



# Retail as unusual

RETAILING IN A TIME OF EXTREME UNCERTAINTY

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# Retail as unusual

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*Carys Egan-Wyer, Martin Moström, Ulf Johansson*

Things are far from usual in the world right now. We have suffered two years of restrictions, closures, and shortages because of a global health crisis. A war in Europe has caused supply chain disruptions and energy price shocks. The United Kingdom's exit from the European Union has hindered cross-border movement of capital (both human and physical) in Europe. And we are witnessing an increased frequency of climate-related catastrophes (such as fires and flooding) related to the climate emergency.

This macro-environmental turbulence has been described as a perfect storm or a herd of black swans. Many are wondering when things will return to normal. Many fear that they never will. You may have heard the phrase "business as usual." According to the Oxford dictionary, it refers to the underlying, ongoing, and unchanging state of affairs which persists despite difficulties or disturbances. When used in retailing it implies the normal execution of standard functional operations within an organisation. Today, some argue that business as usual no longer exists and the macro-environmental turbulence described above (as well as many others not detailed) mean that retailers will need to consider how to operate in a world where "business as unusual" is the new normal.

The macro-environmental disruptions retailers are experiencing can be loosely categorised according to where their impact is most readily felt—on the supply side, the demand side, or in-store operations. But many disruptions impact all three categories. And they are often interlinked. The Covid-19 pandemic, for example, affected supply, demand, and in-store operations. And when demand changed due to covid, supply was also affected. All this turbulence affects retail performance and, if business as unusual becomes the new normal, retailers will need adapt many areas of their operations and their offerings. For example, how retailers manage supply chains, stock levels, logistics, how they organize retail locations, formats, and channels, how they accomplish communications, marketing, and

governance, and how staff are recruited, trained, and incentivized.

We asked students from the master's programme in International Marketing and Brand Management (Class of 2023) to analyse the future of retail from a "business as unusual" perspective. They identified the most relevant and disruptive macro-environmental challenges and used a variety of tools to make predictions about the consequences for retail organisations in the near future. Some groups collected empirical data to make their predictions, while others used scenario thinking to forecast the effects of the business environment trends. The retail branches analysed ranged from grocery to gas stations. Each analysis has relevant suggestions for how retail organisations can deal with a specific macro-environmental challenge.

In the first chapter of this report, Camacho et al. examine import dependency in the Swedish grocery sector and highlight the unsustainability of the industry's current practices. The increase of severe drought in Europe has impacted grocery retailers' ability to deliver the fruits and vegetables to which customers have grown accustomed and the authors suggest that retailers should make major changes in their offerings and business models by advocating for local production of fruits and vegetables.

In their chapter, Alm et al. analyse the possibility of mitigating the negative impact of delays on consumer brand attitudes and purchase intention, using IKEA as a case study. Data on the effect of communication about supply chain disruptions was collected through experiments. The results indicate that consumers have a more positive attitude and higher purchase intention when delays were communicated with a clear explanation of the specific macro-environmental cause of the disruption compared to with unspecified supply-chain delays. The study provides insights into the importance of transparent communication during supply chain disruptions and how brands can mitigate negative

consequences by communicating the root cause of the disruption.

COVID-19 worsened the global semiconductor shortage, impacting various industries. The shortage is expected to continue, causing delays and higher prices for retailers and customers; thus, the need for organizations to adapt. Jimenez et al.'s chapter looks at how companies within the automotive and smartphone industries have tried to mitigate the effects of the shortage on customer experience and logistics. Based on the findings, retailers should relocate production components, forecast demand early on, remain agile and flexible and strengthen supplier relationships to overcome the shortage. Furthermore, retailers should be transparent and manage the consumer experience to compensate for delays and lack of availability.

In their chapter, Carvell et al. provide insights into how inflation might lead to an increase in showrooming among price-sensitive customers. With increasing inflation, customers change their spending habits to develop more deliberate purchase decisions, and price becomes the most important factor. However, they also show how retailers can combat showrooming with physical and digital touchpoints to reduce the friction associated with

the purchase and enhance the customer experience throughout the customer journey.

In the chapter by Köhler et al., the authors discuss two potential challenges for gasoline retailers: the potential shift towards 15-minute cities and a possible ban on fossil fuel powered cars. They present and discuss four scenarios for the future of gas station retailing, which have the potential to guide retailers in implementing radical business changes or supporting initiatives to diversify possible risks.

In the final chapter of this report, you will find the editors' reflections on the chapters. We consider whether the contemporary disruptions are really something new and discuss what makes them special and interesting.

This report is essential reading for anyone interested in the changes to the retail industry that will be brought about by the increasingly turbulent and unforeseeable world we are living in. You will not find all the answers here, but you might just find some of them. You will definitely find some interesting thoughts and perspectives that have hitherto not been commonplace in the retail industry.



# Grocery Retail in an Uncertain World

## THE IMPACT OF SOUTHERN EUROPE'S DROUGHT ON FRUIT AND VEGETABLE RETAILING IN SWEDEN

*Katherine Camacho, Valeria de Leon, Alessia Falco, Niklas Kjellander, Yuxin Li & Francesca Scriboni*

### SUMMARY

The increase of severe drought in Europe has impacted fruit and vegetable offerings and retail business models. In this chapter, we explore the connection between the southern European drought and the current unsustainable practices of Swedish grocery stores, with a focus on import dependency and consumer accessibility. We also suggest a potential solution. This chapter builds on the results of a survey of 64 consumers as well as academic literature and governmental reports. Our findings suggest that retailers should conduct major changes in offerings and business models by advocating local production of fruits and vegetables.

### INTRODUCTION

The accessibility of food has been taken for granted in modern Europe. Nonetheless, recent macroeconomic uncertainties, such as the COVID-19 pandemic, war, and inflation, have highlighted the fragility of the entire European food supply chain. To overcome these challenges, the supply chain system requires a restructuring towards greater flexibility and sustainability.

In recent years, climate change and its implications have become more apparent than ever before, with extreme weather events occurring frequently around the world, and impacting various aspects of our lives and business operations. Drought is a significant effects of climate change and has been increasingly recorded across southern Europe in the last two years. Food retailers in Europe are negatively affected by drought due to the complications it has on agriculture, resulting in bad harvest and crop shortages that lead to scarcity and higher prices in the European market. Food retailers, therefore, need to adapt to the changing climate conditions and the new business environment to remain competitive. In this context, retailers can no longer rely on the "usual" model of retail but must become increasingly flexible to cope with the uncertainties that climate change brings.

Spain and Italy have experienced increased episodes of drought, with the Global Drought Observatory reporting these countries as among the worst affected in August 2022. Spanish officials noted that the summer of 2022 was likely the driest in



60 years, while in Italy, the president of the Italian Meteorological Society reported that no similar data had been recorded in 230 years. The significance of this lies in the fact that Spain and Italy are crucial trade partners for Sweden in the prepared and fresh fruits and vegetables categories, with Spain being the 2nd largest and Italy the 5th largest exporter of fresh, chilled, or dried fruits to Sweden.

### METHOD

This chapter is based on a study that explores how the drought in Southern Europe affects Swedish food retailers through qualitative research. The study used both primary and secondary data to enhance its validity. Primary data was collected from a survey of 64 Swedish consumers regarding fruits and vegetables retail marketing mix in Swedish grocery stores. The survey comprised 17 multiple choice, checkbox, and open-ended questions. Surveys were chosen for their ability to generate individual insights, protect anonymity, and gather sincere responses. Secondary data was collected from academic books, research articles, government websites, and reports relevant to the topic. The results provide a comprehensive understanding of the implications of the drought on Swedish food retailers. In explicating the study's findings, this chapter aims to help retailers modify and adapt their business models to meet the changing needs of consumers in the face of drought.

### RESULTS

#### Presentation of results

In this part, we will present the results of our survey of 64 Swedish consumers (with no restriction on gender or age). 92,2% of those surveyed buy fruits and vegetables regularly. The results are therefore relevant for fruits and vegetable retailers who want to understand what is important for consumers, their purchasing behaviour, and what needs to be done in a context where the shadow of drought is becoming increasingly big.

89% of those surveyed prefer grocery retail chains to local markets when they purchase fruits and vegetables. A small minority buy at both. The majority of those surveyed highlighted the important of price when buying fruits and vegetables.

Almost 60% of the respondents agreed that Swedish grocery stores offer a great range of fruits and vegetables, but a large percentage consider the

prices to be high (64,1%) with only 33% considering them affordable. When asked about how rising prices would affect their consumption of imported vegetables, more than half of the respondents mentioned that they would buy them sometimes, 43,8% showed indifference and just 5% stated that they would stop buying imported products.

The consumers surveyed were divided about their consumption of seasonal fruits and vegetables. 32,8% shop according to seasonal availability but 40,6% do not always buy seasonal fruits and vegetables. The vast majority of respondents are in favour of buying fruits and vegetables grown in Swedish greenhouses. They justified their reasoning along the following lines:

1. Good quality. Some respondents are in favour as long as the quality is good, and they have a proper taste compared to the ones imported and they would buy from greenhouses because they trust Swedish food quality.
2. Cheaper price. Respondents believe that the price of fruits and vegetables grown in greenhouses is cheaper if compared to imported ones, especially because of the increase in transport costs.
3. Support local business. Some believe it will allow Sweden to be more self-sufficient. In fact, some researchers affirm that consumption of local food strengthens local economies, generating employment and developing small agricultural businesses and commercial establishments.
4. Satisfy needs. Some do not consider the provenance when buying these products since they do not perceive the difference and they do not care as long as their needs are satisfied.
5. More product choice. Some are happy since more product choice is available, which is in line with certain researchers' suggestion that diversity in stores can evoke excitement in customers.

Among those who are reluctant to buy fruits and vegetables grown in Swedish greenhouses, their explanations can be grouped into two categories, First, they think it is more expensive and, second, they believe these products are of bad quality and will negatively impact their health.





Some researchers argue that innovative retailers should educate customers regarding their product offerings to have better operations and increase customer satisfaction. Concerning this, the majority of people surveyed (51.6%) think that supermarket communication does not help them make informed decisions when it comes to buying locally produced fruits and vegetables, and only 21.9% state the opposite. However, it is worth noting that a large proportion of respondents said that they think it is difficult to find products to replace their usual choices of fruits and vegetables when they are not available.

#### **Discussion of Results**

**Place:** Our findings highlighted that it is important to consumers that a satisfactory variety of merchandise available. Customers may go elsewhere if they cannot find what they need. In our case, this does not mean only switching from one supermarket to another but also involves other competitors, such as local markets etcetera. Although in Sweden, consumers prefer to buy fruits and vegetables in grocery retail chains, the situation should be constantly monitored, especially when drought is affecting different aspects of the offering. Moreover, all the measures that the Swedish

government and the Agency of Agriculture are taking to tackle climate change by developing local networks can nudge suppliers and consumers to favour local markets in the near future. In the past, grocery retailers applied pressure on the supplier side to obtain the best prices and a large number of products but, because of drought, market forces are shifting. Various researchers underline the importance of relationships over transactions. Different actors have increased in importance, and keeping a good relationship with local suppliers may prove crucial. The critical situation gives a lot of power to local suppliers and it is fundamental to build partnerships in order to transform threats into long-term opportunities. In this way, retail chains can have a well-rationalized assortment without relying too much on imports, while also reducing the risk that consumers stop purchasing fruits and vegetables in their stores.

**Price:** In response to the scenario where the end price of imported fruits and vegetables continues to increase due to drought, most grocery retailers resort to discounting to maintain their competitiveness. However, discounting is not an ideal competitive tool because it encourages purely price-based decisions which leads to less

loyalty, consumer stickiness, and lower margins. Furthermore, non-price benefits, such as service and offered products, can also positively affect consumers' shopping behaviour. Based on the above evidence, we suggest that grocery retailers should compete on the non-price benefits that customers care about, by providing new offerings—in this case, local products produced in Sweden. For this new offering, we suggest a ladder pricing mechanism where customers can 'move up' and 'down' in price to provide more freedom of choice and excitement to customers.

