

BAND 2

Wirtschafts- und sozialwissenschaftliche Praxisstudien

**THE PANDEMIC'S IMPACT ON FOOD BUSINESS EDUCATION
AND FOOD VALUE CHAINS: GLOBAL REFLECTIONS**

Herausgegeben von:
**Christian Herzig, Gervasius Harwin Wangrimen,
Viola-Maria Cußmann, Pious Tetteh Anoi**

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Ernährungswirtschaft

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Christian Herzig, Gervasius Harwin Wangrimen,
Viola-Maria Cußmann, Pious Tetteh Anoi (Eds.)

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education and food value chains:
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In memory of Johannes Kahl

Foreword

Christian Herzig, Marc Birringer, Ute Gilles, Helga Keil

Forty years ago, the University of Kassel and the University of Applied Sciences Fulda signed an agreement that would strengthen the two universities' cooperation in teaching, research and development. In 2005, this was followed by a cooperation agreement between the Faculty of Organic Agricultural Sciences (University of Kassel) and the Department of Nutritional, Food and Consumer Sciences (Fulda University of Applied Sciences). Since then, the joint Master of Science programme in 'International Food Business and Consumer Studies' (IFBC)—initiated and developed by Prof. Dr. Dr. h.c. mult. Angelika Ploeger, Prof. Dr. Ulrich Hamm and Hans Hemann (on the Witzenhausen side, all three now retired) and Prof. Dr. Friedrich-Karl Lücke (retired) and Helga Keil (on the Fulda side)—has been at the centre of our institutional cooperation.

The IFBC programme is offered as a joint degree programme. It pursues an interdisciplinary approach that integrates agricultural, food economics and consumer science perspectives in an international context across the two locations. The programme qualifies students to step into leadership positions in internationally operating companies, organisations and institutions in the food industry, specifically in an intercultural context. To prepare students for this professional field, knowledge from the natural, economic and social science disciplines is brought together, and competencies are promoted that enable students to better understand, reflect and address the key questions arising from global food value chains. In the programme, special attention is paid to cultural differences and their effects on consumers and organisational behaviour. Furthermore, the degree programme also serves to prepare students for academic career paths, that is, further research in the field of international food business and consumer studies.

The first cohort of twelve students started in the winter semester of 2006/07. Since then, the students of the programme—predominantly from international origins—have benefited from mutually recognised teaching modules and a diverse range of teaching content and methods. The students are enrolled at both universities and can use all the institutional facilities, which improves their learning. Because of the distance between the locations and the different organisational cultures, the beginning of the programme was challenging. However, solutions were found for all these challenges, for example, to take into account different teaching methods and module description templates, to summarise learning efforts in different curricular norm value calculations and to master train connections, data transfer or enrolment processes for students travelling from abroad. The universities' administrative environment also had

to make adjustments for the non-German-speaking students and set up support structures. It was helpful that the programme directors and lecturers went far beyond what was required, sometimes finding unconventional solutions. An example of the close collaboration is the 'cloverleaf meeting' that still takes place today, where the four programme directors and coordinators of both locations meet regularly. We see the success of the programme as being reflected in the steadily increasing student numbers and high graduation rates. We are pleased that today, up to 50 students start the programme each year, often coming from areas such as agricultural and food sciences, food technology, microbiology, nutrition or food engineering. By the end of 2021, around 300 graduates from 52 countries around the world had completed the programme, more than two thirds of them from outside of Europe.

The degree programme is now well established at both institutions. In addition to the interdisciplinary nature of the courses, intercultural interaction is a highly valued feature of the degree programme, which is a result of the diversity of nations represented. Topics are introduced, discussed and worked on from different perspectives and horizons of experience. The competences and experiences gained during the interdisciplinary study grow in the students' later professional environment. The programme also offers graduates the opportunity to build a worldwide alumni network that they benefit from while pursuing their future career paths.

Through an intensive support, counselling and mentoring system, we provide the students with sound training and a solid framework to successfully complete their degree programme in a country that is initially foreign to them. Through joint activities and field trips at the beginning of their studies and the offer of an annual field trip abroad, students get to know their environment and fellow students very well. The high proportion of compulsory modules and a compulsory two-semester project seminar also enable students to network and organise themselves within their respective cohorts.

It was such a project seminar, which spanned the summer semester 2021 and winter semester 2021–22, that formed the basis for this book. The aim of the project seminar was to organise the 'IFBC Essay Competition'. It was carried out by Prof. Dr. Christian Herzig and three students of the IFBC: Gervasius Harwin Wangrimen, Viola-Maria Cußmann and Pious Tetteh Anoi. To mark the fifteenth anniversary of the IFBC programme in 2021, which was severely affected by the pandemic, the writing competition provided a space to reflect the effects of COVID-19 on global food value chains and on studying, learning and living in Germany during the pandemic. It was a pleasure to see that many IFBC students and graduates participated in the competition. At an event organised by the project group in December 2021, the 15 winning essays writers and runners-up of the writing competition were announced, and current

and former students and lecturers were invited to celebrate the anniversary year together. The event, held online because of the pandemic, not only brought IFBC alumni and students together, but it also brought in the writing competition jury, which consisted of all past and present programme directors, who were happy to meet once more.

We hope you enjoy reading the essays.

Prof. Dr. Christian Herzig, Programme Director, University of Kassel

Prof. Dr. Marc Birringer, Programme Director, Fulda University of Applied Sciences

Ute Gilles, Programme Coordinator, University of Kassel

Helga Keil, Programme Coordinator, Fulda University of Applied Sciences

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1

The COVID-19 Pandemic and Its Influence on International Food Business Students and Professionals

An introduction to the essay competition

Viola-Maria Cußmann, Anoi Pious, Gervasius Harwin Wangrimen, Christian Herzig

On January 30, 2020, the World Health Organisation declared the outbreak of the novel coronavirus to be a public health emergency of international concern, giving COVID-19 the highest alert level. Since then, the COVID-19 pandemic has drastically changed the lives of those around the world. The pandemic has been one of the greatest and most challenging crises the world has faced in recent decades. Everyone, regardless of origin, gender, age and race, has been affected, and public life has been completely different from what we were used to. Undoubtedly, the COVID-19 pandemic has also had unexpected impacts on food business education and practice.

Starting with the former, education was suddenly confronted with an extraordinary new reality. The rapid adaption to the new circumstances called for technological, personnel, content and resource adjustments. Instead of an auditorium and laboratory, students started to attend classes online through WebEx and Zoom. Digital channels became more and more important, and studying and learning transformed in a fundamental way, resulting in a notable change in international study programme settings. Major challenges that have never been present before have now come to influence students' daily lives and means of learning. Although some people were still allowed to go to work (under particular circumstances) and some pupils allowed to attend school—at least part time—most students were forced to attend university from home for more than one year.

In addition to education, the COVID-19 pandemic has also affected global food production and consumption in an unprecedented way. The pandemic did not affect all food sectors and products equally, and similarly, supply chains were not affected equally at all stages and phases and in all regions of the world. However, the economic, logistical and social effects of the pandemic have revealed the fragility of food value chains to external shocks, such as to COVID-19, leading to an intensive debate on the design and functioning of value chains in the agri-food sector. The focus has been on appropriate responses to pandemic shocks, such as the COVID-19 pandemic, the development of prevention and management strategies to build resilient supply chains and methods, along with creating effective policy measures to permanently preserve food security and food sovereignty. Although the long-term impact of

the COVID-19 pandemic on the design of food value chains might still be uncertain, it is clear that the above concerns can only be addressed by considering the complex web of actors that connect the food journey from farm to fork, including the sudden change in consumption and demand patterns.

