	yes, for sure
58	English	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Human Resources	6-10 years	yes, that is quite likely	metal products, steel, adhesives, plastic products, textile products, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory), "Übersetzungsdienstleistungen"	70-90%	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, China, India	CENTRAL and WESTERN EUROPE, CHINA, NORTH AMERICA, SOUTH AMERICA	ja	ja	a) and b)	yes, I could imagine that
59	Deutsch	30-40 years	male	Doctor/PhD	Deutsch	Deutschland	> 500 employees	medical sector	Medical Care	6-10 years	yes, definitely	pharmaceutical / medical products	0-10%	CENTRAL and WESTERN EUROPE	no additional production facilities abroad	nein	ja	a)	no, rather unlikely
60	English	30-40 years	male	High school degree	Syrian and Portuguese	Portugal	10-49 employees	automotive industry	Supervision	1-5 years	yes, that is quite likely	metal products, steel, adhesives, plastic products, machines as intermediate products (e.g. motors)	70-90%	CENTRAL and WESTERN EUROPE, China, EAST ASIA	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, SOUTH AMERICA	ja	ja	a) and b)	yes, I could imagine that
61	Deutsch	30-40 years	male	Master's degree	Deutsch	Deutschland	10-49 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Advisory	1-5 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	10-30%	CENTRAL and WESTERN EUROPE	NORTH AMERICA	nein	nein	c)	no, rather unlikely

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/pre-products from abroad to the domestic market or to neighboring countries).	20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?	21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. ("do not agree at all" - 1 point, "completely agree" - 5 points)	I think it is likely my company will shift the purchase of certain products to other suppliers.	In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	I do believe my company will search for suppliers in other countries anywhere in the world.	I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	22. According to your personal perception, how much importance does your company attach to sustainability?	23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?
1	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, definitely	services (e.g. advisory)	"Einfache Tätigkeiten werden ausgelagert. Das war schon vor Corona der Fall und Corona hat das nicht verändert."	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway. No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	2	1	2	0	4	yes, I think that's quite likely
2	Deutsch	30-40 years	male	Doctor/PhD	Ägypter	Deutschland	> 500 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical /medical products	Reshoring/Backshoring/inshoring/Onshoring	Yes, I think it is quite likely that my company will start purchasing more from domestic companies.		3	3	3	3	3	0	yes, that might happen
3	Deutsch	18-30 years	female	Master's degree	Deutsch	Schweiz	250-500 employees	banks and insurance companies	IT	1-5 years	yes, definitely	IT software, services (e.g. advisory), "Schadenbearbeitung"	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	1	1	1	1	4	no, not at all
4	Deutsch	30-40 years	male	Bachelor's degree	Schweiz	Schweiz	10-49 employees	construction industry	Production	6-10 years	yes, that is quite likely	services (e.g. advisory)	buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		2	1	0	0	5	4	yes, that might happen
5	Deutsch	18-30 years	male	High school degree	Deutsch	Deutschland	50-249 employees	medical sector	Quality Management	< 1 year	yes, definitely	"Keine"	no changes at all	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		1	1	2	2	1	5	no, rather not
6	English	30-40 years	female	Master's degree	French	Germany	> 500 employees	medical sector	Marketing	1-5 years	yes, definitely	adhesives, plastic products, chemical products, machines as intermediate products (e.g. motors), household goods, furniture, IT software, services (e.g. advisory)	partial Nearshoring	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		4	4	3	4	3	4	no, rather not
7	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	50-249 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Kundenkommunikation	1-5 years	no, rather not	IT software	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	2	2	2	1	4	yes, that might happen
8	English	18-30 years	male	Master's degree	Italian	Italy	> 500 employees	textile industry	Production	1-5 years	yes, definitely	steel, machines as intermediate products (e.g. motors), IT software, IT hardware	Reshoring/Backshoring/inshoring/Onshoring	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	2	2	3	2	2	no, rather not
9	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	pharmaceutical industry	Marketing	1-5 years	yes, definitely	pharmaceutical /medical products	Reshoring/Backshoring/inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		5	5	3	5	5	2	no, rather not
10	English	18-30 years	male	Bachelor's degree	Jordanian	Jordan	1-9 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	partial Nearshoring	My company is currently exploring new markets abroad.		4	2	3	3	4	4	yes, that might happen
11	English	18-30 years	male	Master's degree	Italian	Italy	1-9 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	< 1 year	yes, definitely	IT software, IT hardware, services (e.g. advisory)	Reshoring/Backshoring/inshoring/Onshoring	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		4	5	4	3	4	3	yes, that might happen
12	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	> 500 employees	banks and insurance companies	Sales	> 10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory), "Wertpapiere, Aktien, Real Estate"	no changes at all	"Veränderungen ja, aber nicht in der Beschaffungsstrategie unserer Bank, sondern eher in Form von Sparmaßnahmen"		1	1	1	1	3	4	no, rather not
13	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	energy supply	Accounting & Finance	< 1 year	yes, that is quite likely	metal products, textile products, chemical products, pharmaceutical /medical products, machines as intermediate products (e.g. motors), furniture, IT software, IT hardware, services (e.g. advisory)	buying ahead	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		0	0	2	0	0	5	yes, that might happen
14	English	30-40 years	male	Master's degree	Egyptian	Germany	> 500 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	Reshoring/Backshoring/inshoring/Onshoring and partial Nearshoring	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		4	4	2	5	5	4	yes, that might happen

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/pre-products from abroad to the domestic market or to neighboring countries).	20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?	21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. ("do not agree at all" - 1 point, "completely agree" - 5 points)	I think it is likely my company will shift the purchase of certain products to other suppliers.	In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	I do believe my company will search for suppliers in other countries anywhere in the world.	I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	22. According to your personal perception, how much importance does your company attach to sustainability?	23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?