**Product:** Product assortment is severely affected by drought and changes in offering strategies should be made to maintain the same level of satisfaction. Product variety is one of the preferred factors when shopping, and from our study, we conclude that people's perception of fruit and vegetable diversity in Swedish grocery stores is quite different. There is an existing trend for purchasing local, sustainable and organic food and, furthermore, consumption of Swedish regional food has significantly risen in the last few decades. This attitude is confirmed by some of the respondents, who argue that they would prefer to buy Swedish products instead of imported ones. A way to respond is by providing a wide range of products supplied by greenhouses and local farmers, especially in peak seasons of Swedish food production. Most of the respondents showed positive buying intentions regarding greenhouse products and support towards local producers. Trust in Swedish quality was also mentioned as one of the main reasons for such preference. It is also worth noting that respondents who express a high level of trust in Swedish products are willing to pay a premium price for local products.

**Promotion and Communication:** One of the main barriers to buying local products is lack of information. It is necessary to increase consumer knowledge in order for them to develop positive attitudes toward local products. We suggest that retailers could encourage customers to choose local products by creating a store layout that separates local products from imported ones and by giving local products more visibility. This would help customers to orient themselves more easily. 56.3% of the respondents in our study believe that placement of fruits and vegetables in supermarkets



influenced their purchase decisions. One possible reason for this is that stores can combine sensory marketing with the placement of the products to create an exciting environment for consumers, which influences their purchase decisions. 43.7% of respondents did not believe that placement influenced their purchase decisions. This could be because sensory marketing is often defined as an unconscious trigger that leads consumers to generate their own perceptions. Retailers could introduce new technologies in the store to provide consumers with access to additional information on products to support them in finding, comparing and buying goods, while enhancing their shopping experiences. For example, retailers could implement QR codes or information kiosks. Another way to provide more information is by relying on employees, with some research suggesting that sales personnel should take on the role of facilitators.

**Business model:** The increase in severe drought in southern Europe will cause challenges for the availability of fruits and vegetables in the future, which will continue to impact Swedish grocery retailers' business models. In addition, The Swedish Agency for Agriculture is creating projects to support local food producers which will result in grocery retailers having to offer locally-produced fruits and vegetables. Thus, grocery retailers will have to innovate in order to adapt. The first element that will change regards partners. Retailers should reduce the volume of imported fruits and vegetables and acquire them, instead, from local farmers selling seasonally produced products. Those fruits and vegetables that do not usually grow in Sweden can be sourced from local greenhouses. Consequently, another element that would change

is offerings. Due to the business model innovation, the relationship between grocery retailers and their customers will change, impacting communications. New store layouts, sensory marketing, innovative technologies, improving employee and customer relationships, and promoting local products are key to educating consumers about these changes.

### CONCLUSIONS

Our aim is to highlight the B2C-economical along with the B2B-logistical relationship between drought in import countries and the availability, assortment, and price of fruits and vegetables in Swedish grocery stores. Our primary and secondary data point in a similar direction—advocating for, implementing, and expanding local production of fruits and vegetables. The major changes are executed in two key retailer areas: retail offerings and retail operations.

Concerning retail offerings, the suggested implementations are via the 4P model: for product, there is a trend for consumers to purchase and prefer locally grown fruits and vegetables, thus Swedish retailers should focus on native production. As for price, retailers should implement a pricing ladder mechanism for local products, which will facilitate freedom of choice and excitement for consumers. In terms of place, retailers need to work with local suppliers to achieve a joint perspective. Lastly, for promotion, retailers should emphasize local products through store layouts and utilize employees to educate and guide shoppers to more sustainable shopping.

As for retail operations, we conclude that retail business model innovations are required to tackle the forecasted scarcity of imported fruits and vegetables. These initiatives could stem from retailers collaborating with suppliers through technological advances in the supply chain, e.g., greenhouse production over importation.

Revolutionizing retailers' offerings and operations is nothing that happens overnight; it is a long-term objective that will require much technological, logistical, political, and environmental research and collaborating entities. Nonetheless, the consequences of climate change are already taking place and the time to act is now.

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# Communicating delays

## A QUANTITATIVE CASE STUDY ON SUPPLY CHAIN DISRUPTIONS AND IKEA'S CONSUMER RESPONSE

*Lisa Alm, Kevin Blomkvist, Katie Fajer, Amanda Persson, Johanna Sandberg & Herman Vähäkangas*

### SUMMARY

This study analyzes the impact of communication on mitigating negative consumer attitudes and purchase intention resulting from supply-chain disruptions in the retail industry. The focus is on IKEA, which has faced severe delays in its in-store experience due to disruptions from incidents of varying nature. IKEA's store layout makes it particularly vulnerable to these delays as shoppers discover items in showrooms, which may become temporarily unavailable for purchase due to supply-chain disruptions. The study examines whether brands' efforts to communicate the causes of these disruptions have created value or merely contributed to the noise already overwhelming consumers.

### INTRODUCTION

Although unanticipated supply-chain disruptions are not a new business environment trend, the last several years have demonstrated unprecedented publicity surrounding these issues. As a result, consumers are more aware than ever of the circumstances resulting in the delay of their goods, resulting in a new dimension of consumer insights revolving around these realities. This reality leads to the question of whether brands' efforts to communicate the causes of these disruptions, which have kept products off shelves, have created value, or if these communications have merely been contributing to the noise that is already overwhelming consumers.

This study aimed to analyse the effect of communication regarding supply chain disruptions on mitigating the negative impact of resulting delays on consumer brand attitudes and purchase intention, using IKEA as a case study. The data was collected through digital surveys, and the field of participants was randomly divided into two groups, one for unspecified supply-chain delays, representing the control group, and one in which supply-chain delays were communicated as being a result of the Russo-Ukraine conflict.

IKEA was selected as the sample case for this study as the company has faced severe supply chain delays because of disruptions from incidents of varying nature. In-store experience in IKEA has been particularly impacted by product delays. This is primarily due to IKEA's store layout, which consists of a pathway through a series of sample rooms decorated to exemplify how IKEA's products would look in consumer spaces. These displays are altered quarterly to emphasize new products and seasonal trends; however, the base products often remain the same. IKEA stores are designed such that shoppers discover the items they wish to purchase in the showrooms (particularly larger furniture), take note of the name and then find the item in the attached warehouse just before the checkout. When supply-chain disruptions occur, store stock is impacted, making some products shown in showrooms temporarily unavailable for purchase, unbeknownst to the customers while they are perusing the showrooms.

In this chapter, we present the results of our study. Our findings provide insights into the importance of transparent communication during supply chain disruptions and how brands might mitigate negative consequences by communicating the root cause of the disruption.

### METHOD

The formation of attitude is explained by Fishbein and Ajzen, in five steps: (1) In the mind of an individual, an object is connected to certain characteristics and associations, which constitute multiple beliefs about the said object, (2) each belief about the object results in a response, i.e. attitude, (3) the responses are formed through conditioning transferred to the attitude object, (4) all transferred responses are summarized, (5) the attitude object will obtain these summarized responses which then will become the overall attitude. In the IKEA scenario, delivery delays may constitute a service failure, causing negative

outcomes and potentially dissatisfied customers. Applying the five steps, these evoked negative feelings would then, in theory, be associated with the brand, in this case, IKEA. These feelings are then taken into account by customers, when they form their overall attitude toward IKEA. In times of crisis and war, humans experience compassion, empathy, and altruism. Following the same analogy on attitude creation, the empathy associated with a supply chain disruption resulting from war may evoke empathy that might offset, at least some of, the negative responses to the delay. Hence, a difference in brand attitudes might exist between supply chain disruptions that are communicated to have resulted from humanitarian crises or from unspecified circumstances.

This leads to our study's first hypothesis:

H1: There is a difference in consumer attitude when the delay is due to the war and humanitarian crisis in Ukraine/Russia compared to an unspecified supply chain issue.

And further, the study's second hypothesis:

H2: A delay resulting from a humanitarian crisis affects consumers' purchase intentions to a lesser extent than an unspecified supply chain delay.

The research was carried out using a deductive quantitative approach with descriptive statistics, through SPSS where a t-test analysis was performed. A quantitative method was chosen since it can generalize the results to a wider population and give a deeper understanding of the patterns that emerged from the survey. The aim of this study was to investigate consumer brand attitudes and purchase intention towards different supply chain disruptions.

The data was collected through digital surveys and analysed through t-tests. The survey was handed out through various social platforms. The respondents were targeted on a global scale since IKEA is a global company applying a global strategy. The authors collected 128 answers and the participants were limited to people who were able to answer within a certain time frame and had access to the social platforms used.

To test out the hypothesis, the field of participants was randomly divided into two groups. One for unspecified supply-chain delays, representing the control group in this study, and one in which supply-chain delays were communicated as a result of the Russo-Ukraine conflict. The second group was used to measure the potential influence on consumer brand attitude and purchase intention causing product delay as a result of a humanitarian crisis. The participants were randomly assigned to one of two questionnaires, either "Supply chain disruption due to humanitarian crisis, the Russo-Ukraine conflict" or "Un-specified supply chain disruption".

The data was then exported to SPSS, where a t-test analysis was performed to see if there were any significant differences between the two groups in terms of brand attitude and purchase intention. The significance level was set to 5% as it is presumed to indicate strong evidence against the null hypothesis. There is thus less than a 5% probability that the null is correct, and that the following results are random.

## RESULTS

Sample 1: Supply chain disruption due to humanitarian crisis, the Russo-Ukraine conflict.

Sample 2: Unspecified supply chain disruption.

SURVEY DATA		STATISTICAL RESULTS					
SURVEY	SURVEY	VARIABLES	CRONBACH'S ALPHA	MEAN	P-VALUE	SIG. LEVEL	SIGNIFICANT?
TOTAL N	128	Brand attitude	0.944	SAMPLE 1: 4.2548 SAMPLE 2: 3.5939	0.002	0.05	YES (0.002<0.05)
CONFLICT N	62	Purchase intention	0.899	SAMPLE 1: 4.000 SAMPLE 2: 3.4545	0.039	0.05	YES (0.039<0.05)
UNSPECIFIED N	66	(Patience)	-	SAMPLE 1: 4.18 SAMPLE 2: 3.41	0.014	0.05	YES (0.014<0.05)
WOMEN / MEN / OTHER	76 / 50 / 2						
AGE (MAJORITY)	16-26						

\*Figure 1: Results from statistical calculations. Conducted with a 95% confidence interval.



### Consumer brand attitude

Customer brand attitude was measured using a scale ranging from one to seven. The participants were asked about their perception of IKEA in terms of 'good/bad', 'appealing/unappealing', 'pleasant/unpleasant', 'favourable/unfavourable' and 'likeable/unlikeable'. These variables were analysed through Cronbach's alpha, which with an output of 0.944, can conclude that the variables are a closely related set of items as a group. The variables were then merged into the new variable: brand attitude. Analysing the data on brand attitude using a t-test and Sample 1 had a mean of 4.2548, being supply chain delay due to the humanitarian crisis. Sample 2, the control group where the reason for supply chain disruption is not communicated, had a mean of 3.5939. This was concluded with a p-value of 0.039. Hence, with a significance level of 95%, the mean score of brand attitude is higher if the supply chain disruption is communicated to be due to a humanitarian crisis.

Based on our statistical analyses, we can say that our first hypothesis (H1) is true; there is a difference in consumer attitude when the delay is due to the war and humanitarian crisis in Ukraine/Russia compared to an unspecified supply chain issue.

It can thus be assumed that the difference in brand attitude between the two samples comes from different initial reactions to the information that contributes to the overall attitude towards IKEA. Delivery delays as a service failure cause negative customer experience and dissatisfaction. Furthermore, compassion, empathy and altruism are prominent feelings among humans in humanitarian crises. Applying the five steps, the delay and its associations will result in certain beliefs about the delay, which in turn leads to an attitude towards the event. This event is then associated with IKEA, and the response attitude will be transferred onto IKEA through conditioning. This attitude towards the delay will then be summarised together with all other beliefs about IKEA, which will then become the overall attitude in relation to the brand. The difference between these two samples' attitudes can hence be derived from their initial reaction to the delay and the reason behind it. This further proves the benefit of having clear communication and providing a cause of action in terms of a supply chain disruption due to a humanitarian crisis in comparison to not providing any information to the consumers. The ones who are reached by the additional information (in case of a humanitarian crisis) can, through our research, be claimed to have less negative attitude towards IKEA.