The 15th anniversary of the International Food Business and Consumer Studies (IFBC) programme in 2021 coincided with the COVID-19 pandemic. To mark this unusual anniversary, an essay competition seemed to be a useful tool for reflection. Designed as one of the projects of the IFBC programme, the student-run essay competition served as a framework for both IFBC students to share their feelings, viewpoints and experiences with learning and studying during the pandemic and for IFBC graduates to reflect on the consequences of the pandemic on global and regional food value chains and production networks. The task was very well received and inspired many participants. Even though every essay was unique and written with great effort, only a limited selection could be published in this book. The following chapter introduces eight students' and seven graduates' essays, providing their deep insights and personal thoughts of the COVID-19 pandemic and how it has affected them. It is often a journey of emotions that gives the rare chance to get close to the beliefs of students and professionals in the food business. Their challenging time and how COVID-19 influenced their lives and jobs may just be able to move you, as a reader, to tears. Every individual essay gives a different perspective, showing the individual personalities and ways of dealing with challenges and the diversity of the food sector in various parts of the world.

Part I introduces eight essays written by current IFBC students that were short-listed by the jury for the essay competition award. The jury members and project team members were impressed by the quality of the submitted essays, the depth of argumentation and reflection and the advanced linguistic style. Reading through the essays, including those not published here, brings to mind that as an international student, every beginning is difficult. The country is foreign, one does not know anyone else, and a vast distance separates students from their families. Because of the pandemic, the situation deteriorated. The lockdown forced citizens to stay home. Social distancing and strict regulations made it hard to meet new people. The expectations of their study abroad changed completely. What was meant to be one of the greatest experiences of their lives suddenly became a nightmare. The essay writers sharing their story with us are lamenting about loneliness, isolation and uncertainty. The missing interactions with other students and absence of cultural events drained the colour from their experience. In addition to their personal struggles, concerns about family members overseas were a severe burden to bear. Consequently, every day became a new challenge, full of fear and doubts. All at once, health, something that taken for granted for most, became the most important part of their lives.

All essay writers show that the virus put the world on hold. There was no other choice than to accept the new reality. Even though life was turned upside down for most students, they learned how to adapt to their changed circumstances. Particularly, their study life was drastically impacted. Whereas years ago, students wanted to have the possibility to study from their beds, their biggest wish became returning to an in-person lecture at the campus. Even though the pandemic might have revolutionised online education, digital learning has some downsides, as well. Although it opens opportunities for long-distance learning, the monotony of online learning makes it hard to follow lectures for the entire day. Nevertheless, according to the students, a day of online lectures was short compared with the typical 'Fulda classes'. Under normal conditions, IFBC students have lectures in Fulda twice a week. Usually, these days are very exhausting because of the long travel time from Kassel to Fulda. Thanks to WebEx and Zoom, this time could be used differently, and the students were less travel weary.

Part II presents seven essays written by former IFBC students, which means graduates who have started to work as food business professionals or in other positions, such as researchers in their home countries, Germany or other countries. The short-listed essays are characterised by the breadth and relevance of the topics and by the students' regional and sectoral perspectives. The way in which the authors interweave expert knowledge and the art of formulation and the way in which they offer differentiated insights into the relationship between the pandemic and food production and consumption were noted by the jury members. Moreover, readers can sometimes feel very close to the topic when personal perspectives and the writer's own experiences are included.

The panic buying phenomena, a decline in out-of-home consumption and changing consumer demands and eating habits are reported to have led to the undersupply and oversupply of food. In the next phase, when the pandemic has subsided, it is argued that the food value chain must adapt to the new situation and conditions. Dependencies on suppliers have started to rise again. Suppliers needed to try their hardest to meet the pending quota because of border restrictions (especially international trade) during the worst time of the pandemic. At the same time, paranoid tendencies towards hygiene matters began to be overemphasised. Hygiene and safety systems have been questioned and called into doubt, resulting in higher standards of hygiene and safety measures generally. It is argued that the food value chain needs to become more and more resilient to prepare for the 'new normal' while policy interventions on food production, retention, distribution and consumption are also seen to be important topics to be discussed regarding resilient chains.

Finally, the pandemic also drove technological development. Digital reformation began to rise, and hygienic awareness pushed the establishment of contact-less and meet-less concepts. Consumers began to favour staying at home, leading to the rapid growth of online channels and means. Delivery services and other long-distance services are advancing. As a result, some graduates state that products and services need to adapt to the new normal, and doing so will create a new demand and opportunities in the market.

To conclude, people on earth experienced the same pandemic, yet each person has a unique perspective. The essays demonstrate that every food professional also has their own perspective on how the food value chains should adapt to the situation, as well as that every student has their own perspective on what it feels like to be a student during this pandemic. Every author has their own story to tell, but they all agree on the same thing: although the pandemic was very challenging for the authors, it made them stronger. Many things could be learned, even if, for most people, the downsides outweighed the positives. The following 15 essays present a unique and emotional collection of very personal insights, viewpoints and thoughts on the pandemic and how it has influenced the food business, consumption and education. For each part (students and graduates), the three best essays are presented first, followed by the remaining short-listed essays in alphabetical order. They were awarded at the anniversary event "15 years of IFBC" in December 2021.

Reflections by Food Students

2

Plans Do not Include Global Pandemic

Romario Andrés Torres Ceballos

Moving to a new different country as an international student represents an opportunity to take new academic offers. Still, meeting many people from all over the world in a short amount of time comes along with the package. Starting from the international week at the beginning of the program, to the first day of class and following international events, unknowingly, you start shaping your future substitute family for the next study years ahead. As time passes by, the feeling of being a bit more selective with whom time is spend with, increases. Important holidays become more nostalgic since time passes by and it is not possible to visit family across the ocean either because of time or money. Then suddenly you realize your blood brother is now embodied by the young man you met your first day at the citizen's office and your little sister by the girl who invited you to try her typical food at the first international evening. All of the supportive social environment it had been created, seems to be changing and now the setting revolves around a global pandemic creating nothing but fear and health concerns of loved ones on a faraway continent. Just like this, everything seems to change: study rhythm, social life, the days at the library, the face-to-face communication with classmates, everything.

In pre-COVID-19 times, the lectures are a specially enriching environment since different perspectives and opinions are voiced in different accents and points of view shaped by every individual's culture. This allows us to understand that despite all the evident differences, there is a common desire that glues different cultures in one place. However, all of a sudden, the campus is not the meeting point anymore. Now, digital gear has become even more important than before, and backpacks are no longer used. The daily learning experience is now limited by the four walls of a foreigner room with a totally different interaction among students. At the end of the day, fresh air and sunlight are very much missed. More own-study hours are required due to material that was only shared through emails. This could all sound a bit discouraging; however, looking at the bright side of the unexpected events that terrify our comfort zones can always help deal with unpleasant circumstances. Before the corona outbreak arrived in Germany, the daily routine of an IFBC student living in Fulda consisted of six hours in total of travelling at least twice a week to attend lectures in Witzenhausen; this was sometimes more exhausting some days than others. This frequently affected my own interests when selecting the new modules of the semester. Nonetheless, the experience of interacting every day through the screen made it less important to care about distances and more about effective online communication. This outcome saved me around 90 hours of travelling

for one module only, resulting in a more appreciative perspective of my personal space at home. So the saved time was invested into setting new lights, more plants and my own colourful art that started filling the empty walls of the bedroom that is now my classroom. This made it easier to feel more at home and succeed at the end of the semester.