15	English	50-60 years	male	Master's degree	Indian	Saudi Arabia	> 500 employees	oil industry	Production	> 10 years	yes, that is quite likely	metal products, plastic products, machines as intermediate products (e.g. motors)	reshoring/Backshoring/Inshoring/Onshoring	My company is currently exploring new markets abroad. No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.	4	3	4	2	3	1	no, not at all	
16	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	chemical products, pharmaceutical / medical products	reshoring/Backshoring/Inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.	5	5	3	4	4	4	no, rather not	
17	Français	30-40 years	female	Master's degree	Française	Allemagne	> 500 employees	medical sector	Marketing	1-5 years	yes, that is quite likely	adhesives, plastic products, chemical products, pharmaceutical / medical products, services (e.g. advisory)	reshoring/Backshoring/Inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.	4	4	2	3	2	4	yes, that might happen	
18	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	retail	Apoio ao cliente	< 1 year	yes, definitely	textile products, clothing	buying ahead	My company is currently exploring new markets abroad.	4	4	2	1	4	5	yes, I think that's quite likely	
19	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	tourism	Marketing	1-5 years	yes, definitely	wood-based products, plastic products, textile products, furniture, IT software, IT hardware	buying ahead	"não podemos mudar"	2	4	4	2	2	2	no, rather not	
20	Português	18-30 years	female	Master's degree	Brasileira	Portugal	50-249 employees	chemical industry	Marketing	1-5 years	yes, definitely	metal products, plastic products, chemical products, machines as intermediate products (e.g. motors), IT software, herbal / plant products	partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. My company is currently exploring new markets abroad.	4	4	4	2	4	2	no, rather not	
21	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	plastic products, pharmaceutical / medical products, household goods, furniture, IT software, IT hardware, services (e.g. advisory)	buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.	4	4	2	0	0	2	no, rather not	
22	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutsch	> 500 employees	medical sector	Medical Care	< 1 year	yes, that is quite likely	chemical products, pharmaceutical / medical products, IT software, IT hardware, herbal / plant products	partial Nearshoring and no changes at all	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.	3	3	3	3	3	1	no, not at all	
23	Deutsch	18-30 years	female	Bachelor's degree	Iran	Deutschland	50-249 employees	medical sector	Human Resources	1-5 years	yes, that is quite likely	textile products, IT software	buying ahead	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.	2	4	2	5	3	4	yes, that might happen	
24	Deutsch	18-30 years	female	Bachelor's degree	Deutsch/Kroatisch	Deutschland	> 500 employees	medical sector	Advisory	< 1 year	yes, definitely	pharmaceutical / medical products, IT software, IT hardware, services (e.g. advisory), "Medizinprodukte"	buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies.	4	4	3	3	3	4	yes, that might happen	
25	Português	18-30 years	male	Bachelor's degree	portuguesa	Portugal	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	IT	< 1 year	yes, definitely	services (e.g. advisory)	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.	0	0	0	0	0	0	no, rather not	
26	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Procurement	1-5 years	yes, that is quite likely	metal products, steel, adhesives, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)	partial Nearshoring and buying ahead	My company is currently exploring new markets abroad.	4	4	4	3	4	3	no, rather not	
27	Deutsch	30-40 years	female	High school degree	deutsch	Deutschland	10-49 employees	metal industry	Human Resources	1-5 years	yes, definitely	textile products	buying ahead	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.	3	3	3	5	2	2	no, rather not	
28	English	18-30 years	male	Master's degree	Italian	Italy	10-49 employees	retail	Marketing	< 1 year	yes, definitely	plastic products, textile products	reshoring/Backshoring/Inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.	4	5	3	4	4	3	no, rather not	
29	English	40-50 years	male	Bachelor's degree	British	United Kingdom	50-249 employees	machine construction / mechanical engineering	Procurement	> 10 years	yes, that is quite likely	metal products, steel, IT hardware	partial Nearshoring	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. My company is currently exploring new markets abroad.	5	4	4	0	5	2	no, rather not	

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/pre-products from abroad to the domestic market or to neighboring countries).	20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?	21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. ("do not agree at all" - 1 point, "completely agree" - 5 points)	I think it is likely my company will shift the purchase of certain products to other suppliers.	In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	I do believe my company will search for suppliers in other countries anywhere in the world.	I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	22. According to your personal perception, how much importance does your company attach to sustainability?	23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?
30	Deutsch	18-30 years	male	Master's degree	Spanien	Deutschland	> 500 employees	food industry	Procurement	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware	partial Reshoring/Backshoring/inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. , Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. , My company is currently exploring new markets abroad.	5	5	4	3	3	4	yes, that might happen	
31	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	1-9 employees	pharmaceutical industry	Medical Care	1-5 years	yes, that is quite likely	pharmaceutical /medical products	partial Reshoring/Backshoring/inshoring/Onshoring, partial Nearshoring and buying ahead	"Aus dem Europäisches Ausland sind wir zu verpflichtet, dort zu bestellen, da oft günstiger, müsste gesetzlich geändert werden; außerdem europäisches Ausland ist zum beschaffen von Fertigungsmittel sehr umständlich"	4	3	2	4	3	3	no, rather not	
32	Deutsch	40-50 years	male	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Advisory	1-5 years	yes, definitely	metal products, steel, plastic products, chemical products	partial Nearshoring	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.	4	5	5	4	5	4	no, rather not	
33	English	18-30 years	female	Bachelor's degree	Romanian	Belgium	50-249 employees	transport & logistics	Accounting & Finance	1-5 years	no, definitely not	metal products, machines as intermediate products (e.g. motors), household goods, furniture, clothing, cosmetic products	partial Reshoring/Backshoring/inshoring/Onshoring	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.	1	2	1	3	3	4	no, not at all	
34	Deutsch	18-30 years	female	Master's degree	deutsch	Deutschland	250-500 employees	food industry	Procurement	1-5 years	yes, that is quite likely	groceries, herbal / plant products, "Roh- und Halbwaren Obst und Gemüse in Bioqualität"	buying ahead	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.	1	4	2	1	1	5	yes, that might happen	
35	Portugues	30-40 years	male	Bachelor's degree	Portuguesa	Portugal	50-249 employees	food industry	Marketing	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, herbal / plant products	partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. , Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. , My company is currently exploring new markets abroad.	4	4	4	2	4	3	no, rather not	
36	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	transport & logistics	Project Management	1-5 years	Kurzfristig ja, aber nicht auf lange Sicht	steel, "Container"	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.	2	4	4	2	2	4	yes, that might happen	
37	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	> 500 employees	chemical industry	Research and Development	> 10 years	yes, that is quite likely	plastic products, chemical products, clothing, cosmetic products, IT software, IT hardware, services (e.g. advisory)	"strategische Entscheidung kostenbasiert, weiterhin in verschiedenen Regionen der Welt"	"Nein, wir werden nach wie vor aus dem in- und Ausland beziehen"	4	4	5	3	2	5	yes, that might happen	
38	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	chemical industry	Retail	1-5 years	yes, that is quite likely	"Keins, wir produzieren selber"	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.	1	1	1	1	1	4	no, rather not	
39	English	18-30 years	male	Bachelor's degree	Italian	Italy	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, that is quite likely	services (e.g. advisory)	partial Reshoring/Backshoring/inshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. , Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. , My company is currently exploring new markets abroad.	4	5	4	4	5	2	no, rather not	
40	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	tourism	Accounting & Finance	1-5 years	yes, definitely	furniture, clothing, IT software, IT hardware, services (e.g. advisory)	no changes at all	"Wir kaufen hauptsächlich IT ein - und diese Branche ist nicht wirklich betroffen von der Pandemie"	2	2	2	2	2	2	no, rather not	
41	Deutsch	40-50 years	female	Apprenticeship	Deutsch, Schweizerin	Deutschland	1-9 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical /medical products	partial Reshoring/Backshoring/inshoring/Onshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies.	4	4	3	3	4	4	no, rather not	

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/pre-products from abroad to the domestic market or to neighboring countries).	20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?	21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. ("do not agree at all" - 1 point. "completely agree" - 5 points)	I think it is likely my company will shift the purchase of certain products to other suppliers.	In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	I do believe my company will search for suppliers in other countries anywhere in the world.	I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	22. According to your personal perception, how much importance does your company attach to sustainability?	23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?