### Purchase intention

*Purchase intention was measured by asking five questions on propensity/interest to buy, using a scale from one to seven. These questions were later analysed as one variable, "Purchase intentions" since all five questions resulted in a Cronbach's alpha of 0.899, meaning the internal consistency among the questions can be deemed to be statistically satisfactory.*

*Furthermore, purchase intention was then analysed using a t-test which resulted in a mean of 3.4545 for Sample 1 and 4.00 for Sample 2. With a p-value of 0.039 and a significance level of 95%, the mean score of purchase intention is higher when IKEA communicates that a supply chain disruption is due to a humanitarian crisis and hence lower when the delay is unspecified.*

Based on our statistical analyses, we can therefore say that our second hypothesis (H2) is true: A delay resulting from a humanitarian crisis affects

consumers' purchase intentions to a lesser extent than unspecified supply chain delays.

Sample 1 obtained a higher mean on purchase intention, thus providing a strong indication that consumers are willing to continue with their intention to purchase to a higher degree despite a delay, if it is due to a humanitarian crisis. This is aligned with the second hypothesis presented previously in this essay. This means that supply chain disruption that is out of the brands' control is considered to affect dissatisfaction and consumer sentiment to a lesser degree than controlled supply chain disruptions. The data further confirms a less severe effect on experienced service gap in regard to brand offerings when the supply chain failure was communicated to be due to a humanitarian crisis. The higher mean of sample 1, clearly indicates that it would be beneficial for a company in their operations to utilize clear communication in such events. This can be deemed especially useful due to its proven capacity to retain a higher purchase intention amongst the brands' consumer base throughout the duration of the supply chain disruptions, potentially resulting in less of a negative impact on revenues.

### CONCLUSION

The statistical significance of the survey results suggests that product delays result in a lower impact on consumer brand attitudes and purchase intention when the delays are communicated to consumers as having resulted from humanitarian crises rather than when the reason is not specified.

These results imply that efforts to communicate the root of supply chain disruptions are an effective use of company resources. In the era of technological development, consumers are more aware than ever of the forces impacting supply chains, and as information becomes increasingly available, consumers demand to be kept in the loop. It is not likely that this demand will dissipate in the near future, emphasizing the relevance of this research, as brands must decide what communications are worth their resources. As unforeseen supply chain disruptions continue to riddle the business environment, this study suggests that communicating the root of the disruptions, in the case of humanitarian crises, could result in less impact on brand attitude and purchase intention.



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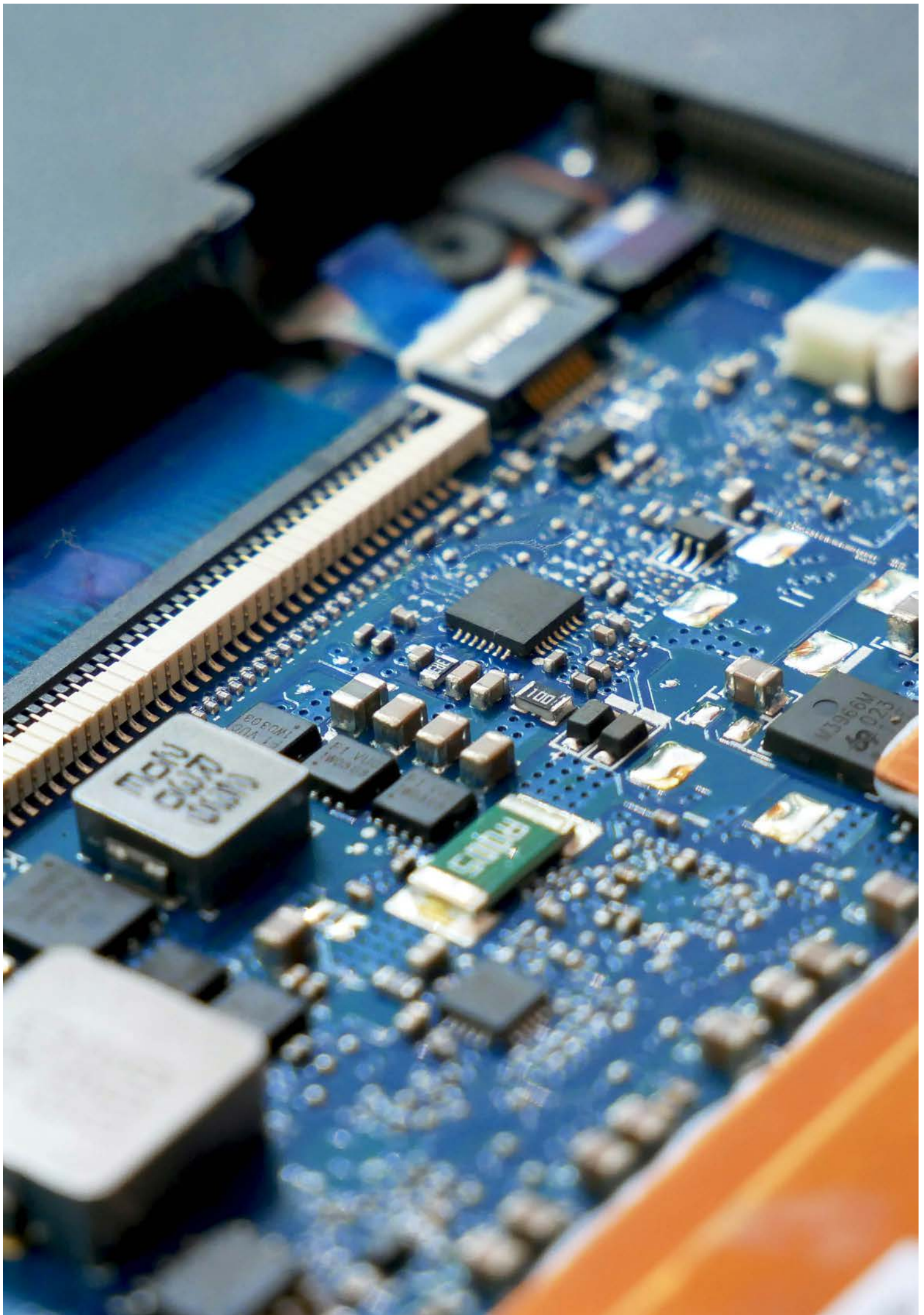
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# The semiconductor chip shortage

*Daniel Castro Jimenez, Amanda Gerth, Anete Katrina Kalnina, Erika Lybe & Arantxa Rufrancos Luna*

## SUMMARY

COVID-19 worsened the global semiconductor shortage, impacting various industries. The shortage is expected to continue, causing delays and higher prices for retailers and customers; thus, the need for organizations to adapt. Through a case study analysis, this paper looks at how companies within the automotive and smartphone industries have tried to mitigate the effects of the shortage on customer experience and logistics. Based on the findings, retailers should relocate production components, forecast demand, remain agile and flexible and strengthen supplier relationships to overcome the shortage. Furthermore, retailers should be transparent and manage the consumer experience to compensate for any setback.

## INTRODUCTION

In the wake of the Covid-19 pandemic, the world continues to experience the lingering effects of significant semiconductor shortage, also known as microchips, hereafter chips. Vulnerable even before the pandemic due to increased demand for technology combined with a complex and highly concentrated supply chain, the shortage worsened as lockdown restrictions were put in place. According to Tim Cook, Apple lost around USD 6 million in 2021 due to the shortage, cutting the supply of its flagship products. Retailers such as IKEA and Elgiganten confirmed a lack of dishwashers, causing delivery delays. The electronics retailer Best Buy couldn't meet demand as they ran out of graphics cards and gaming consoles, leading it to prioritize buyers based on membership subscriptions. The biggest impact, however, could be seen in the automotive industry, which increasingly relies on electronics as the cars get "smarter", leading to unfinished vehicles piling up and buyers being offered cars without the usual features.

In short, chips enable the society humanity currently lives in, powering a wide range of electronics from medical devices, payment cards, and farm equipment to 5G, home-appliances, and toys. As digita-

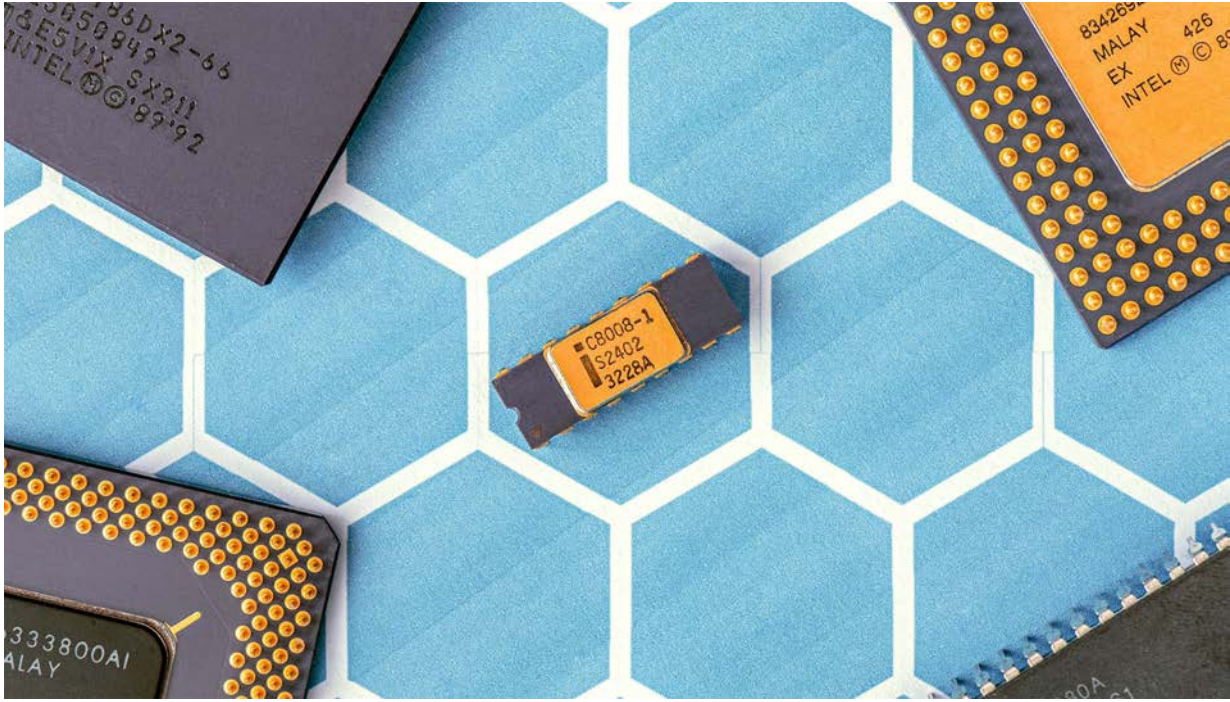
lisation and automation grow, chips are therefore becoming only more crucial. Despite huge recoveries in the global supply chain and governments taking action to prevent future shortages, the chip shortage is predicted to persist. The chip industry will struggle to catch up, trying to satisfy an ever-increasing demand for electronics while facing threats from geopolitical conflicts.

Aside from the long-term implications the shortage might have on retailers as they strive for greater digitalisation and automation, we see the trend causing more immediate influence on retailers in two ways. First, by impacting the supply chain, there will be delays and limited inventory, which in turn will lead to delays in deliveries and increased pricing of certain products. Second, it will impact the customer experience. Customers will have to deal with delays in product availability and higher price points, which overlap with already inflated prices and an expected recession, potentially causing customers to purchase more sparingly. The purpose of this research paper is to investigate the global shortage of chips and propose managerial recommendations for retailers to manage these challenges.