As time passes by, it is incredible to think that the last good time that was shared with friends in one same room happened when they celebrated my birthday back in February. After that night, some faces I never saw again because some finished their studies and left. I never got the chance to say goodbye in a proper way, with a proper hug. Keeping positive thoughts pops up in my mind once again, just to realise that new connections and beautiful friendships have been made during the pandemic. Spending so much time at home, flat mates cross the line of being just that; they become your family because now the situation forced us to be more empathic with each other, to care more about our common health and to understand that the more time we spend together and hold long conversations, the easier it is to endure the feeling of loneliness and despair. Movie nights, karaoke nights, cooking sessions and collective exercising routines brought us even closer to the point where I consider them now my acquired family. If I need something, they provide me with more than I asked for, and when someone needs something, we will try to make sure everything is under control.

In spite of my newly acquired family, it got hard not to think about the family you have on the other side of the Atlantic. In March 2020, I impatiently waited for my parents' visit to Germany. Everything was ready for their arrival. Plans, however, were crumpled, and at that moment, I knew I would have to miss them for at least one more year. Global health risks and all sorts of these experiences are supposed to be better tolerated if you are surrounded by family and lifetime friends. However, uncertainty is certain. And wondering about your family members' health status is a constant thought. South America has a lot of flaws when it comes to their health system, and having a sister working for it increased my fear. The lack of job opportunities, the bad management by mediocre governments and the increasing numbers of infected people kept me up at night many times. Whenever there was a family call, due to my foodie academic experience, I provided as much information for them when it was about adopting a healthier food lifestyle to be prepared just in case the virus decided to show up at their households. It is comforting, though, knowing that they have each other and that their concern about their son, brother, cousin and nephew might be even bigger, believing there is no one to take care of me. Therefore, I felt like an additional emotional burden for them.

And just like that, everything absolutely changed. Humans are usually afraid of changes, but with change comes growth. My academic life, my social and

personal support, just like my huge need for family heat, changed. From every aspect, however, I learned something new: managing my time at my own rhythm at home and understanding how important it is to have a proper learning environment; practice makes perfect, and working from home with new technologies made me understand that. I no longer look for excuses but for ways to solve my own problems. I can now perform a decent haircut and bake at least banana bread; I created 15 new origami figures and have taught some of them to some friends. When it comes to my blood family, you realise nothing is as important as the health of your loved ones, and hoping to see them again soon is the motivation to keep moving forward not only as a professional but to show them the amazing growth you had as a human being.

I came to Germany chasing the dream to better myself as a professional and had everything planned. My plans, however, did not include a world pandemic that would shake my financial, personal and academic status. However, in the future, when the coronavirus echoes just as a memory, I will know that my empathy for others and my constant positivism were challenged to the maximum, and I can proudly say they were not defeated.

Author

I'm Romario Torres, and I have been living in Germany for three years now. I was born and raised in Colombia, where I was able to grow professionally until I decided to pursue my degree in Agroindustrial Engineering. The food industry was always a core topic within my academic development, and gradually, my interest in marketing research and food development began to grow. My desire to continue acquiring knowledge in these areas led me to the International Food Business and Consumer Studies Master programme. Currently, I find myself on the verge of completing my master's studies and continue to dream about being able to work as a bridge for international food companies and different markets around the globe. Nature, dancing, classic movies, sports and drawing always keep me entertained. There is a saying that applies to my passions: the goal is not to be better than others but to be better than your previous self.

3

The Moments in Between

Kristeena Daniella Abbey

New Year's Eve, 2020.

Dear Diary,

It has been a while. There has been almost no motivation to pen down my thoughts between school, the mini job and life. Probably because I am afraid to get lost in them. It is like a raging storm, so loud in my head. A high tide that threatens to pull me under any time I try treading through. But for today, let us wade through. Buckle up! This will probably be a long write for now and a long read in the near future....

Very audible sigh.

In a few minutes, it will officially be 2021. There will be no fireworks this year; there is a ban on them. There was no Christmas party this year. In fact, no Halloween party, no Thanksgiving dinner with friends, no Christmas market and, now, no fireworks. At least there were Christmas decorations and a Christmas tree at the town centre. And Phil and I managed to pull off a virtual collaboration dubbed 'A Covid Christmas' with the piano piece he put together and the painting I worked on. It probably was the only highlight of the Christmas season, considering the pandemic and how crazy life has been this year.

Come to think of it, it probably was not the only highlight of the Christmas season. It snowed in Witzenhausen the day after Christmas! It was a thin sheet of white that made everything look so bright. And it was a welcome change for most international students like myself, who had yet to witness the magic of snowflakes and a winter wonderland in the little cherry town of Witzenhausen. I remember scrolling through Instagram stories, seeing most people putting up videos of the snow and sharing giggles and laughter all over. For a while, I felt the Christmas spirit. Just within those few moments.

Anyway, the student hall has been silent for most of this year, even though there are people around. I see a few of my course mates occasionally, along with other students. Everyone tries to be in high spirits when you see them. But I feel it is just for those few moments. Having to wear a mask almost all the time is a constant reminder of just how many things have changed. But regardless of it all, there have been kind souls all around. Most international

students seem to be handling their fair share of woes. Still, even in such times, there has been so much help offered to most students, ranging from financial aid to providing some basic necessities. I have significantly benefitted from the Tafel group here in Witzenhausen. It crosses at least one need off my list—food. They were not the only ones who helped. The church also provided some things for international students, from fruits to vegetables to canned products. It was definitely one less thing to worry about. It made it easy to narrow down all my worries to the most pressing ones: school, specifically meeting deadlines and bearing the workload.

At the start of learning online, it was good knowing that I could just stay indoors and learn without actually going to school. For an introvert like me, that was perfect – of course, without including the reason that was being made possible in the first place. For a while, it was good knowing I could just attend class online and get so many other things done without the supposed disadvantage of travel time. But now, thinking back to life before the pandemic, I realise a few things. For example, even though I felt the journey to Fulda early Monday morning was exhausting, everyone probably misses it as much as I do. I miss the incessant chattering of my course mates as we stood at the train station before the break of dawn. Joining in with the mass of people who were also getting along with the lives they all lived. At the moment, I cannot recall the last time I went to the train station. There has been nowhere to go, despite the slight easing of the corona restrictions.

Even though it was unnerving, I actually missed having class presentations in front of a classroom full of students. For some weird reason, I get nostalgic thinking of the marketing research module presentation during the first semester. How some people seemed exceptionally ready and knowledgeable while presenting. And how the rest of the class peered closely and curiously at every slide, trying to spot any undoing that only our professor seemed to find. Interesting times. Unfortunately, the online platforms are just not the same. Most people's faces are usually blank. Counting the seconds or lost in anxious thoughts. Probably centred on how the pandemic might be ravishing their part of the planet or perhaps the state of their finances or mental health. It could be any or all.