42	English	40-50 years	male	Master's degree	Swiss	Switzerland and UK	10-49 employees	IT development	Investment	> 10 years	yes, that is quite likely	IT software	no changes at all	"not relevant to us"		1	1	1	1	1	5	yes, I think that's quite likely
43	Français	18-30 years	female	Doctor/PhD	French	Réunion island	1-9 employees	food industry	Sales	1-5 years	yes, definitely	adhesives, plastic products	partial Nearshoring and buying ahead	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		3	3	2	4	2	3	no, rather not
44	Français	50-60 years	female	High school degree	Française	France	> 500 employees	education / administration	Accounting & Finance	> 10 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	4	4	1	1	3	la durabilité recoute pas tellement dans l'industrie ou je travaille
45	Deutsch	30-40 years	female	Doctor/PhD	Zypern	Deutschland	> 500 employees	medical sector	Medical Care	1-5 years	yes, definitely	plastic products, chemical products, pharmaceutical /medical products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware,	partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		4	4	4	3	3	2	no, rather not
46	Deutsch	30-40 years	female	High school degree	deutschland	Deutschland	> 500 employees	banks and insurance companies	Advisory	> 10 years	yes, definitely	services (e.g. advisory)	no changes at all	"Keine Vorprodukte"		0	0	0	0	0	4	yes, that might happen
47	Deutsch	50-60 years	male	Apprenticeship	Deutsch	Deutschland	> 500 employees	metal industry	Procurement	1-5 years	yes, that is quite likely	metal products, steel, plastic products	partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries.		4	4	3	2	3	3	no, rather not
48	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	> 500 employees	pharmaceutical industry	Production	6-10 years	yes, that is quite likely	plastic products, chemical products	no changes at all	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		2	4	2	4	4	4	yes, I think that's quite likely
49	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	50-249 employees	textile industry	Procurement	1-5 years	yes, definitely	textile products, clothing	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	2	3	1	1	4	no, rather not
50	Português	30-40 years	female	Master's degree	brasileira	Alemanha	> 500 employees	education / administration	Educação	1-5 years	I don't know	groceries, IT software, IT hardware	"Não compramos produtos na universidade."	"Não compramos produtos na universidade."		0	0	0	0	0	4	yes, that might happen
51	Português	18-30 years	male	Master's degree	Português	Portugal	> 500 employees	Consulting (IT- Consulting, management consulting, tax consulting, audit, etc.)	Serviços Financeiros Actuariais	< 1 year	yes, definitely	"Produtos tecnológicos (IT)"	no changes at all	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		2	1	2	1	1	5	no, rather not
52	Português	>60 years	male	Doctor/PhD	Português	Portugal	> 500 employees	machine construction / mechanical engineering	Research and Development	> 10 years	yes, that is quite likely	metal products, steel, concrete & stones, adhesives, textile products, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)	buying ahead	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	4	4	2	2	2	no, rather not
53	English	40-50 years	male	Bachelor's degree	German American	United States	1-9 employees	IT development	Sales	> 10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	no changes at all and ("Or concept has already been very global at the very core. Punishing third parties because of a pandemic would be a mistake")	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		1	4	5	1	2	5	Unrelated
54	English	18-30 years	male	Master's degree	Italian	Italy	250-500 employees	food industry	Marketing	1-5 years	no, rather not	groceries, services (e.g. advisory), "Various ingredients"	buying ahead	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		2	4	5	1	1	5	yes, I think that's quite likely



Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) product(s) does your company purchase from other companies (from national companies or from abroad)?	19. Which changes in the procurement strategy of your company could you imagine? (e.g. shifting the procurement of certain products/pre-products from abroad to the domestic market or to neighboring countries).	20. Do you think it might be possible that your company will slightly shift the supply chain, purchasing from other suppliers, in order to mitigate the risk of not receiving products on time?	21. In your personal opinion, how likely do you consider the following strategic options for your company in times of the COVID-19 pandemic? Please rate the statements on a five-level scale. ("do not agree at all" - 1 point, "completely agree" - 5 points)	I think it is likely my company will shift the purchase of certain products to other suppliers.	In my opinion, it is likely my company will purchase from additional suppliers, in order to mitigate the risk of not receiving products on time.	I do believe my company will search for suppliers in other countries anywhere in the world.	I think it is likely my company will return parts of our supply chain back to the company's original country (Reshoring).	I believe it is rather likely my company will transfer parts of the production to companies in neighboring countries (Nearshoring).	22. According to your personal perception, how much importance does your company attach to sustainability?	23. Do you think your company would be willing to pay more for products produced either in your country or in a neighboring country, in order to achieve a greater degree of sustainability?
55	English	30-40 years	female	Doctor/PhD	Brazilian, Italian	UK	250-500 employees	education / administration	Research und Development	1-5 years	yes, definitely	plastic products, chemical products	buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies.		4	4	4	4	4	2	yes, that might happen
56	English	30-40 years	female	High school degree	Brazilian	England	50-249 employees	metal industry	IT	1-5 years	I don't know	metall products	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		0	0	0	0	0	0	no, not at all
57	English	30-40 years	male	Master's degree	Indian	Germany	250-500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Sales	1-5 years	yes, definitely	IT software, services (e.g. advisory)	Reshoring/Backshoring/nshoring/Onshoring	Yes, I think it is quite likely that my company will start purchasing more from domestic companies.		4	4	5	3	0	5	yes, I think that's quite likely
58	English	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Human Resources	6-10 years	yes, that is quite likely	metall products, steel, adhesives, plastic products, textile products, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory), "Übersetzungsdienstleistungen"	Reshoring/Backshoring/nshoring/Onshoring, partial Nearshoring and buying ahead	Yes, I think it is quite likely that my company will start purchasing more from domestic companies. , Yes, I think it is quite likely that my company will start purchasing more from companies in neighboring countries. , My company is currently exploring new markets abroad.		4	4	4	3	4	2	no, rather not
59	Deutsch	30-40 years	male	Doctor/PhD	Deutsch	Deutschland	> 500 employees	medical sector	Medical Care	6-10 years	yes, definitely	pharmaceutical /medical products	no changes at all	No, we are already mainly purchasing from domestic companies and neighbouring countries anyway.		1	1	1	1	1	2	no, rather not
60	English	30-40 years	male	High school degree	Syrian and Portuguese	Portugal	10-49 employees	automotive industry	Supervision	1-5 years	yes, that is quite likely	metall products, steel, adhesives, plastic products, machines as intermediate products (e.g. motors)	Reshoring/Backshoring/nshoring/Onshoring	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		2	2	4	2	2	3	no, rather not
61	Deutsch	30-40 years	male	Master's degree	Deutsch	Deutschland	10-49 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Advisory	1-5 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	no changes at all	No, changes of our supply chain are not very likely - we will continue to source from abroad just as before.		1	2	3	2	2	4	yes, that might happen

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) products does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal opinion, how beneficial is the process of outsourcing in your company?	13. In which regions does your company sell its products / services?	14. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?	15. Is your company currently planning general cost-saving measures as a result of the pandemic?	16. According to your personal opinion, how severe might be the long-term effects of COVID-19 on global supply chains?	17. What do you think might be long-term effects of COVID-19 for the supply chain of your company, your national economy, and global trade?	English Translation of question 17)
1	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	>500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, definitely	services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE	no decrease in sales at all		30	Produkte werden wieder vermehrt lokal bezogen und hergestellt: insb. Medikamente.	"Products are increasingly being sourced and manufactured locally again. Especially medicines."
2	Deutsch	30-40 years	male	Doctor/PhD	Ägypter	Deutschland	>500 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical / medical products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE	Yes, a decrease in sales of approximately 0-20 %		50	Schwer zu wissen	"Hard to know."
3	Deutsch	18-30 years	female	Master's degree	Deutsch	Schweiz	250-500 employees	banks and insurance companies	IT	1-5 years	yes, definitely	IT software, services (e.g. advisory). "Schadenbearbeitung"	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	we are not selling products abroad	Yes, a decrease in sales of approximately 40-60 %		20	GDP Verlust um 3-7%, das ggf. über die nächsten 5 Jahre abgebaut wird	"GDP loss by 3-7%, which may be reduced over the next 5 years."
4	Deutsch	30-40 years	male	Bachelor's degree	Schweiz	Schweiz	10-49 employees	construction industry	Production	6-10 years	yes, that is quite likely	services (e.g. advisory)	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE	no decrease in sales at all		20	Wird sich sehr schwer davon erholen.	"Will be very difficult to recover from this."
5	Deutsch	18-30 years	male	High school degree	Deutsch	Deutschland	50-249 employees	medical sector	Quality Management	< 1 year	yes, definitely	"Keine"	My company does not source out any processes.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA	Kann nicht angegeben werden		20	Einerseits eingeschränkt, bei Impfstoff wiederum positiv.	"On the one hand limited, with vaccine again positive."