## METHODOLOGY

We employ a case study methodology, with the automotive and smartphone industry as cases. The automotive industry was the first one affected by the shortage –even continuing to experience it today. Thus, it provides us with a long-term approach to how companies have tried to mitigate the shortage's effects on customer experience and logistics. Furthermore, logistics and customer experience management are vital for the smartphone industry, as they are highly demanded products, and smartphone companies are high-volume buyers of chips. For data, first, we interviewed an industry expert with 15+ years of experience in the automotive and OEM industry to help guide our research. Then, we collected data through secondary sources –such as online news, academic journals, industry reports





and business or technology websites, among others. To ensure data quality, we established a criterion for data inclusion to assess the credibility of our sources and ensure validity. We reviewed the authority, timeliness, consistency, and objectivity of each of our data sources.

## CASES

### Automobile Industry

The chip shortage has affected the automotive industry globally. Many car manufacturers have temporarily halted production or lowered production levels, with about 11.3 million cars being cut from production in 2021. Nearly all car retailers are affected by the decrease in supply and increase in consumer demand, with delivery times for consumers remaining uncertain. The automotive industry is prominently affected by the shortage because the industry relies on JIT, thus, not having enough stock levels at the start of the shortage. Furthermore, the industry has a low priority with chip manufacturers compared to high-volume businesses, such as electronic companies. Finally, technological advances have resulted in more chips being needed for production.

To deal with the shortage, car companies have focused on securing chips with manufacturers, such as Tesla making advance full payments to ensure supply. Other solutions have been to lower the demand for chips by making chip-dependent fun-

ctions as add-ons instead of by default. Similarly, car manufacturers have re-designed some product elements and financially compensated consumers. For instance, in 2021, BMW delivered specific models without a touchscreen and compensated consumers with \$500 off the price. Likewise, Polestar changed the Pilot Pack of the Polestar 2 cars and reduced the price by £850 in all markets except in the USA and Canada. Other solutions are Subaru, Toyota, and Volvo, which have dedicated pages on their websites to the chip shortage, being transparent and upfront about the issue. The pages offer information about the causes of the shortage and how customers can be expected to be affected, which is often in delivery delays.

### Smartphone Industry

Since 2012, Apple has launched a new iPhone every September. The iPhone is Apple's largest source of revenue, and launches are timed to capture holiday shopping demand. From 2020 onwards, Apple has experienced challenges from supply chain disruptions. In 2020, the launch of the iPhone 12 had a 2-month delay. In 2021, the chip shortage started to affect iPhone production, and Apple relocated 50% of the iPad's components to fulfil production. Still, production was 20% lower than projected, resulting in a \$6bn loss in revenue in Q4. Currently, China's zero-Covid policy disrupted production at Foxconn, Apple's largest chip manufacturer and assembler, leading to a decrease in production



of approximately 30%, and the longest waiting time for an iPhone. To mitigate the effects of the disruptions, Apple has asked suppliers to stock up on components, tried entering new production agreements and looked into decentralizing from China. From the consumer side, the company has maintained the public informed through its financial quarter's conference calls and press releases. Furthermore, external distributor retailers, such as Best Buy and Walmart, have dealt with the shortages through exclusive early access to products with their membership programs.

For Samsung, the company is one of the leading chip manufacturers in the world, a position which allowed it to secure components at the beginning of the shortage. Nevertheless, as production halted in its plant in Texas because of severe weather conditions and chip scarcity increased, Samsung was affected. The company started experiencing delays and shortages in 2021, with sales falling 24% by Q2. To combat the chip shortage and drive profitability, the company prioritized component supply for its premium Galaxy models. For instance, while the Galaxy S21 series launched in January 2021, the S21 FE model, the affordable version, was pushed back to February 2022. Similarly, its more recent launch, the Galaxy S22 series, is experiencing extreme shortages; thus, the company cancelled the launch of the S22 FE.

## RESULTS

### Predicted Trend Development

The chip shortage, as displayed in the cases, has prompted governments and chip manufacturers to take action to expand production and prevent future scarcity. For instance, the USA and EU have implemented chip acts to improve self-sufficiency and boost competitiveness. Nonetheless, the shortage is expected to continue for the next one-to-two years, possibly even longer, as the results of new investments will take at least four years to show. Chip manufacturers take years and billions of dollars to build and equip before production; new foundries can take up to 3 years to set up, with chip design and production taking an additional 12-36 months, depending on chip type. Thus, in the near future, production will continue to be vulnerable and centralized –with 75% of production taking place in East Asia and 90% of the most advanced chips being made exclusively in Taiwan. The past

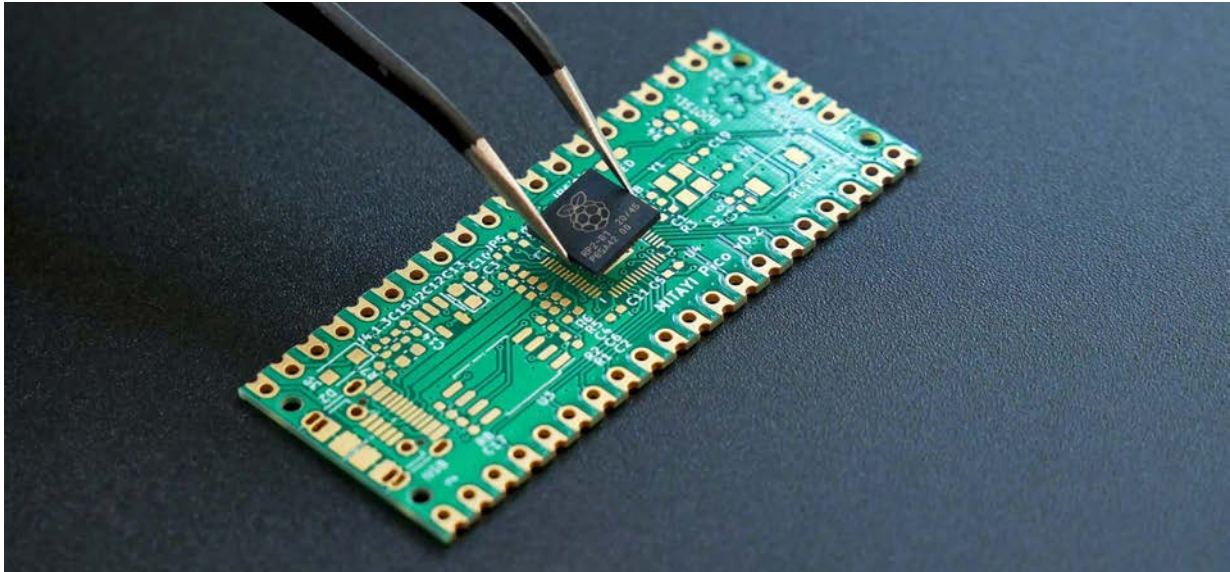
few months have shown an ease in demand for certain chips, such as those in PCs and smartphones, due to the push in production during lockdowns and the current global inflation affecting consumer spending. However, this current chip surplus can potentially be nullified in 2023. Thus, the relaxation of the bottleneck is only temporary. Sufficient chip supply will only be achieved in the long-term once new foundries open and assuming all other factors remain the same.

Various external factors affect the chip supply chain. For starters, an economic recession can slow down the construction of new foundries, which require a large amount of capital, leading to further shortages. Similarly, natural disasters and geopolitical issues, such as the continued Russo-Ukrainian war and the potential China-Taiwan war, threaten supply chain operations and access to primary components. Finally, the shortage can differ depending on the type of chip and type of industry, with advanced chips continuing to be limited. The ever-growing technological advancements in AI, electric vehicles, IoT and 5G within the next few years will continue to heavily drive demand for chips before the right support is in place. With this ever-increasing demand, it will be hard for the strained chip supply to catch up. Overall, it is hard to predict how the factors will evolve or resolve, adding to the uncertainty and complexity of predicting when the chip shortage will end. However, it is reasonable to assume that it will continue throughout the next two years, with even industry experts such as Samsung's CEO and Intel's CEO predicting so.

### Predicted Effects on Retail

Based on the reported factors influencing the chip shortage, retailers can see a current safe inventory of certain products, such as laptops and smartphones, which could last into 2023, depending on the surge in technology demand within the year. Currently, consumers are buying less than during the pandemic due to inflation and the threat of recession.

As previously mentioned, the chip supply chain is highly volatile and hard to predict. However, continuing with a prediction of a sustained shortage, in the near future, retailers will be impacted by their logistics and possibly experience greater delays and



limited inventory. Following the cases of Apple and Samsung, retailers will have to continue to relocate production to meet demand; consequences will be delays in deliveries to consumers or complete production stops of the other products which have lost production capacity or components. How retailers determine where to relocate or stop production must be based on a forecast, which may or may not be in line with future consumer consumption. Finally, not only will the shortage continue to increase prices, but the current heightened inflation will cause a ripple effect where both components and production costs will add to higher product prices. In turn, retailers will also have to manage the consumer experience since it will be prominently impacted by delays in product availability and higher price points. Overlapping with already inflated prices and an expected recession, customers will potentially be more sparing with their purchasing.

#### **Managerial recommendations**

Before concluding, a set of managerial recommendations for retailers on how to manage the chip shortage will be suggested.

Concerning logistics, not all retailers have power over their suppliers, like Apple, or are part of the manufacturing process, like Samsung and the car companies. However, being aware of the shortage grants retailers the ability to plan and start acting, overall being better prepared in the long term. Therefore, retailers should forecast demand early on with the help of customer data and insights, allowing them to better match future demand with

supply and avoid low inventory levels or high delivery times, especially during key selling times. Furthermore, retailers and their executive teams should remain agile and flexible throughout the shortage, being able to think and act fast to the ongoing changes. Finally, retailers should strengthen their relationships with suppliers. A strong relationship with suppliers can potentially allow retailers to secure supply or have priority once components are available.

In terms of the consumer, laying emphasis on all stages of the customer journey in retail is crucial to identify and manage the problem at hand. The first recommendation is for retailers to increase education along the journey. Consumers need to be informed about any lack of product availability or potential delivery delays through various touchpoints and be able to get updates easily. Investing more monetary resources and human capital in customer service touchpoints, such as call centres, live chats, and e-mail, can help reduce information asymmetries and provide the consumer with a more personalized experience. This will give the consumer a sense of importance independent from the purchase. In this digital age, when consumers are presented with various options online and offline, personalisation and convenience are of the highest value. Consequently, retailers need to offer customers an easy and "smart" experience through all stages of the journey, regardless of whether the customer reaches the purchasing stage of the customer journey.

Furthermore, in line with education, retailers must be transparent on stock and inventory, clearly communicating online and offline stock levels and approximate restock times. Transparency throughout massive delays is imperative as it lays a foundation for trust and loyalty between the consumer and the retailer. In case of dishonesty or unmet expectations, the retailer's reputation will suffer. Overall, being transparent about stock allows the consumer to better plan their purchase and manage their expectations. The last recommendation would be concerning education for retail employees, to have extensive knowledge of the ongoing chip shortages to be able to assist and educate consumers. Collaboration of all parties in retail is of the utmost importance allowing open-ended resource interaction across organizational boundaries. To manage demand, retailers need to ensure that all employees within a retail organization are educated and can see themselves from a consumer's perspective.

Finally, the recommendation for retailers would be to manage the loss of experience due to delays and lack of product availability. One way to achieve this is by compensating the consumer. Solutions include offering product replacements and consultations with support experts, as illustrated by the BMW case. Another way is through consumer expectations management, as unmet expectations can lead to consumer disappointment, thus, affecting the experience. Waiting lists and pre-orders of electronic devices, along with the reward of a discount or free deal on supplementary products, have been effective strategies made by retailers to maximize demand and excitement for new product releases. For instance, pre-ordering a smartphone and getting headphones for free. While this was a viable strategy before the shortage, it is no longer optimal. Retailers should now release and brand their new products to raise interest levels in accordance with actual supply.