This winter semester has definitely been one with many winter blues, from struggling with the pandemic, schooling online and tragic losses among the student body. And even now, I am swamped with presentations, with some research paper deadlines looming. I hope you can hear my frustrated sigh. So many group meetings to attend and lecture slides to get through. Sometimes, the lecture slides feel like they have been dumped on you because the pressure of self-study is palpable. That can be difficult when you are depressed because you find yourself wanting to do nothing at all but wallow in self-pity on most

days. Especially when you think of how exactly to fit your plans and timelines into this new norm the pandemic has created.

But getting to study from home is not all that bad because our lecturers have been trying to make it more fun and interactive. I have not played as many Kahoot games in my life pre-COVID-19 as I have since the pandemic changed everything we knew. The same can be said for the level of innovation during group projects. I really had no idea what could be achieved with most of these software and apps. It has been an intriguing journey trying to make things work over such a distance with course mates. Being international students from different backgrounds means it takes twice as much effort, if not more, to actually collaborate on a virtual space to get projects done, submit reports and carry out presentations. And it has been an intriguing learning process throughout. Also, I must admit that the few oral exams I had online were not filled with as much tension as the physical ones. That is definitely a good aspect of this. Learning online definitely has its own perks. It helps you to self-pace most of your learning process, excluding the times you have deadlines for submissions. I found that it has required a level of discipline and patience – a conscious effort to actually be accountable for my learning journey despite the many uncertainties. Especially the uncertainties that had to do with the pandemic.

But the virtual space has supported more than just learning in these times. It has fostered a sense of unity and global empathy. Starting from viral TikTok challenges that had most of the world looking past the grim situation while trying to make life and the economy progress against all odds. As I write this, some vaccines are already being rolled out. That is a hopeful enough note to begin the new year. 2020 has been one roller coaster of a year, but this is for the lives we have lived. This is for the lives we still live and all the moments in between.

Until next time, *'be safe, be smart, be kind'*. – *Dr Tedros Ghebreyesus (WHO Director-General)*.

Happy New Year, Kella Yebba

Author

My name is Kristeena Daniella Abbey, a fifth-semester IFBC student and a Ghanaian. I am passionate about art in all forms, be it poetry, music or painting, mainly because of the opportunity to think outside the box. I believe thinking outside the box is a key aspect of innovation that will play a vital role in impacting the food industry within the capacity I wish to occupy. My career goal is to play an active role in the field of food product development and innovation, one that will challenge my creative abilities and allow me to harness and hone my skills in developing innovative products to meet consumer needs and thrive in a sustainable and ever-dynamic marketing world.

4

The Good and the Bad in My Online Learning Experience

Jennifer Sunardi

I am writing this essay as a master's student at the University of Kassel and Hochschule Fulda, where I study in international food business and consumer studies. As I am writing this, the world has been battling the COVID-19 pandemic for almost two years. In an attempt to prevent the virus from spreading uncontrollably, our government has put lockdown measures in place. These lockdown measures have forced us to empty our streets, only to fill our days through the screen. Everything goes online. As a student, the ones that stand out the most are the lectures, company visits, work conferences and class meetings that have went online. I divide my arguments into multiple categories, which are efficiency, economy, technological dependency and social and professional life. Each category represents the effects the pandemic has had on my education, either positively or negatively. Overall, I have mixed feelings about my online learning experience. I tried to weigh the pros and cons of online learning, and in the end, I could not decide whether the pros outweigh the cons or vice versa because each argument pays equal attention and respect to both sides.

#1 Efficiency

Online education was often associated with unproductivity and ineffectiveness in the past. It took a pandemic to break this stigma. In recent years, positive opinions have been raised around the topic of online education efficiency in terms of both retention outcome and time effectiveness. We could divide this topic into two subtopics: quality and time efficiency. Regarding quality, the Research Institute of America shows that online learning is more effective than on-site learning, providing students with 25–60% more material retention compared with only 8–10% when learning on site (Guitierrez, 2016). As for time, students suggested that online learning provides more efficacy as they can study at their own pace (Chernev, 2021). I can agree with both findings, to some extent.

When one mentions online learning, I assume it can either be real-time video lectures or prerecorded lectures. I have had the chance to participate in both. Both real-time video lectures and prerecorded lectures are very convenient because students can participate from the comfort of their homes or from just about anywhere (that has an internet connection). However, just like on-site lectures, real-time video lectures are lacking playbacks since due to legal rights, we are not allowed to record the lectures and rerun them as we please. Think

of it as a movie. When I watch a movie in a cinema for the first time, it would not be the same as when I rewatch the movie for a second time. Sometimes, it is surprising how much detail I can miss the first time. Although no direct Q&A sessions can be done, fortunately there are forums that allow us to communicate with the lecturers and fellow students. Anyhow, online lectures require no hours-long train rides and getting ready at 6 a.m. I finally have the time to do everything that I have been planning to, but never did, such as to read more books, take more classes to expand my skills and learn new languages. Moreover, learning at my own pace has given me the chance to learn about time management, which is an invaluable experience that will help me in the future when I start my career. All in all, when it comes to efficiency, I believe online lectures are superior, but only if the online lectures are replayable.

#2 Economy

We all know that it is no secret that the pandemic has caused our global economy to suffer, but not everything about the pandemic has been bad. It is true that businesses have taken a turn for the worst and that people are devastatingly losing their jobs and income. However, looking from the online learning perspective, the pandemic actually saves costs. Shifting their approach to online learning, IBM has reportedly saved around \$200 million (Guitierrez, 2016). Without the need to provide equipment and other costs related to travel, rent and so forth, many people believe online education is cost-effective. Take Professor Urs Niggli, our Honorary Professor at the University of Kassel, for example. Professor Niggli lives in Switzerland and had to travel back and forth to Witzenhausen before the pandemic. Imagine how much money he saves (not to mention time) by eliminating the need to travel for teaching. The same goes for me. I realise that I have cut unnecessary expenses significantly just by not taking the train to go to the university. It is not just about the ticket, but also those visits to the bakery and coffee shop that I walk past on the way to the university. All things considered, distance learning is indeed cost-effective.

#3 Technological dependency

Working with technology has its advantages and disadvantages. The pandemic has made us appreciate our technology more than ever and to become more accepting of online education. It is an advantage to be working more with technology as it builds our skills in using digital platforms. However, as we normalise the use of technology in our daily lives, it is inevitable that we might become too dependent on the internet and even sometimes judge our productivity based on how good or bad our connection is. This is exactly what happened to me. Often, when I experience lag, I lose motivation and focus

easily due to the feeling of annoyance. Hence, when I speak highly of online learning, a good connection is the one condition that should be fulfilled.

#4 Social life

Studies have found that in higher education students, social distancing measures set off negative emotions such as frustration, boredom, anxiety, confusion, anger and so forth (Cao et al., 2020; Brooks et al., 2020; Ma and Miller, 2020; Elmer et al., 2020; Zimet et al., 1988 as cited in Aristovnik et al., 2020). With all the restrictions, events and social clubs are being cancelled, borders and shops are being closed, and we are forced to self-isolate. Therefore, I hold the view that it is only natural to feel such emotions, especially among international students who live thousands of kilometres away from home. It is not only risky but also costly to fly back home with all the quarantine regulations and entry restrictions. Without being home for so long and no new relationships to build, loneliness is bound to happen. Of all the negative impacts the pandemic has had on me, I feel this part is the most challenging.