6	English	30-40 years	female	Master's degree	French	Germany	>500 employees	medical sector	Marketing	1-5 years	yes, definitely	adhesives, plastic products, chemical products, machines as intermediate products (e.g. motors), household goods, furniture, IT software, services (e.g. advisory)	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA	instead of a decrease we are actually experiencing an increase in sales		30	Review of the current distribution and sourcing processes; Validation of more suppliers to prevent the risk of back order situations	"Review of the current distribution and sourcing processes; Validation of more suppliers to prevent the risk of back order situations."
7	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	50-249 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Kundenkommunikation	1-5 years	no, rather not	IT software	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE	Yes, a decrease in sales of approximately 0-20 %		20	Insgesamt schwerwiegend und prozessverändernd	"Overall severe and process changing."
8	English	18-30 years	male	Master's degree	Italian	Italy	>500 employees	textile industry	Production	1-5 years	yes, definitely	steel, machines as intermediate products (e.g. motors), IT software, IT hardware	My company does not source out any processes.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND.	yes, a decrease in sales of approximately 20-40 %		60	Will not have long term effects (at least directly) on the supply chain which is well consolidated. Issues may arise from decrease in revenues which might bring the company to reconsider its current supply chain	"Will not have long term effects (at least directly) on the supply chain which is well consolidated. Issues may arise from decrease in revenues which might bring the company to reconsider its current supply chain."
9	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	50-249 employees	pharmaceutical industry	Marketing	1-5 years	yes, definitely	pharmaceutical / medical products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA	instead of a decrease we are actually experiencing an increase in sales	approximately 0-10 % cost-saving measures	10	Die Lieferketten werden sich verändern, es sollen mehr Pharma- und vor allem Hygieneprodukte wie Bspw. Masken und Desinfektionsmittel im Inland und in Nachbarländern hergestellt werden, um im Falle einer erneuten Pandemie-Welle besser aufgestellt sein zu können.	"Supply chains will change, with more pharmaceutical and especially hygiene products, such as masks and disinfectants, being manufactured domestically and in neighboring countries to be better positioned in the event of another pandemic wave."
10	English	18-30 years	male	Bachelor's degree	Jordanian	Jordan	1-9 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	WESTERN ASIA	yes, a decrease in sales of approximately 40-60 %		10	It has and will definitely continue to reshape our company's supply chain, national economy, and global economy. Businesses and governments are already shifting their operations to accommodate for the effects of COVID-19 and I don't see everything going back to normal even if the pandemic ends.	"It has and will definitely continue to reshape our company's supply chain, national economy, and global economy. Businesses and governments are already shifting their operations to accommodate for the effects of COVID-19 and I don't see everything going back to normal even if the pandemic ends."
11	English	18-30 years	male	Master's degree	Italian	Italy	1-9 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	< 1 year	yes, definitely	IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE	yes, a decrease in sales of approximately 20-40 %		20	---	"--"
12	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	>500 employees	banks and insurance companies	Sales	>10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory), "Wertpapiere, Aktien, Real Estate"	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTH AMERICA, SOUTH AMERICA	Yes, a decrease in sales of approximately 20-40 %	approximately 20-30 % cost-saving measures	10	Nach der Einführung des Impfstoffes wird sich die allgemeine Lage etwas beruhigen - die wirtschaftlichen Konsequenzen werden zunächst erstmal noch deutlich sichtbar sein, mittelfristig erwarten wir jedoch eine deutliche Besserung im Finanzwesen - zumindest in Deutschland. Für viele Bürger jedoch bedeutet die Pandemie deutliche Einkommensenbußen und ein Anstieg der Arbeitslosigkeit.	"After the introduction of the vaccine, the general situation will calm down somewhat - the economic consequences will initially still be clearly visible, but in the medium term we expect a significant improvement in the financial sector - at least in Germany. For many citizens, however, the pandemic will mean a significant drop in income and an increase in unemployment."
13	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	>500 employees	energy supply	Accounting & Finance	< 1 year	yes, that is quite likely	metal products, textile products, chemical products, pharmaceutical / medical products, machines as intermediate products (e.g. motors), furniture, IT software, IT hardware, services (e.g. advisory)	My company does not source out any processes.	we are not selling products abroad	Yes, a decrease in sales of approximately 0-20 %		50	- mehr Fokus auf kostensparende Strategien, damit auch Anpassung der bisherigen Lieferketten; - zunehmender Einkauf bei inländischen Unternehmen oder Nachbarländern; - mehr In- und Nearshoring; - Erhöhung der Lagerbestände bzw. Vorratshäufung	"- more focus on cost-saving strategies, thus also adjustment of existing supply chains; - increasing purchasing from domestic companies or neighboring countries; - more in- and nearshoring; - increase in inventories or stock purchases"
14	English	30-40 years	male	Master's degree	Egyptian	Germany	>500 employees	IT development	IT	1-5 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, AUSTRALIA & NEW ZEALAND	Yes, a decrease in sales of approximately 20-40 %		40	A Shortages of raw ingredients and components due to temporary closures of ports & factories in several countries will force manufacturers to seek new sources. Shifts in demand patterns, as already consumers worldwide are focusing more on essential goods, due to the financial impact which reflected on several jobs; COVID-19 span uncertainty could lead manufacturers and service providers to introduce new strategies to avoid breaching contracts and SLA penalties.	"A Shortages of raw ingredients and components due to temporary closures of ports & factories in several countries will force manufacturers to seek new sources. Shifts in demand patterns, as already consumers worldwide are focusing more on essential goods, due to the financial impact which reflected on several jobs; COVID-19 span uncertainty could lead manufacturers and service providers to introduce new strategies to avoid breaching contracts and SLA penalties."
15	English	50-60 years	male	Master's degree	Indian	Saudi Arabia	>500 employees	oil industry	Production	>10 years	yes, that is quite likely	metal products, plastic products, machines as intermediate products (e.g. motors)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA	yes, a decrease in sales of approximately 20-40 %	approximately 0-10 % cost-saving measures	20	The drop in oil prices due to the lockdown had a severe impact on our industry.	"The drop in oil prices due to the lockdown had a severe impact on our industry."
16	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	chemical products, pharmaceutical / medical products	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	instead of a decrease we are actually experiencing an increase in sales	no cost-saving measures planned	10	- Pharmaprodukte werden per Gesetz demnächst in größerem Maße in der EU hergestellt, um eine konstante Versorgung sicherstellen zu können; - Die Wirtschaft insgesamt wird stark unter der Pandemie leiden - auch in den kommenden Jahren.	"- Pharmaceutical products will soon be manufactured by law to a greater extent in the EU to ensure a constant supply; - The economy as a whole will suffer greatly from the pandemic - also in the coming years."