### CONCLUSION

The future of chip supply remains uncertain and challenging. For the next one to two years, the shortage of chips is predicted to continue as no additional chip production is likely to happen in the short term. Current chip production has been impacted by political conflicts as well as a limited supply of components and raw materials required

for production. Thus, affected industries will have to continue decreasing the production volumes of their products, find solutions to adapt or change their offerings with decreased chip usage, or even postpone new product launches. Retailers are the ones handling both shortages from suppliers and continued demand from customers. For them, supply chain and customer journey management will be the way to retain customers and maintain a competitive advantage. These can be achieved through business agility and flexibility, strong supplier relationships, demand forecast, consumer education and compensations. While in the near future, factors will continue to impact chip production and, thus, retail products availability, governments and manufacturers are working on long-term solutions. Large investments are being allocated to decentralize the supply chain and increase chip availability; however, it will take remarkable time for foundries to be built, tested, and ready to run. For now, all the participants in the system, from chip manufacturers to the end consumer, will have to accept and adapt to the new reality.

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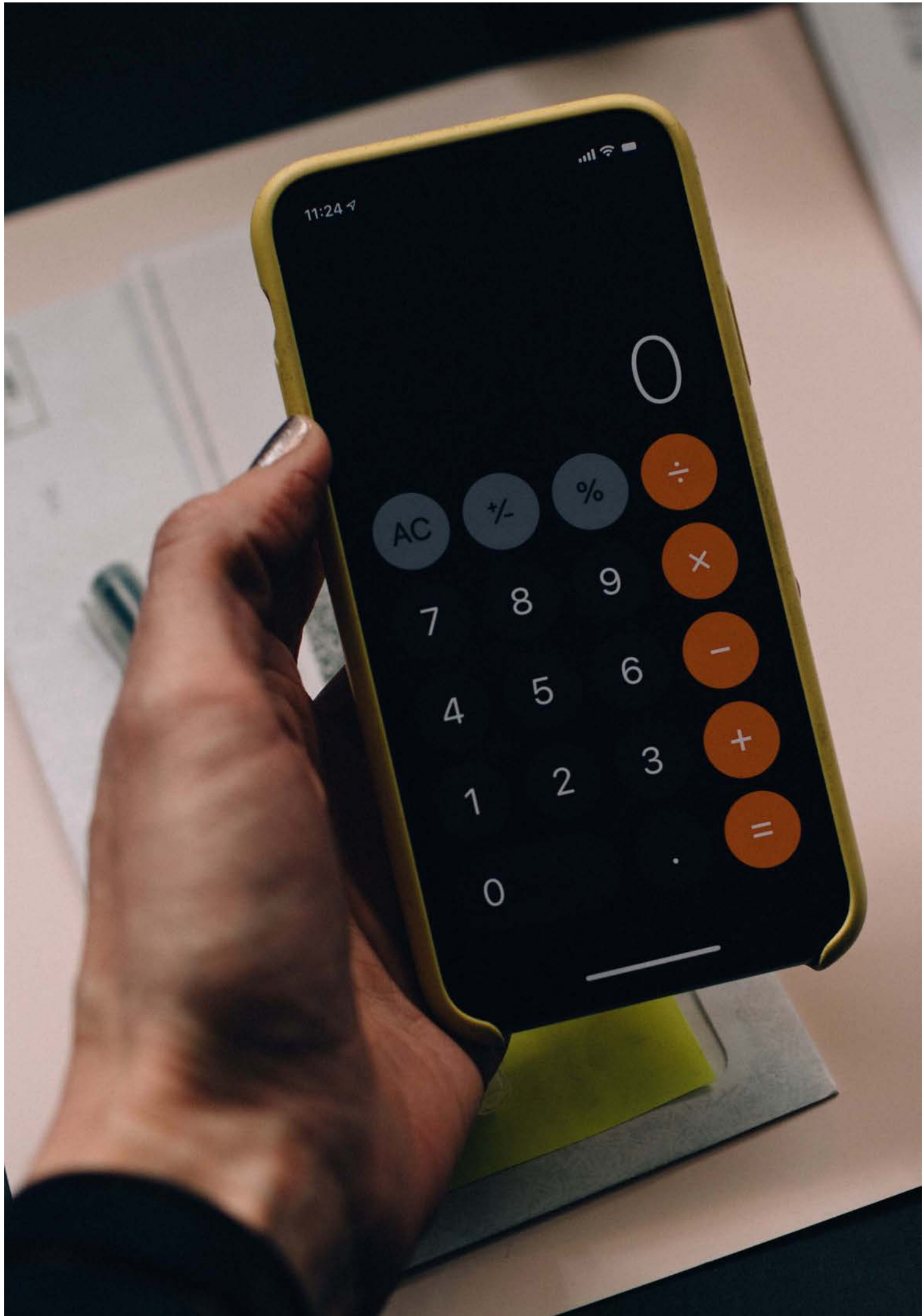
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# The effects of inflation for retailers

*Mimi Carvell, Louise Edlund, Julie Melchior Eide, Alice Nordgren, Cajsa Schoultz & Sofia Steerling*

## SUMMARY

Inflation is an emerging business trend affecting the political, economic, social, and technological retail business environments. Inflation causes customers to develop more deliberate purchase decisions in which price is a more important factor. This may increase the phenomenon of showrooming and consequently decrease customer loyalty and revenue. In this chapter, we focus on how retailers can combat showrooming with physical and digital touchpoints that reduce the friction associated with the purchase and enhance the customer experience throughout the customer journey.

## INTRODUCTION

On top of the already-considerable pressure caused by fast-changing environments accelerated by events such as the Covid pandemic and supply disruptions, retailers are now also facing economic challenges. Indicators are pointing towards an imminent global recession estimated to culminate in 2023. The Swedish economy is expected to experience recession characteristics such as increased inflation, unemployment, and interest rates. The disposable income of Swedish households is, hence, decreasing, and a decline in consumption is forecasted.

Inflation increases the probability of recession, as central banks raise interest rates in an effort to slow down overheated economies and price rushes. The increased price of consumption imposed by inflation is concerning consumers and causing them to grow increasingly pessimistic regarding their spending habits. 74% of consumers are reducing their average spending, and half of the consumers are willing to change their retailer of choice to reduce costs. Perceived value for money is among the most important factors influencing consumption patterns during inflation, thus customers' price sensitivity increases. The price sensitivity is expressed in increased interest in cheaper alternatives, such as discounted products and private label brands. Moreover, customers develop strategies to cope

by incorporating new habits such as planning their shopping behaviour, reducing and avoiding waste and stockpiling, as well as shopping more frequently to mitigate. The effects of the current crisis therefore can be said to create a new consumption logic. Customers tend to continue being price-conscious even when proceeding into the recovery stage of a recession, indicating a long-term change in consumption behaviour.

Against this backdrop, showrooming is likely to become even more prevalent. Showrooming is a phenomenon in which customers visit bricks and mortar stores to physically evaluate their purchases before buying online. By visiting retailers, both online and offline, customers can experience the product physically while simultaneously acquiring it at the lowest price possible. In 2018, showrooming penetration was 50% in Sweden. Following the decrease in households' disposable income coupled with the increased price sensitivity, more thorough and deliberate pre-purchase research can reasonably be expected. Thus, we expect to see an increase in showrooming during the emerging inflation.

The purpose of this chapter is to examine the potential consequences of increased showrooming for retailers in Sweden. Strategies to diminish or overcome the challenges will be proposed.

## METHOD

To provide a solid foundation for this qualitative study, data was collected from statistical, industry, and governmental reports. Blogs, news, and reports were important additional sources of even more contemporary information. Followingly, an adapted version of a PEST analysis was conducted to gain insight into external factors (political, economic, social, and technological) that might impact retailers due to inflation. Searching the broader environment helped to identify potential external changes from inflation that could impact retailers' success.

Literature was also reviewed to identify commonalities and differences in customer behaviour, such as price sensitivity and showrooming, and to explore the factors contributing to these behaviours. The findings were then used to develop recommendations for retailers, focusing on the customer journey and touchpoints, to address the challenges posed by inflation, changing customer behaviour, and showrooming. While the recommendations are not exhaustive, they are intended to provide a starting point for retailers to consider as they navigate the complex and evolving retail landscape.

## RESULTS

### How Inflation Is Affecting Retailers

To contextualize inflation's effect on retail, an adaptation of the PEST framework illustrates the political, economic, social, and technological effects of inflation. In other words, an analysis of how retailers might be politically, economically, socially, and technologically affected due to inflation was performed, rather than an examination of the retail industry in general.

Politically, inflation leads to government interventions, which can result in new, temporary policies affecting tax and interest rates, requiring retailers to be agile in their business planning to sustain resilience in the fast-paced political environment.

Economically, the high inflation has struck the Swedish and global economies hard, and "Riksbanken", the Swedish Central Bank, has raised the key interest rate repeatedly. Consequently, the retail industry's bottom line is affected as sales slow due to the lower purchasing power in households and decreased consumption. Therefore, retailers are increasingly pressured to rethink their strategies to sustain future business and sales. If this downward trend continues in the long-term, increased unemployment is likely, which will further contribute to increased uncertainty in the economy.

Socially, consumers are more price-sensitive, looking for better prices, doing more research before shopping, and planning purchases in terms of pricing and discounts to cope with economic constraints. As a result, the phenomenon of showrooming has become a bigger issue as customers search for the best prices or discounts online, while researching the product in physical stores.

Technologically, e-commerce is not exempt from inflation but can remain more price competitive compared to traditional brick-and-mortar stores as they do not carry the same fixed costs and can also more easily reduce costs. Furthermore, customers are enabled to make more informed and conscious decisions because they have good access to information.

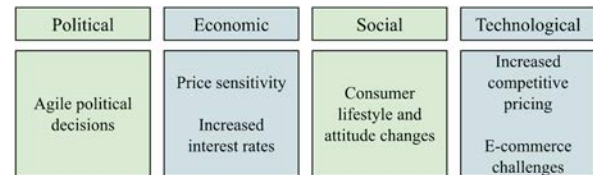


Figure 1: Summarization of adapted PEST analysis.

### Consequences of Inflation and Showrooming for Retailers in the Near Future

The aftereffects of economic hardship tend to linger. Therefore, price-sensitive customers may not forgo behaviours that have shifted and become new standards because of inflation. For example, shoppers may stay longer per visit in-store in order to compare options and get the best deal. Retailers will have to take these lingering effects into consideration and face the reality of customers utilizing physical stores in different ways.

There are recurring customer patterns regarding inflation, such as the tendency to focus on products that are on sale and trading down to cheaper or private-label brands. Another tendency is to switch from their retail store of choice to another option where the customer believes it is cheaper. Thus, with inflation increasing price sensitivity, retailers are arguably at risk for an even higher rate of customer disloyalty when the concept of showrooming enables price comparisons. Consequently, brand loyalty becomes threatened.

The showrooming phenomenon challenges physical retailers to meet the prices of online retailers or experience negative effects on their sales. Less profit has already led many physical retailers to lay off in-store personnel or to cut back on training. While this can be an efficient way to cut costs, in-store personnel are facilitators of the retail brand and a big part of the in-store experience. Customers who have received good in-store service are more prone to purchase goods and leave the retail store with a good impression. Cutting costs through laying off employees can thus lead to a decreased value



for the customer in terms of in-store experience and service, which can affect sales negatively. Less money directed toward the experience, layouts, and innovation can also be a risk for retailers as the image of the retail brand has been shown to be an important factor that influences which store customer chooses.

As a consequence of showrooming, retailers are left without a clear understanding of how to manage this shift. When adopting a multichannel strategy to respond to the increasing online shopping, retailers increase their chances of retaining the customer when they are showrooming as they offer their products both offline and online. However, showrooming could also entail the customer turning to a competitor when making the purchase. Thus, possible revenue is lost and hurts the bottom line of traditional retail stores.

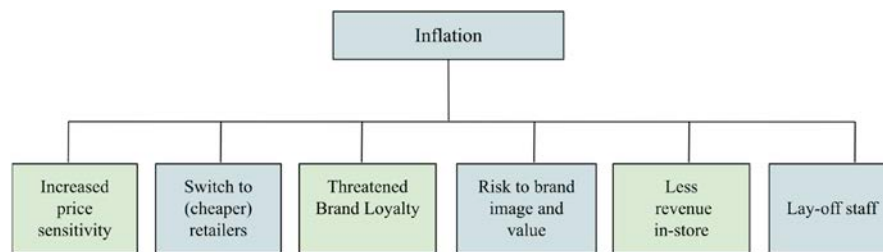


Figure 2: Consequences of inflation for retailers in the near future.