#5 Professional life

The pandemic has decreased students' internship, as well as networking, opportunities (Juršanaitė and Misiukaitė, 2020). Many companies are even struggling to keep their own employees, let alone open new job vacancies. For some who are lucky enough to not only survive but thrive amidst the pandemic, creating new vacancies is not the problem. The problem would be in how a company provides good training virtually and how the newly hired adapt to working independently from home, with less supervision compared with working in the office. I am among the unlucky ones who never received any offers, despite sending so many internship applications. Regardless, I believe there is a silver lining in everything. If there is the best time to receive rejections, I believe now, during the pandemic, is the time. Rejection means feedback, and feedback means there is room to grow. If now is not the best time to focus on self-improvements, I do not know when that time is!

The pandemic has indeed changed everything I know about studying abroad, as I have had to adapt to all these social distancing measures and make an educational shift. While it has had a devastating impact on the global economy, our psychological health and our social and professional lives, there are bright spots that some may have overlooked. Had the pandemic never happened, we may have never realised how online learning—or telecommunicating in general—could also be very efficient in terms of quality and time, not to mention how the pandemic has cut our travel expenses significantly as we lock our doors and see the world through our windows (and gadgets). I realise that in terms of the best way to learn, there is no one-size-fits-all approach, which is why we

have had diverse options in the education system from the very beginning. Now that we have experienced both on-site and online education, we can easily choose which system suits us best. Online education is not new, but the pandemic has revolutionised the education industry, which means that in the future, we will be seeing more university programmes on the internet that did not exist before. Yes, I believe that online education is here to stay and is not just a mere fad. To end this, I would like to point out how efficient and comfortable my online learning experience has been. Although I would be lying if I say that I am happy with the price that I have to pay. So, indeed, mixed feelings! In any case, all credit goes to everyone who has made the IFBC programme possible despite the pandemic. I wholeheartedly thank you all.

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Author

My name is Jennifer Sunardi, an Indonesian in my final year pursuing the IFBC programme. I am an aspiring marketer who has come passionate about the food industry after several years of working and studying in this space. My last corporate job working in an Indonesian multinational food enterprise inspired me to enrol in this programme. I participated in a focus group discussion and was astounded by how a food company puts consumers' opinions first and made marketing decisions based on that. In pursuit of reaching my international business goals, I am learning more in data analysis and will be pursuing an internship/thesis with a food company here in Germany. Furthermore, I'd like to also improve my linguistic skills, which are English (that I feel the strongest in), German and Chinese (where I feel like I have more room to grow). When I'm not studying, I enjoy reading dystopian novels.

5

Struggle During the COVID-19 Pandemic as a Student: Finding Opportunities

Blandina Josopandojo

Being born is not something we can choose, but death is inevitable, and luck takes a big role in our lives. Nevertheless, effort helps us become better people. Everything always has two sides, but many conditions only have an insignificant positive side and have a very big negative side. However, life must go on. Hence, we can say 'sad and move on'. I believe we should learn, adapt or improve and try our best in the future. COVID-19 might be one of the worst gifts ever received by most people in this world. But I have been learning so many things during this pandemic, which have helped me become a better person, and I believe that I am not the only one who has been experiencing this.

I am an international student who comes from Indonesia. I had the opportunity to experience an actual class in my first semester in the winter semester of 2019/2020. In my second and third semesters, I had to attend all classes virtually. Now, in my fourth semester, I am doing an internship, and I am only able to come to the office for up to 50% of my total working time. Other than that, I work from home. Next semester, I will do my master's thesis in the company where I am doing my internship now. Probably, I could come to the office every day to do my master's thesis, and I hope this will happen.

I believe humans are very adaptable creatures; the only question is whether they want to be or not. When it comes to the discussion about offline or online classes, there are always advantages and disadvantages given by both conditions. Many friends of mine prefer real classes. I also sometimes miss having a moment of studying in an actual classroom. However, having an opportunity to be forced to join a virtual class during this pandemic makes me realise that sharing knowledge is not limited by distance and space. Hence, except for practical things like laboratory activities, I do not see any problem with having online classes. We can directly talk to the lecturers, and we can see our classmates and lecturers through a webcam. The important thing is whether we want to become adaptable or not with the condition.

Nonetheless, I also had a hard time in my second and third semesters. For me, online classes, for example, Zoom or WebEx, are brilliant ideas and have the same concept as normal class but done virtually. However, it is bad when there is no class at all and only e-learning. Many lecturers only sent video or voice recordings, or even worse, they simply sent a presentation or PDF documents of the material without further explanation. I believe that class should not be one direction but two directions. I am sure that everyone can get the learning

material just anywhere on the internet. Nevertheless, classes provide lecturers with the chance to explain the material and offer an opportunity for students to ask and discuss the topic directly together with lecturers and other students. Hence, it was one of the hardest moments for me as a student during the pandemic.

Everyone has the right to learn, regardless of where they are. Instead of perceiving online classes as a misfortune, I saw it as an opportunity. Since the IFBC programme is a joint degree of Kassel University and Fulda University of Applied Science, I have classes provided by both Kassel-Witsenhausen and Fulda. I stayed in Witsenhausen, and it took me three hours to travel from there to Fulda. So six hours total travel per day if I had class in Fulda. However, online classes helped me save my time a lot. Moreover, I can have both classes from Kassel-Witzenhausen and Fulda on the same day. Therefore, online classes have also given me the opportunity to enrol in more classes and learn, regardless of my location. Furthermore, even though now I stay in Munich to do my internship, I still can join a class provided by the university.

In addition, this current pandemic has also forced people to think about how or develop methods to solve problems without having direct contact. Digitalisation improves the efficiency of work and time. For example, when I moved here to Munich from Witsenhausen, I did not have to go to the Rathaus (city hall) to register my address. I did not have to make and wait for an appointment. In other words, I simply registered online because of the contact restrictions. However, before the pandemic, I had to make an appointment and go there, which cost a lot of time. So I hope this pandemic can make many people or parties realise that many things can be done in a simpler and faster way with the advantages of digitalisation.

Furthermore, since I am a student, I do not earn much money. Regardless, there are always bills to pay. I have used the advantage from time efficiency of the online classes to find and do a part-time job. I could also start focusing on searching for an internship at the end of my second semester. Thus, I had more than six months to prepare and search for an internship. In contrast, having more time to find a part-time job or internship did not necessarily mean that I could get it easily during this pandemic. I was also having a pretty hard time while searching for it.

On the one hand, as I have already mentioned before, I come from Indonesia. But actually, I am a Chinese-Indonesian, and my physical features are more Chinese than native Indonesian. On the other hand, in the first and second waves of the pandemic, there was a quite heavy lockdown, and everyone was scared. Then, I was receiving so much racist treatment regarding this pandemic. It seemed like I was the reason this disaster happened. Somehow,

I see that people have a tendency to find someone to blame in a bad condition instead of finding a solution. Maybe it sounds idealist to hope all people want to unite and work together to make the world a better place. But I still believe that together makes us stronger.