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) products does your company purchase from other companies (from national companies or from abroad)?	12. Which (intermediate) products does your company sell to other companies (to national companies or to abroad)?	13. In which regions does your company sell its products / services?	14. According to your personal opinion, how beneficial is the process of outsourcing in your company?	15. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?	16. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?	17. Is your company currently planning general cost-saving measures as a result of the pandemic?	18. According to your personal opinion, how severe might be the long term effects of COVID-19 on global supply chains?	19. What do you think might be long-term effects of COVID-19 for the supply chain of your company, your national economy, and global trade?	English Translation of question 19)
17	Français	30-40 years	female	Master's degree	Française	Allemagne	> 500 employees	medical sector	Marketing	1-5 years	yes, that is quite likely	adhesives, plastic products, chemical products, pharmaceutical /medical products, services (e.g. advisory)		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	Instead of a decrease we are actually experiencing an increase in sales		40		" "	
18	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	retail	Apoio ao cliente	< 1 year	yes, definitely	textile products, clothing		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	A empresa abriu durante a pandemia		0	Redução de vendas, consequentemente a eliminação de postos de trabalho	"Sales reduction, consequently, elimination of jobs"	
19	Português	18-30 years	female	Master's degree	Portuguesa	Portugal	10-49 employees	tourism	Marketing	1-5 years	yes, definitely	wood-based products, plastic products, textile products, furniture, IT software, IT hardware		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, SOUTH AMERICA	My company does not source out any processes.	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	20	não sei	"I don't know"	
20	Português	18-30 years	female	Master's degree	Brasileira	Portugal	50-249 employees	chemical industry	Marketing	1-5 years	yes, definitely	metal products, plastic products, chemical products, machines as intermediate products (e.g. motors), IT software, herbal plant products		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, SOUTH AMERICA	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	20		" "	
21	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	medical sector	Medical Care	6-10 years	yes, definitely	plastic products, pharmaceutical /medical products, household goods, furniture, IT software, IT hardware, services (e.g. advisory)		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, SOUTHERN AFRICA, SOUTH AMERICA	My company does not source out any processes.	we are not selling products abroad	Generell keine Verkäufe	approximately 20-30 % cost-saving measures	60	Kommt auf die Branche an und die weitere Dauer der Pandemie.	"Depends on the industry and the further duration of the pandemic."
22	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutsch	> 500 employees	medical sector	Medical Care	< 1 year	yes, that is quite likely	chemical products, pharmaceutical /medical products, IT software, IT hardware, herbal / plant products		NORTHERN EUROPE, WESTERN ASIA	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	Instead of a decrease we are actually experiencing an increase in sales	more than 50 % cost-saving measures	70	Keine Verschlechterung in der Pharmaindustrie, lediglich eine Verschiebung in der Versorgungskette der Pharmaindustrie (Zunahme von Herstellung pharmazeutischer Produkte in der EU). Gesamtwirtschaftlich gesehen werden wir uns im kommenden Jahr von der Rezession erholen.	"No deterioration in the pharmaceutical industry, only a shift in the supply chain of the pharmaceutical industry (increase in manufacturing of pharmaceutical products in the EU). In overall economic terms, we will recover from the recession in the coming year."	
23	Deutsch	18-30 years	female	Bachelor's degree	Iran	Deutschland	50-249 employees	medical sector	Human Resources	1-5 years	yes, that is quite likely	textile products, IT software		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	yes, a decrease in sales of approximately 0-20%	approximately 0-10 % cost-saving measures	30	Für die Wirtschaft ist die Pandemie ein schwerer Schlag. In 2020, in 2021 wird jedoch hoffentlich durch eine Impfung alles anders und die Wirtschaft kann sich wieder erholen.	"For the economy, the pandemic is a severe blow in 2020, but hopefully in 2021, vaccination will change everything and the economy can recover."	
24	Deutsch	18-30 years	female	Bachelor's degree	Deutsch/Brasilisch	Deutschland	> 500 employees	medical sector	Advisory	< 1 year	yes, definitely	pharmaceutical /medical products, IT software, IT hardware, services (e.g. advisory), "Medizinprodukte"		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	no decrease in sales at all	I don't know	10	Ich denke das einige Unternehmen finanzielle Einbußen haben werden. Andere wiederum, je nachdem aus welcher Branche sie kommen, einen höheren Gewinn erzielen werden.	"I think that some companies will have financial losses. Others, depending on the industry they come from, will make a higher profit."	
25	Português	18-30 years	male	Bachelor's degree	portuguesa	Portugal	> 500 employees	Consulting (IT-Consulting, management consulting, tax consulting, audit, etc.)	IT	< 1 year	yes, definitely	services (e.g. advisory)		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH-EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	no decrease in sales at all	no cost-saving measures planned	10	A meu ver as implicacões a longo prazo ainda não podem ser previstas	"In my view the long-term implications cannot yet be predicted."	
26	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Procurement	1-5 years	yes, that is quite likely	metal products, steel, adhesives, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)		CENTRAL AND WESTERN EUROPE, NORTHERN EUROPE, SOUTHERN AFRICA, NORTH AMERICA	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	yes, a decrease in sales of approximately 20-40%	no cost-saving measures planned	20	Langfristig ist relativ. Die nächsten 3-2 Jahre werden bestimmt noch anstrengender werden, was die globale Beschaffung anbetrifft. Es könnte aber sein, dass sich das ganze Geschehen in 2-3 Jahren wieder beruhigt hat.	"Long-term is relative. The next 2-3 years will certainly be even more strenuous in terms of global procurement. But it could be that the whole thing will have calmed down again in 2-3 years."	
27	Deutsch	30-40 years	female	High school degree	deutsch	Deutschland	10-49 employees	metal industry	Human Resources	1-5 years	yes, definitely	textile products		CENTRAL AND WESTERN EUROPE, NORTHERN AFRICA	My company does not source out any processes.	yes, a decrease in sales of approximately 0-20%	no cost-saving measures planned	30	In den kommenden 3-4 Jahren wird sich die Wirtschaft national/sowie international erholen. Der globale Handel wird dann weiter geführt werden.	"In the next 3-4 years, the economy will recover nationally/as well as internationally. Global trade will then continue as before."	
28	English	18-30 years	male	Master's degree	Italian	Italy	10-49 employees	retail	Marketing	< 1 year	yes, definitely	plastic products, textile products		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	20	The impact on global economy will be severe. Concerning supply chains, I believe companies might reassess their procurement.	"The impact on global economy will be severe. Concerning supply chains, I believe companies might reassess their procurement."	
29	English	40-50 years	male	Bachelor's degree	British	United Kingdom	30-249 employees	machine construction / mechanical engineering	Procurement	> 10 years	yes, that is quite likely	metal products, steel, IT hardware		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, NORTHERN AFRICA, WESTERN ASIA, NORTH AMERICA, SOUTH AMERICA	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	yes, a decrease in sales of approximately 40-60%	approximately 20-30 % cost-saving measures	40	Global trade will diminish in any case. Nevertheless, our national economy will maintain the course more or less – provided Brexit will not interfere trade between GB and Europe too much. Supply chains will depend on our relations with European countries.	"Global trade will diminish in any case. Nevertheless, our national economy will maintain the course more or less – provided Brexit will not interfere trade between GB and Europe too much. Supply chains will depend on our relations with European countries."	
30	Deutsch	18-30 years	male	Master's degree	Spanien	Deutschland	> 500 employees	food industry	Procurement	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	instead of a decrease we are actually experiencing an increase in sales	approximately 0-10 % cost-saving measures	30	Im Zuge der Pandemie haben wir bereits Änderungen in der Beschaffung von bestimmten Produkten veranlasst – und diese Änderungen sollen auf unbestimmte Zeit so bleiben. Aufgrund der Pandemie bedingten Liefererschwierigkeiten mussten wir mehr von regionalen Anbietern kaufen zu teureren Preisen und daher müssen wir trotz gesteigertem Absatz Kosten einsparen.	"In the course of the pandemic, we have already initiated changes in the procurement of certain products – and these changes are to remain so indefinitely. Due to the pandemic-related supply difficulties, we have had to buy more from regional suppliers – at more expensive prices and therefore we have to cut costs despite increased sales."	