### How Retailers Can Deal With and Respond to Inflation and Showrooming

Rather than attempting to counteract the increase in showrooming, retailers in Sweden could attempt to assimilate the customer experience for the showrooming customers. Retailers need to adopt the perspective of the customer and attempt to map out the customer journey of showrooming customers, from pre-purchase to post-purchase. By capturing the customers in the pre-purchase stage, retailers can create incentives for making purchases in-store by reducing uncertainties associated with the in-store experience. They can also develop unique components of the physical customer experience. With increased price sensitivity and customer deliberation because of inflation, this stage is arguably longer and more critical than previously.

**Pre-purchase Touchpoints:** Digital touchpoints offered in the pre-purchase stage can be utilized to make customizable physical touchpoints in-store to counteract showrooming. Retailers can ensure

a smooth in-store experience in the pre-purchase phase by allowing customers to plan their visit ahead by providing extensive information about the physical stores' layout, product availability, and the number of other customers at a given time, uncertainties are reduced and the visit in the physical store is more likely to be time-efficient and pleasant. Perceived disadvantages of physical purchases are thus reduced and seen as a simpler option to showrooming.

Physical stores can offer instant gratification in a way that e-commerce cannot. To capture the customer in-store, exclusive, in-store-only touchpoints should be conveyed in the pre-purchase phase. A cost-efficient way of doing this could be organic exposure on social media. To achieve this, the customer experience needs to be persuasive. The retailer can beneficially advertise sensory elements

to create an experience inaccessible to e-commerce which could create incentives for initiating and experiencing the customer journey to completion while in-store, rather than engaging in showrooming behaviour.

**Purchase Touchpoints:** As technological solutions and mobile devices are one of the greatest drivers for showrooming, retailers can beneficially implement technological capabilities in store to make the experience more seamless. By providing customers with digital touchpoints in the form of self-service and mobile checkout, digital screens, and the option of checking availability in-store, friction areas such as the customers' sense of wasting time, frustration, and ambivalence may be reduced. It is essential to realize the extensiveness of technological capabilities. These stretch beyond in-store solutions, entailing that online platforms and e-commerce should be optimized and easy to use to further deter customers from turning to competitors. Furthermore, on- and offline channels should be interconnected. The option to order online immediately in the store is an innovative solution that may decrease showrooming. As is the use of in-store QR-codes to help customers find products online.

Retailers can also incorporate customer evaluations into self-checkouts. Instead of just scanning the items and paying, customers can also evaluate the store. This data can be useful for retailers to analyse and collect, as it may locate areas that are critical for communication. Additionally, it enables them to identify potential issues and provide a better in-store experience in the future.

Employees are perhaps the most crucial resource for physical retailers. A reconsideration of their role might, therefore, be in order. Availability of personnel is argued to be more important than having personnel who take an involved role in the purchase, as this can be perceived as invasive and might discourage customers from following through with their purchase. However, a passive yet present role has been found to improve the customer experience and minimize friction. Employees that provide help when needed, possess extensive knowledge of the product, and manage the stores efficiently are still central parts of a positive customer experience.

Although retailers could arguably decrease the risk of showrooming by improving the customer experience, price is still a major driver of this behaviour, especially in times of inflation. Even if it is a rather short-term solution, retailers could offer a price-matching service. This could help retailers retain customers at a critical time when customer loyalty is considerably low. Initially, retailers could price match across their own retail channels but, to sustain competitive advantage, price matching towards competitors could also be considered. Although potentially resulting in a loss of margin, this should be considered in relation to the cost of losing a customer.

**Post-purchase Touchpoints:** Post-purchase touchpoints remain crucial in driving customer loyalty and are a powerful tool with which to drive profit and value in the long run, which may eventually extend the consumer life cycle. In the post-purchase stage, good service can establish relationships of trust

with customers. Much of the what the customer perceives as good service is dependent on the store personnel, therefore retailers should develop training programs that enable personnel to create and maintain trustworthy relationships with customers.

Once established, trust can be maintained via loyalty programs and newsletters. Although communication is relevant in all purchase stages, it should be emphasised in the post-purchase phase, where it helps the retailer to stay top of mind and encourages customers to return. In the challenging times of inflation, customers tend to go for offers that provide them with the most value for their money. Depending on the size and budget of retailers, a more or less extensive loyalty program may be implemented with offers that offset inflation effects by making customers feel like they are making a good deal. To further strengthen the relationship, retailers should demonstrate empathy for the economic situation of their customers by showing that they understand them, and that retailers and customers are “in this together”. Extending a thank you to customers for their loyalty is an additional measure, which does not cost much but can be highly appreciated.

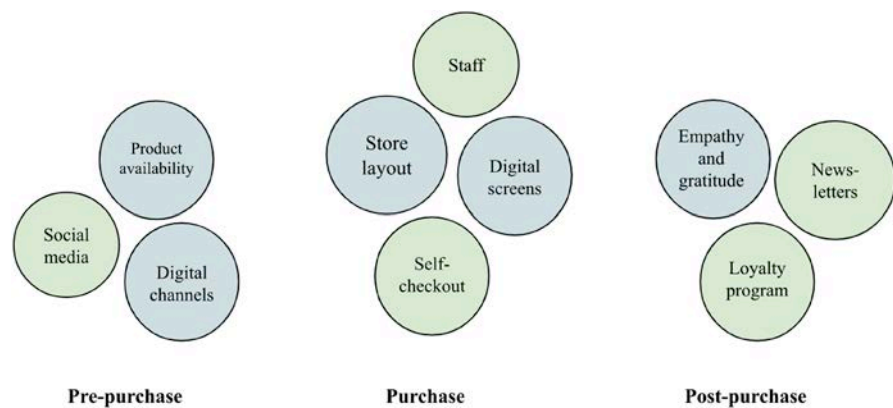


Figure 3: How retailers can deal with and respond to showrooming through touchpoints.

## CONCLUSIONS

Retailers in Sweden will likely be subject to various changes caused by inflation. Due to political uncertainty, retailers will be forced to adjust accordingly. Simultaneously, the retailers are facing a strained financial situation with higher operational costs as well as a decrease in customer demand. The decrease in households' disposable income is expected to cause an increase in customer price sensitivity. Changes in consumption patterns will result in more deliberate purchasing decisions. Alt-

though retail overall can expect to face consequences from inflation, e-commerce retailers have better opportunities to be more responsive regarding the fast-moving environment, while brick-and-mortar stores might experience difficulties in maintaining competitive pricing.

If the developments of inflation and showrooming continue as predicted, consequences will affect retailers now and in the forthcoming years. If, as predicted, inflation's effect on price awareness and sensitivity does indeed increase showrooming, then retailers are at risk. Customers' loyalty towards retail brands is challenged as customers will not only switch between sales channels to save money but also between competitors, which will hurt the bottom line of retailers who are not competitive on price. In response to affected sales, retailers have laid off employees which helps cut down on expenses. However, this may come at the cost of the perceived quality of the experience as good service tends to contribute to the retail image, and the image of the retailer is an important factor when the customer decides which retailer to visit.

In terms of how retailers can deal with and respond to these changes, we suggest that to combat the behavioural effects of economic uncertainty and inflation, it is essential that retailers create a positive experience for the customer throughout the customer journey. Physical and digital touchpoints should be incorporated from pre-purchase to post-purchase to create a seamless and positive experience, as well as to encourage brand loyalty.

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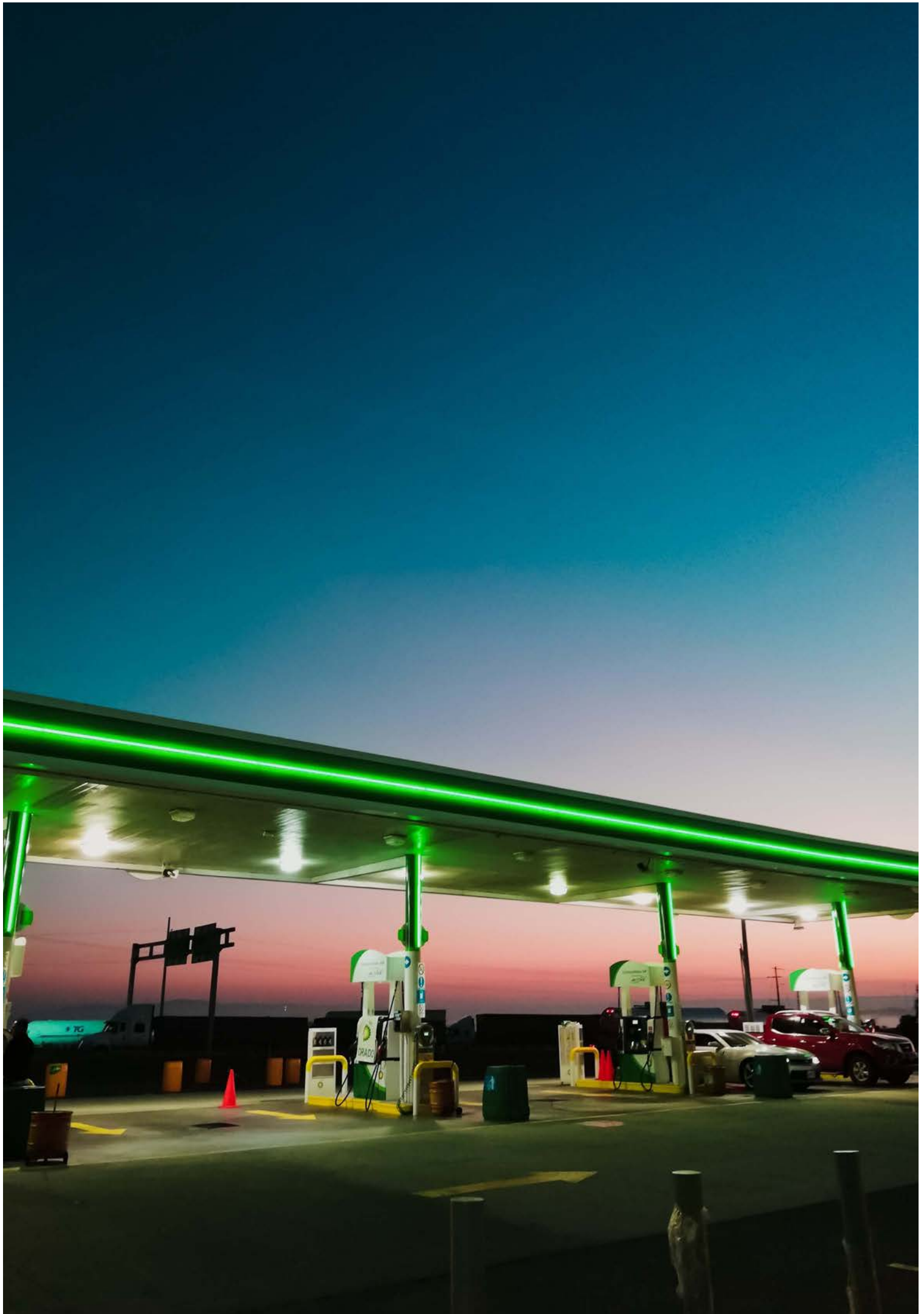
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# Is there a future for retail gas stations in Scandinavia?

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## SUMMARY

Gasoline retailers face the risk of a potential shift towards 15-minute cities and a Scandinavian ban on fossil fuel cars. This paper analyses driving forces to understand how gasoline retailers can anticipate and respond to industry changes in a 2-year frame. This study consists of a triangulated secondary data analysis and a subsequent scenario analysis. Based on two dimensions—15-minute cities and fossil-fuelled cars prohibition—four scenarios of gas station retailing are discussed regarding retail offerings and operations. These scenarios can guide gasoline retailers in implementing business changes to radical scenarios or supporting the initiative to diversify possible risks.

## INTRODUCTION

Imagine a future where it is illegal or unnecessary to purchase a car that runs on fossil fuel. This may no longer be a fantasy. Scandinavian countries are working to ban the sale of fossil fuel vehicles, if allowed by the EU, because of the looming environmental crisis.