I am a person who likes outdoor activities, enjoys nature, tries new things and always makes myself busy. Nonetheless, due to the current pandemic, staying at home for a long period gives me more time to think compared with doing physical activities. I had more time to overthink about my life and others. I have been through a lot of mental stages, from the worst ones to the best. I found that the most important thing is that you should not let yourself drown in your bad thoughts. Always ask why and find a core problem. Determine whether the problem even exists. Ergo, I see these phenomena as an opportunity for me to have more time to reflect on myself and improve my way of thinking.

I also realised that life is not a competition. So never compare yourself with others. Instead, set your own goal and be ambitious to achieve it. Some of my friends have never received racist treatment in their entire lives. Some of my friends' parents are simply millionaires who can afford everything for them. Some of my friends just simply look like they always have good luck. But it does not matter; I just focus on my goal and think about what I should do with what I have. Thankfully, I can achieve all my goals. I got a part-time job, I can do my internship now, and I can survive. So on top of everything, no matter how hard and unfair this life is, effort always helps us find a way.

In the future, I hope people continue to encourage online classes. I will not agree that we should eliminate the conventional or normal class. We are social creatures. We need to have an actual social life. Meeting people and friends in real life is important, not only virtually. Nonetheless, I see that at some point, online classes can promote sustainability. Having a full or partial online class reduces the amount of space needed to build a university building. We can use those areas to grow trees instead. Moreover, we can reduce the energy wasted for travelling to university. Last but not least, I came from a developing country. Many areas in Indonesia still have limited channels for a good education. Online classes might be one of the fastest solutions here so that everyone has the opportunity to improve themselves to become a better person.

Author

I am Blandina Josopandojo from Indonesia. My passions and motivations lie in many different fields. One of them is, of course, in the food area. This passion led me to pursue a bachelor's degree in Food Technology. I enrolled in the International Food Business and Consumer Studies programme in the winter semester 19/20 for my master's degree. Although I have got an opportunity to attend a real class only during my first semester, I enjoyed online class a lot, and I see so many opportunities from that situation. I hope to have a food business of my own that would one day be known overseas. Nevertheless, I must work first to earn money. One of my other passions lies in sports and art. I like to hear beautiful and meaningful lyrics from a song.

6

Life is Always Not Fair. But Never Lose Hope.

Raveendra Madushan Bentharage

I am Raveendra Madushan from Sri Lanka, a simple guy pursuing his life dreams. I have a B.Sc. in food science and technology, and currently, I am pursuing my master's degree in international food business and consumer studies at the University of Kassel, Germany. I would like to travel a lot and, in the meantime, take part in nature photography.

I had a dream since my university time in Sri Lanka to go abroad to pursue my further education. I chose Germany as my master's programme because it has a lot of educational and career opportunities. The day I got admission from the University of Kassel was one of the happiest days of my life. After I moved to Germany, I was astonished by most of the things that I saw because most of them were new to me like the architecture, technology, environment, culture and so forth. I felt it was a new world because my country is still in the Global South.

The university life in Kassel was so challenging. Because it was my first experience away from the family, I had to face everything alone, which increased my self-confidence. The best part of university life was interpersonal connections. I could make a lot of friends from every corner of the world within a short time. I consider it a precious gift. Back in my country, there was no multinational environment in the universities. Everything went as planned. I was able to finish my first semester. However, at the end of 2019, we started to hear about the spread of a contagious virus in China. Initially, we neglected this and didn't bother thinking about it. Chronically, the virus started to spread around the world, and the cases increased, even in Germany. Ultimately, the German government announced the lockdown.

The real sad story is going to start now. One of my roommates was affected by corona. After around two days, another roommate was also affected by corona. The most shocking thing was that I knew they were suffering as I heard how they were coughing so much, but I couldn't help or reach them because of its contagiousness. They were both severely affected by the virus and admitted to the hospital. Actually, I was also worrying and counting the days until I was getting symptoms because I was living with them. I felt like doomsday was coming. Miraculously, I didn't get any symptoms, and I didn't get the corona. But because of the things that happened and the things I had been experiencing with my roommates, my mental health was not in a good condition. Those days were the hardest days of my life. Luckily, my roommates survived. Because of

thinking of these incidents, my mind was not in a good condition. In order to restore my mental health, I invested some time in leisure activities. Like playing the guitar and the flute.

In the meantime, the university decided to put courses online. I was shocked because I was really enjoying the physical presence at the university. I hardly missed the lectures and delicious foods in the Mensa. The first thing I decided was that I was giving my priority to my education, whether the teaching method was switched from physical to online. Initially, it was strange, and with time, I got used to it. According to my perspective, there are both positive and negative aspects of online learning.

When the positive side is considered, we could save travelling time. I remember that whenever we were having lectures at Fulda University, we had to wake up around 4 a.m. and had to catch the train early in the morning. But with the online presence, within seconds, we can log in to the lecture anytime, from anywhere. There is no more waking up early in the morning and no more running to catch the train and buses. I could invest this time in other activities in my daily routine. The features of online platforms like breakout sessions, raise the hands, white board, screen sharing and chatting options should be pointed out. Those options are fascinating. Also, I was able to find an answer to my question quicker, faster and smarter. I could remember that in one subject, we had a field visit, and it was cancelled due to a pandemic. But we had a virtual tour session. It was like a real field visit. This online platform helped me extend my overall IT knowledge.

However, the negative side should be considered. I didn't feel any of the lectures as live because my mind knows they are virtual. Because of that, my attention level was not fully given to the lecture every time. And the interpersonal relationships were not as strong as the live classroom. Sometimes, technical errors happened, such as poor internet connections. Also, sometimes, I had to wait some time until I was approved before entering the session.

Apart from the online learning platforms. When we talk about university life, I would say I missed my library time a lot because most of the time, I used to study in the library and, because of the pandemic, going to the library was forbidden. I felt like I was abandoned during my master's journey. The examination process in the pandemic was strange to me because most of the exams were online. I have never faced an online examination in my life before. This was my first time. Some of the exams were physical and were held according to social distancing and hygienic rules. This was also strange to me. And among my classmates, we couldn't throw a party or get together. After the

first semester until now, I couldn't see any of my classmates physically. I don't have any real university feeling now.

Apart from the education perspective when we move to the career perspective, I found a lot of disadvantages during the pandemic time. In my third and fourth semesters, I was searching for internship opportunities. But there were no opportunities I could find. I was disappointed.

As a food scientist, I see this pandemic from a different perspective as I understand the global supply chain is very fragile because even multibillion dollar companies collapsed during the pandemic because of supply chain interruptions. And in the meantime, I saw how important food is because shelves of the supermarkets went empty as everyone needed to stock foods in the pandemic. And I saw there are emerging opportunities for online marketing.

As previously mentioned, my hobbies were travelling and nature photography. As a traveller, this pandemic ruined my travelling plans. But I didn't regret this because during the pandemic, I was getting information about beautiful places and made some travelling plans. So I don't want to invest in a travel plan until later. It should be mentioned that I missed the opportunity to learn more about German culture during the pandemic time.