31	Deutsch	18-30 years	female	Master's degree	Deutsch	Deutschland	1-9 employees	pharmaceutical industry	Medical Care	1-5 years	yes, that is quite likely	pharmaceutical /medical products		CENTRAL AND WESTERN EUROPE	My company does not source out any processes.	yes, a decrease in sales of approximately 0-20%	approximately 10-30 % cost-saving measures	30	Versuch weniger abhängig zu sein, vom außereuropäischen Markt ( Wirkstoffherstellung fast nur in Asien); bessere Bevorratung von Hygieneartikeln; nach bestandener Krise wird sich schnell alles wieder so "normalisieren", dass der globale Handel wieder an Volumen zunimmt, da es einfach oft unschlagbar günstig ist Produkte oder "Vorprodukte" aus dem Ausland zu beziehen.	"Attempt to be less dependent on the non-European market (production of active ingredients almost exclusively in Asia); better stockpiling of hygiene products; after the crisis has passed, everything will quickly "normalize" so that global trade will increase in volume again, as it is often simply unobtainable to obtain products or "preliminary products" from abroad."	
32	Deutsch	40-50 years	male	Master's degree	Deutsch	Deutschland	> 500 employees	automotive industry	Advisory	1-5 years	yes, definitely	metal products, steel, plastic products, chemical products		CENTRAL AND WESTERN EUROPE, SOUTHERN EUROPE, EASTERN EUROPE, CHINA	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	30	Aktuell sehen wir den Trend, dass Produktionskapazitäten vermehrt aus Drittverlagert werden. Gehen davon aus, dass dieser Trend weiter anhält mit entsprechend negativen Folgen für die deutsche Wirtschaft.	"We are currently seeing a trend toward production capacities increasingly being relocated from Germany. I assume that this trend will continue, with corresponding negative consequences for the German economy."	

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) products does your company purchase from other companies (from national companies or from abroad)?	12. Which of the following best describes your company's primary products?	13. According to your personal opinion, how beneficial is the process of outsourcing in your company?	14. In which regions does your company sell its products / services?	15. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?	16. Is your company currently planning general cost-saving measures as a result of the pandemic?	17. According to your personal opinion, how severe might be the long-term effects of COVID-19 on global supply chains?	18. What do you think might be long-term effects of COVID-19 for the supply chain of your company, your national economy, and global trade?	English Translation of question 19)
33	English	18-30 years	female	Bachelor's degree	Romanian	Belgium	50-249 employees	transport & logistics	Accounting & Finance	1-5 years	no, definitely not	metal products, machines as intermediate products (e.g. motors), household goods, furniture, clothing, cosmetic products	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE	Instead of a decrease we are actually experiencing an increase in sales	no cost-saving measures planned	0	I think the market will decrease in many countries.	"I think the market will decrease in many countries."	
34	Deutsch	18-30 years	female	Master's degree	deutsch	Deutschland	250-500 employees	food industry	Procurement	1-5 years	yes, that is quite likely	groceries, herbal / plant products, "Roh- und Halbwaren Obst und Gemüse in Bioqualität"	nur in einzelnen Fällen vorrätig, oft nur temporär	CENTRAL and WESTERN EUROPE, EAST ASIA, SOUTH AMERICA	Instead of a decrease we are actually experiencing an increase in sales	no cost-saving measures planned	30	es könnte sein, dass nicht alle Waren immer zur Verfügung stehen	"It could be that not all goods are always available."	
35	Portugals	30-40 years	male	Bachelor's degree	Portuguesa	Portugal	50-249 employees	food industry	Marketing	< 1 year	yes, that is quite likely	textile products, groceries, household goods, clothing, cosmetic products, herbal / plant products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	SOUTHERN EUROPE	Instead of a decrease we are actually experiencing an increase in sales	approximately 0-10 % cost-saving measures	30	".."	".."	
36	Deutsch	18-30 years	female	Bachelor's degree	Deutsch	Deutschland	50-249 employees	transport & logistics	Project Management	1-5 years	Kurzfristig ja, aber nicht auf lange Sicht	steel, "Container"	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE	no decrease in sales at all	no cost-saving measures planned	40	Kurzfristig mehr regionale Beschaffung, langfristig jedoch hebt sich das wieder auf, da es in den meisten Fällen günstiger ist im Ausland zu beschaffen	"More regional procurement in the short term, but this cancels out in the long term, since in most cases it is cheaper to procure abroad."	
37	Deutsch	50-60 years	female	Apprenticeship	Deutsch	Deutschland	> 500 employees	chemical industry	Research and Development	> 10 years	yes, that is quite likely	plastic products, chemical products, clothing, cosmetic products, IT software, hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, AUSTRALIA & NEW ZEALAND	no cost-saving measures planned	90	vor allem Klein- und mittelständische Unternehmen werden vermehrt verschwinden, das Angebot unabhängig von großen Konzernen einzuhalten wird deutlich schwieriger werden, der Einzelhandel als ein Lebensmitteln wird nur noch stark eingeschränkt vorhanden sein, Lieferkonzerne werden sehr stark begünstigt -> die Innenstädte werden deutlich weniger attraktiv sein (= leer), insgesamt deutlich weniger Diversität im Angebot	"Above all, small and medium-sized enterprises will increasingly disappear, the offer to shop independently of large corporations will become significantly less, retail apart from food will only exist to a very limited extent, delivery corporations will be very strongly favored & the city centers will be significantly less attractive (= dead), overall, significantly less diversity in the offer."		
38	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	chemical industry	Retail	1-5 years	yes, that is quite likely	"Keine, wir produzieren selber"	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 20-40%	approximately 10-20 % cost-saving measures	40	Gering	"slightly"	
39	English	18-30 years	male	Bachelor's degree	Italian	Italy	> 500 employees	Consulting (IT, Consulting, management consulting, tax consulting, audit, etc.)	Accounting & Finance	1-5 years	yes, that is quite likely	services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	10	Many of our clients are working in the construction industry, food industry, and chemical industry. All of them are suffering from the pandemic severely.	"Many of our clients are working in the construction industry, food industry, and chemical industry. All of them are suffering from the pandemic severely."	
40	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	> 500 employees	tourism	Accounting & Finance	1-5 years	yes, definitely	furniture, clothing, IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	40	Einbußen im BIP, besonders kleinere Unternehmen gehen schneller bankrott, größere Firmen müssen umfangreiche Einsparungsmaßnahmen implementieren, der globale Handel mag gelitten, die Situation wird sich jedoch nach der Pandemie wieder erholen.	"Losses in GDP, smaller companies in particular are going bankrupt more quickly, larger companies have to implement extensive cost-cutting measures, global trade has suffered, but the situation will recover after the pandemic."	
41	Deutsch	40-50 years	female	Apprenticeship	Deutsch, Schwarzem	Deutschland	1-9 employees	medical sector	Medical Care	1-5 years	yes, definitely	pharmaceutical / medical products	My company does not source out any processes.	we are not selling products abroad	Nein nicht in unserem Unternehmen	I don't know	20	Einbußen in jeder Hinsicht, unsichere Arbeitsplätze, Vermehrt Zeitarbeiter / Zeitarbeiter usw.	"Losses in every respect, insecure jobs, increased temporary contracts, temporary work etc."	
42	English	40-50 years	male	Master's degree	Swiss	Switzerland and UK	10-49 employees	IT development	Investment	> 10 years	yes, that is quite likely	IT software	not relevant/applicable to us	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA	no decrease in sales at all	no cost-saving measures planned	30	As investors the entire value chain question is not directly relevant to us, it however is very relevant to some of the companies we invest in. In sure Europe will rethink (has already) it's outsourcing / procurement strategy related to health products. A lot of nearshoring is to be expected. However: the mid-term effect of COVID-19 will by no means be as important as the geo-political tensions btw China and the US and potentially the EU too/in the middle of it.	"As investors the entire value chain question is not directly relevant to us, it however is very relevant to some of the companies we invest in. In sure Europe will rethink (has already) it's outsourcing / procurement strategy related to health products. A lot of nearshoring is to be expected. However: the mid-term effect of COVID-19 will by no means be as important as the geo-political tensions btw China and the US and potentially the EU too/in the middle of it."	