However, other trends are also emerging. One trend is the 15-minute city concept, in which cities are designed so that access to any service or job requires no more than 15 minutes of travel time. This idea projects an unprecedented degree of city compactness, which will affect the necessity for gas stations in cities. These two factors bring a high degree of uncertainty and impact for gasoline retailers, which they need to prepare for. If fossil fuel cars are no longer sold, retail as usual will no longer exist in the gasoline industry. Instead, they will have to navigate retail as unusual.

Academia provides great insights regarding retail transformation. Business model transformation, higher demand for customer experience patterns and the need for excitement, digitalization and growth of mobile device usage, the role of private

labels and offerings, and other changes in retailing are broadly discussed by scholars, who outline grandiose future challenges for retailers. The fact that a physical store and product are offered along with service as part of gas station business suggests a transformation in the retail offering and operations will be necessary together with the realisation of the most significant and less evident risks. Retail researcher Grewal's 5Es theoretical framework – which include an entrepreneurial mindset, customer excitement, engagement, experience, and education – are used to frame our findings and to build the foundation for the transformation of gasoline retailing.

The purpose of this chapter is twofold. Firstly, to explore current macro-environmental business trends in gasoline retailing. Secondly, to provide gasoline retailers with explicit advice on how to adapt retail operations and offerings in order to retain resilience and financial viability in a 2-year timeframe.

## METHOD

We used data sourced from governmental and regulatory bodies, organisations archives, press, academic research, and private sources to generate a scenario analysis that allows us to explore the future of gasoline retailing.

The use of multiple sources of data allowed us to confirm our findings by converging different perspectives, multiple observers, theoretical perspectives, data sources, and methodologies. This enabled a holistic view and understanding of the phenomenon from different angles while facilitating a prediction of future potential outcomes and opportunities for the retail gasoline station industry.

Scenario analysis is an underused tool which allows researchers and retail practitioners to try to understand the future with the help of two main driving factors. It is perfect for business analysis and

planning in uncertain times, such as these. In our study, it provided us with a solid foundation for our inferences about the future of gasoline retailing.

## RESULTS

Norway, Sweden, and Denmark are working to rid their countries of fossil fuels. Table 1 provides an

Table 1: Production and consumption of motor gasoline in Scandinavian countries (Norway, Sweden, and Denmark) in tonnes.

Geography	Category	2016	2017	2018	2019	2020	2021
Denmark	Production of Motor Gasoline	2,098.0	2,241.9	2,189.2	2,225.8	2,133.8	2,092.0
	Consumption of Motor Gasoline	1,338.0	1,277.6	1,280.6	1,280.4	1,142.7	1,159.2
Norway	Production of Motor Gasoline	3,766.0	4,596.0	4,421.0	3,616.6	3,522.1	4,147.9
	Consumption of Motor Gasoline	806.0	783.1	754.7	694.1	657.9	610.0
Sweden	Production of Motor Gasoline	4,906.0	5,674.0	5,003.0	3,653.0	3,558.3	4,561.9
	Consumption of Motor Gasoline	2,360.0	2,257.9	2,098.8	2,052.8	1,882.7	1,920.0

Source: Euromonitor International (2021)

overview of how the consumption and production of motor gasoline changed from 2016 to 2021 in Scandinavia. Considering the current political, economic, sociological, technological, legal, and environmental factors that are affecting fossil fuel production and consumption, this downward trend is likely to continue. Of these factors, most notable are perhaps the war between Ukraine and Russia—which has led to shortages of gas and price increases, reminding consumers and governments alike that there is a need for new energy sources—and climate change. Climate change affects the macro-environment partly due to increased consumer consciousness about environmental issues but also due to the ensuing regulations related to reducing carbon emissions. Norway, Sweden, and Denmark proposed banning the sales of cars that run on fossil fuels and await EU approval while endorsing electric and hydrogen vehicles.

Meanwhile, the COVID-19 pandemic had a considerable effect on the environment. Namely, it caused a shift toward 15-minute cities. To combat the difficulties of the pandemic, for example, to maintain distance and reduce travelling, temporary changes were put in place that allowed people to travel less and work, shop and engage in leisure pursuits closer

to home. It became apparent that such changes are in line with the fourth industrial revolution in which information and communication technologies offer opportunities to combat urban challenges through smart cities. 15-minute cities gained traction during the pandemic, and research is now looking into the applicability of the idea in different geographical locations and contexts.

The potential ban on fossil fuel cars and the development of high-proximity cities are both highly uncertain and extremely influential in that they can lead to a gigantic shift in gasoline retail. Therefore, these are the factors we focus on for the scenario analysis of gasoline retailing in Scandinavia (figure 1). In the following section, each scenario is discussed in order from that which is closest to

the current business conjuncture to the most radical one.

### “Conventional Gas Stations”

This scenario also considers current trends and needs for engaging retail, EV usage in Scandinavia, incentives/regulations imposed by the Nordic Governments and global macro environment events, such as the Russia-Ukraine conflict.

Gasoline retailers must keep up with changes and innovate their retail operations and business model. The Nordic countries' governments have been slowly trying to suppress the gasoline retail industry by implementing regulations against fossil fuel vehicles and providing incentives for EV vehicles ownership and circulation. Eventually, these countries are at the forefront of EV usage and sales, with a high ratio per capital, which results in gasoline retailers adapting their operations and working together with charging operator companies to implement electric chargers in their gas stations.

Since the start of the current Russia-Ukraine conflict, there has been a worldwide movement to reduce dependency on Russian petrol, gas, and oil by focusing on using renewable energies, increasing





Figure 1: Factors for scenario analysis of gasoline retailing in Scandinavia.

local production, and increasing imports from other countries. Thus, Scandinavian gasoline retailers dependent on Russian resources are forced to change their business model. This will also likely prompt the usage of alternative energy different from petrol in the future, which is a small incentive for the continuous slow change of these retailers' operations.

Regarding retail offerings, one way for gasoline retailers to differentiate from each other is by rethinking their in-store product placement and implementing special deals, which relates to the necessity for gas stations to make customers' access

to products easy while engaging and delivering the best customer experience. The predicted number of public charging points in Scandinavia for 2030 is about one charger to 10-19 electric vehicles depending on the country, excluding Iceland, which is predicted to have 1 to 45 ratio, and therefore, in this scenario, the gasoline retailers will maintain their low proximity locations while slowly adding EV chargers and alternative energy sources.

Directly related to this trend and the idea of customer lock-in, we see a need for retailers to build more efficient loyalty programs to grab their



customers more firmly, focusing both on sales and customer experience.

#### **“Dissection of the Gas Station Offer”**

The 15-minute city concept signifies that the urban planning of cities includes neighbourhoods designed to be self-sufficient. It incorporates decentralising all basic services and encouraging more sustainable modes of transport. High proximity and high density are considered within this scenario. As the very essence of this framework is the limiting of private cars within city boundaries. The high-proximity reality will encourage people to lower their car dependency and look for alternatives such as e-scooters, e-motorcycles, and e-bikes. Consequently, gas stations can become obsolete even without legislation that bans the usage of fuel cars.

However, gas stations will not disappear altogether. Within city limits, other amenities such as charging stations for electric vehicles will likely be more prevalent in comparison to the conventional retail offer. Projects for shared electric mobility hubs with various facilities where customers can charge, borrow, and share e-vehicle types are already underway in six cities in Europe such as Amsterdam, Brussels, and Nuremberg.

Some adaptations to the traditional retail business models are likely to appear. Retail researchers have suggested that value will be appropriated by operational efficiency reflected in self-service models. This reflects the argument that the retail business model is moving towards increased self-service. The remodelled gas stations will allow customers to perform self-charging while running errands in the vicinity. Along with the new formats in the cities, there will be an increased focus on accessibility and logistics.

Concerning retailing governance, partnerships with neighbourhood stores will likely be established. This can broaden the retail offer and activities by involving additional services such as EV charging, maintenance, and hardware. Partnerships can also emerge with electric bike shops and subscription-based or shared vehicle shops. Consequently, business model innovations in terms of customer efficiency and engagement can transpire with implications such as multiple locations, mixed offer charging station formats, and supplier co-creation.

Nevertheless, even with the high-proximity aspect in mind, the lack of prohibition on fuel cars means that long-distance travel with motor vehicles will still occur. In this case, a separation of the retail offer will likely appear. Instead, a mix of fuel and electric charging stations might prevail. While the locations of the stations might be like today's, the number of gas stations might reasonably be lower due to the cities' self-sufficiency.

#### **“Metamorphosis of the Traditional Gas Station”**

Considering possible governmental policy changes towards the restriction and consequent reduction of fuel stations within cities, petrol stations are required to undertake a critical transformation of their retail offering and operations to fulfil the requirements.

In this scenario, rejuvenating the retail offering becomes the primary driving force for gasoline retailing transformation, while retail operations are to support these innovations and embody them. Firstly, retailers will add significantly more EV chargers, both superfast and traditional, continuing the current trend of phase-out and fulfilling the need for electric car drivers. This attribute will increase the

product assortment for gas stations and position them as more innovative and compliant retailers. Secondly, gasoline retailers can enhance value by integrating EV car sharing into the current business model, since EV purchase is not attainable for many customers with decreasing disposable income.

These innovations will encourage physical stores to rethink their offering to create distinctive settings, promote shopping enjoyment, and encourage customer purchases. For that reason, gasoline retailers are expected to add new (e.g., via franchising of global fast-food giants) or enhance present gas station cafes. Gasoline retailers can add new or enhance present station supermarkets and their assortment by building their brand via private labels, establishing partnerships with established brands as suppliers (e.g., P&G), or connecting to existing retail cooperatives (e.g., ICA or COOP). For long-journey drivers and those waiting for EV charging gasoline retailers may introduce new retail formats, such as fashion outlets, capsule hotels, restaurants, quiet rooms for rest, co-working spaces, or children's play areas. These new formats will add to customer experience and create value for changing consumer needs. Finally, lower-middle and low-income consumers, who cannot afford EV purchases immediately, will still use fossil fuel cars and logically need repair and maintenance services, representing another possible opportunity for gasoline retailers in this scenario.

Finally, although this scenario is not extremely radical, its alignment requires noticeable capital expenditure investments. For example, gas stations will need to enlarge spaces to include facilities for new offerings as well as new infrastructure and equipment (e.g., laptops for co-working, video games, and facilities for child play areas), require frontline staff training for novel customer needs, negotiate new partnerships or possibly governmental subsidies for innovative gasoline retailers, etc. Therefore, in this scenario, gasoline retailers that follow this strategy will have to be conscious and prudent.

#### **"Gas Stations as Community Hubs"**

Finally, the most extreme scenario is gas stations as community hubs. This scenario has similarities regarding filling station changes due to the prohibition of fossil fuel cars; it also includes the in-

roduction of 15-minute cities which, due to their compactness, contribute to even more considerable changes in consumer behaviour at filling stations. The main challenge for gasoline retailers, in this scenario, is the diversification of their offering beyond service or filling stations. The primary focus is rethinking their traditional business model into one that encompasses innovation, convenience, digitalisation, and customer-centricity. Furthermore, in a 15-minute city, gas stations must reconsider their locations since new demand centres will arise. Accordingly, the layout of the gas station will need to be modified to deliver convenient and attractive products, services, or activities that can work independently or simultaneously with the vehicle charging service. In this aspect, entertainment becomes essential to retain and attract customers who may or may not visit gas stations with the intent of charging their cars but, conversely, for social purposes.

The urban and social importance will result from the transformation of gas stations to become part of the city facilities. Thus, the physical space of gas stations will remain relevant due to the freedom of movement and proximity of residents, making gas stations one of the stops along a person's journey through the city. The architect Jeffrey Inaba proposed the concept of "Station to Staytion" that aims to evolve filling stations as community gathering spots for underserved areas. Consequently, since gas stations today have a hybrid public/private nature, this will keep allowing multiple usage productions, which can vary depending on the inhabitants' routines, being busier during lunch hours for nearby workers or filled with young subcultures at night as a gathering point for social interactions. Thus, the revamping of the traditional offering of gas stations into a consumer-centric multipurpose community hub attracts users of all modes of transportation and mobility.