Amidst all the problems and difficulties, I could finish all the subjects of my master's programme with good grades. I consider it a huge personal achievement. Now, I have only a master's thesis left. However, with the invention of the vaccination, all things are going to be normalised. I would like to mention that this pandemic time taught me a lot of life lessons. The main lesson is that even microscopic organisms can turn the world upside down. We should not lower and underestimate others and their abilities. Any kind of bad thing can happen at any time. I would say the pandemic made my self-confidence higher. It taught me the importance of patience and never losing hope. And finally, I have one hope left: May everything be normalised as it once was before I completed my degree so that I can enjoy my real university life back at least for a shorter time.

Author

I am Raveendra Madushan from Sri Lanka. I have completed my bachelor's in Food Science and Technology in Sri Lanka. I would say that I am a simple and smart guy who follows little dreams. After my bachelor's degree, my dream was to pursue higher education abroad, and finally, I got admission to University of Kassel to follow my master's degree in International Food Business and Consumer Studies. But unfortunately, during the studies, the COVID-19 pandemic came. But it didn't defer my studies. I completed all my courses. And my next dream was finding an internship. That also I could achieve. I was able to find an internship in one of reputed multinational companies. It really helped me know how to cooperate with the international environment in the food industry. Travelling and nature photography are my hobbies. Back to my country in Sri Lanka, I would say that I have travelled to almost all the beautiful places. I had a dream to travel within Europe, also. I also achieved it. I've been travelling to beautiful places in Europe. My ultimate dream in my professional life is creating my own nutritious food brand especially for the patients of dietary-related diseases.

7

Life is a Roller Coaster

Refat Mahtarin

I am Refat Mahtarin, an IFBC master's student from Bangladesh. Starting my childhood, I wanted to study abroad, and finally, the opportunity came in 2019. Full of dreams and hope, I came to Germany to fulfil my wish to get a foreign degree. But the current situation around the world is so disheartening. The whole world is facing a critical pandemic situation that we never thought would happen. Due to this COVID 19 situation, I have had a mixture of experiences. As a student and coming from a foreign country, leaving all my family members behind, my life was already a mess that I was trying to beautify! I was already struggling to settle down in the new environment, and then, this pandemic happened right after. I came to Germany in September 2019, intending to get a master's degree at IFBC. In the first semester, which was winter 19/20, I got lucky to have an offline class environment, though at that time I was not used to the term 'offline class'. After that semester through now, I have been having an 'online class' environment only. This term has become so familiar to me, but I believe that for all the students and corresponding authorities that we do not have to mention it anymore if we are having an online class or offline class. The decision to have offline classes was the perfect and ongoing requirement at that moment as the COVID 19 situations were deteriorating day by day. The whole world came to a halt as everyone was struggling to find a way to get past this pandemic situation. But as a human being, this 'social distancing' situation became hard to maintain at the beginning. Staying away from family became less painful for me when I got a friendly environment with my classmates and neighbours, but the situation changed due to the pandemic. My daily routine changed a lot because of that. My personal life and my student life all got jumbled. But yes, we are human, and we love challenges! So I took it as a challenge and tried to settle down with this adverse situation. Still, now, I am trying but when I look back at 2020, I feel grateful to God that I am still alive, my family members are still doing well back in my country, and my friends and colleagues are still fine. That is a huge achievement to me.

All the Bad Stuff!

This COVID-19 situation has had a great impact on my life. If I have to mention the negative side effects, then I have to say that due to COVID-19, I felt lonely. That is the first thing that comes to mind. I couldn't make friends anymore; I couldn't better know the environment and get the opportunities to know the German culture I was really interested in. Though the situation is now changing

and day by day improving, I still missed the opportunities to learn about Oktoberfest, Christmas market and so on.

For my educational life, due to the pandemic, I had to take all the courses on the online platform. Due to that, I felt like the interaction between the students and teachers was disrupting. Sometimes, the internet was poor, and sometimes, the availability of the group members was unsure. I felt isolated sometimes when I was attending online classes. Several times, I lost my interest in the class or was just present but thinking and roaming somewhere else in my thoughts! I missed my classroom environment a lot. Though the initiative of online classes was taken to secure our lives and protect us from the pandemic situation, it has caused damage to educational life to some extent. The university had to rearrange its study materials according to the situation, but it was also a new experience for some of our lecturers as well. These are the drawbacks of the current situation that I can relate to myself.

Cheerful Facts!

Every story has two sides, positive and negative. For me, this COVID-19 situation has created both types of situations in this phase of my life. Frankly, the 2020 year will always be my worst year. At the beginning of 2020, I lost my soulmate, my husband. I was trying to cope with that loss when I also lost my mini job. I was jobless for almost three months. I was feeling hopeless and alone. But if there is a will, there is a way! During my worst time, I received support from the university and also from my classmates. They supported me mentally, which made me believe in myself. I received inspirational words from my mentors and student counsellors. At that moment, everything was controlled through the online platform; there was no scope of physical appearance. But still, it was managed. I didn't feel alone, even though the COVID-19 situation was rising to an alarming stage.

As every class was scheduled to be online, I got some extra time to give myself and to gather myself to face the world after trying to overcome my situation. Previously, as IFBC is a joint degree course, I had to travel to Fulda and Witzenhausen every week. I am living in Kassel, so every day, I had to wake up early in the morning to travel to attend class. However, this pandemic situation suddenly created a travel-free condition. But still, I wake up early in the morning to have a walk around my neighbourhood. The fresh air helps me calm down and start my day with a positive vibe rather than starting the day hurriedly. Moreover, this pandemic situation has boosted my confidence in many ways. Previously, I was not so familiar with working on laptops through several types of applications and facilities. Due to having online sessions, I have to use lots of applications and online sites. It ultimately boosted my confidence level. Moreover, I can get instant responses from my course correspondences

whenever I am facing any doubts or having some queries to be solved. I don't have to wait for the next class to solve my problems.

Also, I can get some extra courses as I am having more time to myself than before, which includes a language course online to increase my knowledge of the German language. Sometimes, it is also interesting to communicate with the other group members through breakout sessions or Zoom sessions. Though it feels weird to think about how I will interact with them when we finally meet with each other face to face, it will be an interesting situation that I am eagerly waiting for.

In the end, I would say that life is a roller coaster. It truly is. Ups and downs will happen in life, but as humans, we have to face the challenge of life and make it an exciting roller coaster ride. The whole world is now fighting against this deadly pandemic situation. I believe that if we can follow the rules and try to be calm, then the situation can be easily handled. Per the concern of education, it is true that I missed out on a lot of things. I am searching for an internship and still could not manage to find one due to the pandemic situation. In the future, after completing my degree, the job world will be difficult. Sometimes, thinking about that makes me worried, but I try to tell myself that I can do it. If everyone can do it, at least I can try to do it. Giving 100% effort is the main key. Leave the outcome on time. That is the motto of my life.

Author

I am Refat Mahtarin, a master's student of IFBC, and I come from Bangladesh. To fulfil one of my childhood dreams—to get a foreign educational degree—I came here in Germany at the end of 2019. I always wanted to do something that is good for human health and the environment. I wish to utilise my knowledge to develop a healthy and environmentally friendly product in my country, which is very much in demand now. I want to introduce some vegetarian and vegan food products because vegetables grow in abundance in my country, and these are much cheaper than here in Germany. Hopefully, I can do better and one day can export my products here in Germany! My passion lies in reading books. It does not matter if the book is fictional or nonfictional. I love reading books! Back in my country, I have my own little library where I have collected more than 600 books. I wish to expand my little library and gather knowledge as much as possible.