43	Français	18-30 years	female	Doctor/PhD	French	Réunion island	1-9 employees	food industry	Sales	1-5 years	yes, definitely	adhesives, plastic products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	SOUTHERN AFRICA	yes, a decrease in sales of approximately 60-80%	approximately 20-30 % cost-saving measures	10	Chômage; Augmentation des disparités sociales	"Unemployment; Increasing social disparities"	
44	Français	50-60 years	female	High school degree	Française	France	> 500 employees	education / administration	Accounting & Finance	> 10 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	My company does not source out any processes.	CENTRAL and WESTERN EUROPE	yes, a decrease in sales of approximately 0-30%	approximately 10-20 % cost-saving measures	40	Le produit national brut de nombreux pays va diminuer: Le produit national brut de la France ne se redressera lui aussi que lentement. Le commerce mondial sera inférieur pendant plus longtemps.	"France's gross national product of many countries will decline. France's gross national product will also recover only slowly. World trade will be lower for longer."	
45	Deutsch	30-40 years	female	Doctor/PhD	Zyprien	Deutschland	> 500 employees	medical sector	Medical Care	1-5 years	yes, definitely	plastic products, chemical products, pharmaceutical / medical products, groceries, household goods, clothing, cosmetic products, IT software, IT hardware.	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	we are not selling products abroad	Instead of a decrease we are actually experiencing an increase in sales	no cost-saving measures planned	20	Die COVID-19-Pandemie wird die bereits seit Jahren bestehende globale Finanz- und Wirtschaftskrise vertiefen. Alle Länder werden davon in verschiedenen Ausmaß betroffen sein, vor allem aber die Länder, die sich in einer bereits schlechteren Lage befinden. Kleinunternehmen haben schon am Anfang der Pandemie geschlossen. Die Staaten werden nicht mehr in der Lage sein, die Bürger (die ihre Arbeit verloren haben oder in Kurzarbeit sind) finanziell zu unterstützen. Einige Hoffnung ist die Entwicklung eines wirksamen und effizienten Impfstoffs.	"The COVID-19 pandemic will deepen the global financial and economic crisis that has already existed for years. All countries will be affected to varying degrees, but especially those that are already in a worse situation. Small businesses have already closed at the beginning of the pandemic. States will no longer be able to financially support citizens (who have lost their jobs or are on short-time work). The only hope is the development of an effective and efficient vaccine."	
46	Deutsch	30-40 years	female	High school degree	deutschland	Deutschland	> 500 employees	banks and insurance companies	Advisory	> 10 years	yes, definitely	services (e.g. advisory)	My company does not source out any processes.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA	yes, a decrease in sales of approximately 20-40%	approximately 10-20 % cost-saving measures	30	Die nationale Wirtschaft wird sich in absehbarer Zeit erholen. Manche Länder, die wirtschaftlich nicht so stark aufgestellt sind, werden noch einige Zeit daran zu arbeiten haben. Produktionsrückgänge wieder aufzuheben. Die Globalität des Handels wird langfristig um einige Prozent zurückgehen.	"National economies will recover in the foreseeable future. Some countries that are not in such a strong economic position will still have to work for some time to make up for declines in production. The globality of trade will decline by a few percent in the long term."	
47	Deutsch	50-60 years	male	Apprenticeship	Deutsch	Deutschland	> 500 employees	metal industry	Procurement	1-5 years	yes, that is quite likely	metal products, steel, plastic products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 0-20%	approximately 10-20 % cost-saving measures	30	Die langfristigen Auswirkungen sehe ich eher als gering an. Sobald die Pandemie wieder weitgehend unter Kontrolle ist, wird sich der weltweite Handel wieder vollständig ausbreiten. Es wird sich dann nachhaltiger produziert und gehandelt wird, bezweifle ich.	"I see the long-term effects as rather minor. As soon as the pandemic is largely under control again, global trade will spread completely, I doubt whether production and trade will then really become more sustainable."	
48	Deutsch	18-30 years	female	Bachelor's degree	deutsch	Deutschland	> 500 employees	pharmaceutical industry	Production	6-10 years	yes, that is quite likely	plastic products, chemical products	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 0-20%	no cost-saving measures planned	30	N/A	"N/A"	

Respondent number	Language	1. Please select your age.	2. Please select your gender.	3. What is your educational background?	4. Please enter your nationality or nationalities in case you have more than one.	5. In which country do you work?	6. What is the size of your enterprise?	7. What industry is your company primarily associated with?	8. Which of the following best describes your department?	9. Since when are you working for your current company?	10. Do you believe the COVID-19 lockdown, i.e., the pandemic already has or will have an impact on global supply chains?	11. Which (intermediate) products does your company purchase from other companies (from national companies or from abroad)?	12. According to your personal opinion, how beneficial is the process of outsourcing in your company?	13. In which regions does your company sell its products / services?	14. In the course of the COVID-19 pandemic, did you perceive a decrease in sales?	15. Is your company currently planning general cost-saving measures as a result of the pandemic?	16. According to your personal opinion, how severe might be the long-term effects of COVID-19 on global supply chains?	17. What do you think might be long-term effects of COVID-19 on the supply chain of your company, your national economy, and global trade?	English Translation of question 17)
49	Deutsch	30-40 years	female	Master's degree	Deutsch	Deutschland	50-249 employees	textile industry	Procurement	1-5 years	yes, definitely	textile products, clothing	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE	Instead of a decrease we are actually experiencing an increase in sales	approximately 0-10 % cost-saving measures	60	Das Unternehmen, bei dem ich beschäftigt bin, blickt insgesamt sehr optimistisch in die Zukunft. Die Abverkaufszahlen konnten trotz Pandemie zum % gesteigert werden. Das ist hauptsächlich auf das recht hohe Durchschnittsalter und hohe Durchschnittseinkommen der Zielgruppe zurückzuführen, die von den wirtschaftlichen Folgen der Corona Pandemie nur marginal betroffen ist. Grundlegende Veränderungen beschaffungsseitig sind aufgrund der Pandemie in meinen Unternehmen nicht zu erwarten. Auch eine Verlagerung der Produktion nach Deutschland bzw. der Nachbarländer aufgrund vom Covid habe ich für unwahrscheinlich, da sich die deutsche Textilindustrie schon seit Jahrzehnten in einem Strukturwandel befindet und dies mit einem starken Outsourcing einhergeht. Die deutsche Textilproduktion ist nahezu ausgestorben. Grundätzlich ist innerhalb des Textilhandels zu beobachten, dass eine weitere Verlagerung auf den bereits sehr dominierenden Online-Handel und eine weitere Schwächung des Stationären Handels stattfindet.	"The company I work for is very optimistic about the future overall. Despite the pandemic, sales figures were up on the previous year. This is mainly due to the fairly high average age and high average income of the target group, which is only marginally affected by the economic consequences of the Corona pandemic. Fundamental changes on the procurement side are not expected in my companies as a result of the pandemic. I also consider a relocation of production to Germany or neighboring countries due to the COVID-19 to be unlikely, as the German textile industry has been undergoing structural change for decades and this has been accompanied by strong outsourcing. German textile production has almost died out. Basically, it can be observed within the textile trade that a further shift to the already very dominant online trade and a further weakening of the stationary trade is taking place."