#### **CONCLUSIONS**

Most Scandinavian countries have a goal of net zero emission by the 2030s, which imposes comparatively strict goals for the pace of replacing fossil-fuelled vehicles with electric vehicles. Considering the risk of not fulfilling this goal due to insufficient reduction in fossil fuel cars, governments might resort to a more stressful but short-term oriented approach of banning the sale of fossil fuel cars and signifi-



cantly restricting their use in the region. Meanwhile, high-proximity cities are relatively nascent, but already exist and are becoming increasingly popular. Petrol station retailers, hence, face the challenge of organising significant but smooth changes in their operations and offerings resulting from possible future changes in the industry.

The metamorphosis of filling stations should be realised considering the financial bottom line of the business model. These challenges can be tackled by gasoline retail managers by consistently remaining updated on the changing levels of EV ownership and consumer feedback on efficiency. Certainly, gasoline retailers should regard the gradually decreasing quotas for selling traditional cars, steadily decreasing the number of remaining fossil fuel cars, the insufficient EV supply to satisfy all customers' needs in transportation, and smooth change of urban environments to 15-minute cities. Thereby, as an implication for gasoline retail executives in the case of a gradual transition from fossil fuel cars to electric vehicles, these quadrant scenarios can be used as a tool for anticipating future trends, adjusting retail business models, and adding innovation to them incrementally in relation to trend development in the regions. Another possible implication for gasoline retailers to diversify the risk inherent in each scenario is to selectively implement several

noticeable constituents of possible future retailing in order to enhance excitement and engagement in the retail offering and diminish the risks of "black swans" for the mostly silo-managed gasoline retail industry.

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## Reflections from the editors

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When reading the chapters in this report, one might reflect on whether the macro-environmental turbulence that they discuss are something new or not. The retail industry has, of course, suffered from disruptions to supply in the past. There have also been periods of price increase, shortage, and even droughts and geopolitical instability. What is perhaps unusual today is that we see are seeing several disruptions taking place at the same time, hence why we refer to this as macro-environmental turbulence. In some cases, we cannot really see our way back to 'normal' in the near future. For instance, there is no indication that the Ukraine war will end any time soon, tensions in Asia may make eastward-facing supply chains uncertain for a long time and, of course, climate change is here to stay, with its associated droughts and other kinds of extreme weather.

**Droughts**, as an effect of climate change, are a particularly interesting phenomenon which might trigger big changes in the grocery industry. Consumers will need to learn new consumption habits and retailers may need to help educate them in how to choose new, climate appropriate products. We may even see this disruptive phenomenon driving the evolution of a new industry, in which fruits and vegetables are grown in green houses much closer to the end consumer. Droughts in particular, and climate change more widely, can hence be seen as truly disruptive phenomena.

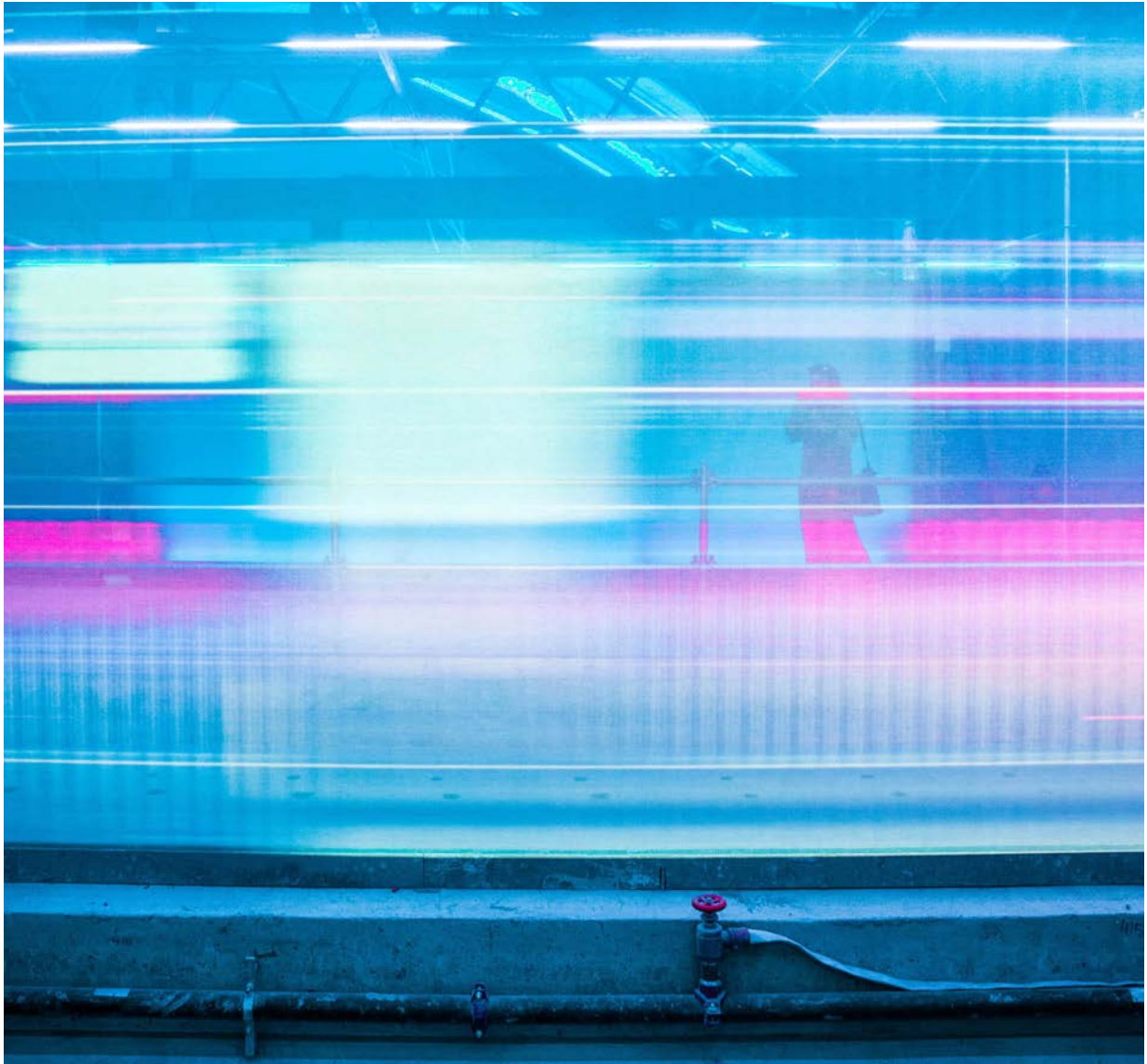
It is quite easy to see that the demand for **semi-conductors** is going to rise in the future. We have already seen how artificial intelligence, machine learning, and large language models have begun to disrupt many industries on a major scale. Semiconductors are a key part of this digital revolution and demand for them is, therefore, unlikely to reduce any time soon.

How to **communicate delays** is an interesting strategic consequence of disruptions in supply systems. From time to time and for different sectors, consumers have become used to delays (for example, ordering cars and other products and services relating

to major household investments) but nothing like we have seen during and after the Covid-19. This poses an interesting marketing challenge. Retailers, of course, want to manage customer expectations. However, communicating too much uncertainty about supply, might lead customers to turn to a different supplier. On the other hand, they might also do that out of frustration if a retailer does not deliver at the right time. Alm et al.'s findings, that consumers are more positive when they understand that the cause of the disruption does not lie with the supplier, are hence very valuable and can contribute to more effective communication with customers.

We have certainly seen **inflation** before, but we now have several generations of customers that are not used to living in its shadow. They have little to no practical experience of how it affects a household budget. As outlined by Carvell et al. in their chapter, one strategy for retailers to follow in times of inflation is to shift the focus away from price and towards other areas where the supplier can improve the offer. In some sectors—particularly those in which retailers have worked for many decades to teach the customer that (low) price should be their main motivation—this will prove difficult. For example, grocery is a sector in which quality differences between products (and suppliers) have rarely been the focus of communication. Instead, retailers have pushed the idea that all grocery products are basically the same, and price is the only differentiator. This is evident in the current debate about high grocery prices. The debate is centred around price and price increases alone rather than the other factors that make up the retail offering, such as with what quality etcetera. When household budgets are strained, as they are now, it is, of course, natural that price is in focus with quality taking a backseat. But other factors are still important. As Carvell et al. point out, if retailers can reduce friction, by using other factors than price to make an offer interesting, the 'cost' of that offer is reduced and, in some ways, the 'price' is also reduced.

**Scenario analysis** is an underused tool for trying to understand the future with the help of driving



factors. Even if it is difficult to predict the timing of radical changes, it is obvious from Kohler et al.'s analysis that, in a matter of years gasoline stations may be obsolete with no offer interesting enough for us to make a detour on our journey. If we accept that the world is moving towards greater use of electric cars, and that their use will continue to grow in the places where we live, work and play – cities, at home, in garages where we park etcetera – the necessity of visiting a gas station, even to charge a battery, must necessarily fall. Why make that detour unless your charge is low? Perhaps the only customers will be tourists passing through on longer journeys or people working in the transportation business, where charging is part of also taking a break. The point here is that technology disrupts and the ways in which infrastructure for new technology is laid out can really change an industry.

#### **MANAGERIAL IMPLICATIONS**

Major changes in society have major implications for retailers' way of doing business. And this is particularly true now, when many major changes are happening at the same time and creating macro-environmental turbulence. So, what exactly should retailers do? While you can find specific managerial implications in each chapter of this report, here we propose some overarching suggestions for retail management in the "business as unusual" era.

Our first suggestion is to constantly analyse your business environment and make appropriate changes. This might sound easy and obvious. But, often, it is not the big strategic steps that are decisive, but the ongoing small changes in relation to the business environment. This is not only a task for management. It is extremely important to involve all the employees who work in the stores. This is often

where you first pick up signals from the consumer/shopper. Signals that could be of great importance for future strategy. It is, therefore, important to actively develop good communication channels between management and store employees and to quickly translate the signals into practical action. Taking down the barriers between stores and head-quarter is key to success here.

Secondly, we think it is important to build a structure with which to collect actionable insights about the outside world. Retailers have often relied on their suppliers' capabilities to provide insights (mostly FMCG). But as the data generated by retailers' IT systems become increasingly more advanced, we will have more data than we ever had before. Data is, of course, good to have. But which data should we use and how should we analyse it? How do we put the insights into practice and create data-driven changes? These are strategic questions. To make data meaningful requires good data analysis skills, retail-savvy people, and a lot of creativity. Analysis should be conducted in close cooperation with all internal departments. It should be a horizontal organizational process that crosses organizational silos.

The third, and probably the hardest suggestion to implement, regards timing. When to act on insights and when to wait. We often overestimate the speed of consumer behavioural change and underestimate the power of long-term, underlying trends. Major external changes such as digitization and sustainability often involve major internal changes with associated high costs. These changes do not always lead to increased efficiency or an increased willingness to pay more for the services. Just look at e-commerce in the grocery sector, which required billions of investments by retailers, and corresponded to less than five percent of total sales. To be sure that data-driven insights will be matched by real consumer demand requires a state-of-the-art system for data collection. In addition, this requires that you can quickly translate the insights into action. Only when these two criteria are met can you rely on getting the timing of implementation right.

Collaborations such as this between retail academics and retail practitioners are extremely necessary if we are to continue to learn from each other. We,

therefore, hope that this will not be the last publication to look into the future and to predict what will happen to retail as our consumption patterns change. Given that multiple and overlapping disruptions are contributing to a macro-environmental turbulence, which in turn, makes the future less predictable, we suspect that it will not. Bob Dylan's phrase "The times are changing" is perhaps somewhat overused but it seems very appropriate now. We think it will be for several years to come. There is a need for more knowledge on how companies and consumers deal with these types of changes, and the consequences those strategies will have for different retail sectors. There really is no more business as usual.

*Carys Egan-Wyer, Martin Moström, Ulf Johansson*

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The chapters of this report were authored by students in the master's programme in International Marketing and Brand Management at Lund University School of Economics and Management (Class of 2023). These analyses were part of the final assessment for a course in Multichannel Marketing, Retail and Globalization.



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