50	Portugals	30-40 years	female	Master's degree	brasileira	Alemanha	>500 employees	education / administration	Educação	1-5 years	I don't know	groceries, IT software, IT hardware	Nem compramos nem vendemos produtos na universidade.	we are not selling products abroad	Não vendemos produtos na universidade.	I don't know	20	- diminuição do PIB ; aumento do desemprego ; todas as economias vão sofrer as consequências da globalização, mas o impacto nos economias emergentes poderá ser drástico; há muita esperança.	"All economies will suffer the consequences of the pandemic, but the impact on emerging economies may be dramatic in my opinion."
51	Portugals	18-30 years	male	Master's degree	Portugals	Portugal	>500 employees	Consulting (IT- Consulting, management consulting, tax consulting, audit, etc.)	Serviços Financieros Actuariais	< 1 year	yes, definitely	"Produtos tecnológicos (IT)"	My company does not source out any processes.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTH AMERICA, SOUTH AMERICA	yes, a decrease in sales of approximately 0-20 %	approximately 0-10 % cost-saving measures	40	A economia portuguesa é composta por cerca de 95% de pequenas e médias empresas. Alguns dos sectores têm sido muito afetados e terá consequências catastróficas. Muitas empresas deparam-se com um cenário de insolvência e o apoio estatal não são suficientes. Levanta a uma taxa de desemprego elevada. O tecido económico geral irá certamente sofrer bastante devido a uma grande redução do número de empresas e a perda de poder de compra dos consumidores que possibitem fomentar as sobreviventes.	"The Portuguese economy is composed of about 95% of small and medium enterprises. Some of the sectors have been very affected and will have catastrophic consequences. Many companies are facing a scenario of insolvency and state support is not enough. It will lead to a high unemployment rate. The general economic fabric will certainly suffer greatly due to a large reduction in the number of companies and the loss of purchasing power of consumers to encourage survivors."
52	Portugals	>60 years	male	Doctor/PhD	Portugals	Portugal	>500 employees	machine construction / mechanical engineering	Research and Development	>10 years	yes, that is quite likely	metal products, steel, concrete & stones, adhesives, textile products, chemical products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy. It is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, CENTRAL and WESTERN AFRICA, SOUTHERN AFRICA, WESTERN ASIA, INDIA, SOUTH AMERICA	yes, a decrease in sales of approximately 40-60%	approximately 30-50 % cost-saving measures	40	Não sei.	"I don't know."
53	English	40-50 years	male	Bachelor's degree	German American	United States	1-9 employees	IT development	Sales	>10 years	yes, definitely	IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, NORTHERN EUROPE, NORTH AMERICA	Instead of a decrease we are actually experiencing an increase in sales	no cost-saving measures planned	0	I think people might be going more local than before and they will probably move away from bottle necks. We have actually been giving advice to companies which their core problem had often been a sole supplier abroad.; That will definitely change and be covered with local backup plans.	"I think people might be going more local than before and they will probably move away from bottle necks. We have actually been giving advice to companies which their core problem had often been a sole supplier abroad.; That will definitely change and be covered with local backup plans."
54	English	18-30 years	male	Master's degree	Italian	Italy	250-500 employees	food industry	Marketing	1-5 years	no, rather not	groceries, services (e.g. advisory), "various ingredients"	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, NORTHERN ASIA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 40-60%	approximately 30-50 % cost-saving measures	20	Severe decrease of HORECA businesses (which represent 40% of the business); It will take couple of years before coming back to grow in that segment	"Severe decrease of HORECA businesses (which represent 40% of the business); It will take couple of years before coming back to grow in that segment"
55	English	30-40 years	female	Doctor/PhD	Brazilian, Italian	UK	250-500 employees	education / administration	Research and Development	1-5 years	yes, definitely	plastic products, chemical products	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	we are not selling products abroad	don't sell products	approximately 10-20 % cost-saving measures	20	More conservative and sustainable trade	"More conservative and sustainable trade"
56	English	30-40 years	female	High school degree	Brazilian	England	50-249 employees	metal industry	IT	1-5 years	I don't know	metall products	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE	no decrease in sales at all	approximately 10-30 % cost-saving measures	60	.	"."
57	English	30-40 years	male	Master's degree	Indian	Germany	250-500 employees	Consulting (IT- Consulting, management consulting, tax consulting, audit, etc.)	Sales	1-5 years	yes, definitely	IT software, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE	yes, a decrease in sales of approximately 20-40%	approximately 20-30 % cost-saving measures	20	It is needed to transform traditional supply chain models and look ahead to the longer term solution of digital supply networks.	"It is needed to transform traditional supply chain models and look ahead to the longer-term solution of digital supply networks."
58	English	30-40 years	female	Master's degree	Deutsch	Deutschland	>500 employees	automotive industry	Human Resources	6-10 years	yes, that is quite likely	metal products, steel, adhesives, plastic products, textile products, machines as intermediate products (e.g. motors), IT software, IT hardware, services (e.g. advisory), "Übersetzungsdienstleistungen"	We are outsourcing certain parts of our processes. However, outsourcing is rather cost-saving in theory, whereas in practice, it is in fact creating incalculable additional expenses.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, WESTERN ASIA, CHINA, INDIA, NORTH AMERICA, SOUTH AMERICA, AUSTRALIA & NEW ZEALAND	yes, a decrease in sales of approximately 20-40%	approximately 30-50 % cost-saving measures	40	Vorübergehende Auswirkungen für die supply chains, aber nach dem Rückgang der Pandemie wird voraussichtlich wieder ähnlich wie vor der Pandemie eingekauft. Lediglich werden wir wahrscheinlich zusätzlich zu den bisherigen Märkten auch die lokalen Märkte hin und wieder einbeziehen, damit es im Falle einer erneuten Pandemie o.ä. keinen erneuten Produktionsstopp geben wird.	"Temporary impact for the supply chains, but after the pandemic has receded, purchasing is expected to return to similar levels as before the pandemic. Merely in addition to the previous markets we will probably also include the local markets from time to time so that there will not be a renewed production stop in the event of another pandemic or similar."
59	Deutsch	30-40 years	male	Doctor/PhD	Deutsch	Deutschland	>500 employees	medical sector	Medical Care	6-10 years	yes, definitely	pharmaceutical / medical products	My company does not source out any processes.	we are not selling products abroad	no decrease in sales at all	no cost-saving measures planned	30	Vorwiegend Negativ	"Predominantly negative"
60	English	30-40 years	male	High school degree	Syrian and Portuguese	Portugal	10-49 employees	automotive industry	Supervision	1-5 years	yes, that is quite likely	metal products, steel, adhesives, plastic products, machines as intermediate products (e.g. motors)	My company does not source out any processes.	CENTRAL and WESTERN EUROPE, SOUTHERN EUROPE, NORTHERN EUROPE, EASTERN EUROPE, NORTHERN AFRICA, CENTRAL AND WESTERN AFRICA, SOUTHERN AFRICA, WESTERN ASIA, CHINA, INDIA, EAST ASIA, SOUTH EAST ASIA, NORTH AMERICA, SOUTH AMERICA	yes, a decrease in sales of approximately 20-40%	I don't know	40	One year	"One year"
61	Deutsch	30-40 years	male	Master's degree	Deutsch	Deutschland	10-49 employees	Consulting (IT- Consulting, management consulting, tax consulting, audit, etc.)	Advisory	1-5 years	yes, that is quite likely	IT software, IT hardware, services (e.g. advisory)	We are outsourcing certain parts of our processes and this is a very effective cost-saving strategy.	CENTRAL and WESTERN EUROPE, WESTERN ASIA, NORTH AMERICA, AUSTRALIA & NEW ZEALAND	no decrease in sales at all	no cost-saving measures planned	50	- geringere Löhnekosten ; - weniger Wettbewerb	"- lower labor costs ; - less competition"