8

COVID-19: A Difficult Time to be Alive

Samrachana Aryal

Many unfortunate events occurred around the world last year. One of them was the coronavirus, which turned all of our lives upside down. My life, like everyone else's in the world, changed drastically during that time. So I mustered up the courage to write a few words about my experience, but I could barely summon my thoughts or write a single word. The next day, I tried again and came up with a story to summarise my experiences with the pandemic as an international student in Germany. And here is my impromptu attempt at writing one.

When the COVID-19 cases hit the news in December, it was merely an epidemic in China. It seemed like a distant disease that would disappear in a few days. And I thought there was no way I was going to be affected by it. In early December, I visited a Chinese garden in Germany. Later, I posted a photo on social media with the caption 'Lost in China'. One of my friends commented on the picture and advised me to beware of the virus, thinking I was really in China. I replied to him, 'I am not in China. I was just kidding, but you better watch out', as he was already living in China. Little did I know what the future held for all of us.

A few days later, China went into lockdown, and the whole world was getting constant updates. Empty streets, people isolated in their homes for months, people wearing masks everywhere and disinfecting everything they encountered, cases increasing with every passing day and hospitals built in just a few days were some glimpses of what was happening over there. It looked surreal, something we had only seen in movies. Again, I thought to myself that nothing like that would happen here. We'd be safe. What I did not know was that no one was safe. Fast forward to March and the same situation I had just seen on the news earlier became our new reality. People were panic buying, stockpiling toilet paper, dry food, disinfectant, masks and anything they could find. Whoever got their hands first on the disinfectant or last roll of toilet paper felt like a winner. 'Is this the end? Are we all going to die?' I wondered. A few days later, masks were made mandatory all around, but there was not a single place where I could find one. Online ordering would take almost a month to arrive. I had to get a mask at any cost. So I decided to make one myself. I tried making one out of an old t-shirt, and it turned out well. At this point, I realised that the 'survival of the fittest' theory had become a reality. The panic buying continued amid the fear of the country's first lockdown. Subsequently, the lockdown began. At first, everyone thought it would only last a few days. But

there was a gradual process of extending the lockdown, and the new rules were imposed every month. Masks were made mandatory, social distancing was practiced, and no social gatherings were allowed. But until when? The uncertainty was killing us all. People lost their jobs, schools were shut, people started to work from home, borders were sealed, there were restrictions everywhere, and the death toll was rising every week. Nobody had expected the lockdown to last for such a long time. I believe if people had been told it would last so long, no one would have cared or followed the rules unquestioningly.

Occasional lifting of the lockdowns resulted in not knowing what exactly the rules were as they changed every week. I thought this would never end. Life seemed to move very slowly. One day, suddenly, my phone rang. I heard that one of our relatives, who lived in the same house as us and was still relatively young, had contracted the virus and would not make it. My heart sank; my mind went blank. I could not believe what I was hearing. I received another news again that my younger brother had also tested positive. I was very worried, but there was nothing I could do but hope that everything would be okay. Fortunately, he recovered from the virus after a month. After that experience, the virus felt more real and personal, and I realised how unpredictable our lives are.

'Is there a way out or any hope of getting back to normal? The outside world is suffering, but what about the inside? Am I doing well? Have I achieved what I wanted? What about my career, my studies or my dreams? Is all of that being put on hold? Could I be more selfish? Am I selfish when everyone in the world is struggling for bare survival, thinking only of myself?' These were the questions I had on my mind all day long, and nothing seemed to be under my control. Constant failures in the form of rejections when I applied for internships made me think: Is this it? Should I continue to be disappointed or move on? Even if I want to move on, is this the right time? After all this, I kept reminding myself that I was lucky to be alive, my family was safe, and I've enough to eat. This is when I started practicing gratitude and discovered yoga. I have to say that it helped me get through the lockdown. The breathing techniques and practicing mindfulness helped me see the positive and hope for a better future. Additionally, I want to give credit to social media for being my saviour. Without it, I would not be able to constantly stay in contact with my family.

Since I had already completed my modules, I had no more classes to attend. However, I decided to join the online language course offered by the university and was ready to experience my first ever virtual class. I somehow felt connected with my classmates, despite the internet connection issues occurring now and then. It was nice to interact with everyone after such long isolation and hear how they were coping. We were all in the same boat. Some lost their

jobs, some took online courses from morning to evening, and some enjoyed the online courses because they did not have to travel to the university, while some disliked the online courses because they missed human interaction. But that was our reality, and either way, we had to live with it. I personally enjoyed taking the classes virtually as I could manage my time more efficiently. At the same time, I decided to start writing my thesis, even though there was less possibility of carrying out laboratory research. There were restrictions everywhere, and it was hard for me to get access to the laboratory. Eventually, I opted for a topic that involved lab work. The test I wanted to conduct had to be carried out at interested participants' homes rather than in the lab. The delivery of the samples was a tedious task as it was not under my control. Some samples had to be resent as they had been damaged during delivery. The whole process took much longer than expected, and the way to get there, I would say, was not easy. Despite the challenges involved, it was a great learning experience, and I somehow managed to do it with the help of my supervisors. Now, I am almost at the end of the process, and I hope to graduate soon. Another progression this month would be my first vaccination. Things are starting to come together, and it looks like everything will soon get back to normal.

All in all, what I learned from this pandemic is that life is uncertain and unpredictable. You can hit rock bottom, be isolated and not see your family or friends for months, but then, you must be patient and have a relentless hope that everything will turn out well. Taking a moment to pause and reflect on what's important and checking in with yourself along with your family and friends are the things that matter the most. The road may be bumpy, but there is light at the end of the tunnel. One day, we will overcome all the losses we have suffered and move on in life. Being alive is the greatest gift of all, and hope is the only thing that will keep us going.

Author

My name is Samrachana Aryal. I came to Germany in 2017 from Nepal to join the IFBC programme. It was my first ever flight abroad, which was nerve-wracking and exciting at the same time. When I look back now, it was a life-changing decision for me. Living in a foreign country on my own with little knowledge of German was really challenging, but I feel proud when I see how far I have come. The COVID-19 pandemic has made things two times more difficult than before. Nevertheless, I managed to finish my degree, and now, I look forward to a successful career in the food industry. In the future, I see myself working for a food company that focuses majorly on innovative and sustainable approaches for food production. In my free time, I enjoy reading books and travelling. I find it a great way to learn more about the world and myself, too.

9

The Student Life Through the Lenses of COVID

Sharon-Rose Johnson

I was part of the International Food Business and Consumer (IFBC) studies freshman cohort that arrived in the last quarter of 2019. Although anxious about moving into someplace new and experiencing cultural shock, I looked forward to exciting times ahead filled with meeting and seeing new people and places. In retrospect, I dare say that the 2019 cohort was fortunate to meet each other during the lectures at the Witzenhausen and Fulda campuses. Back then, I considered it a chore to go through preparations to make it in time for lectures, especially at Fulda. The excitement of Sunday evenings was always short-lived, knowing that I had to wake up early for 'marathon Monday'. Mondays were when the first-semester students had a series of lectures at Fulda, beginning at 9:30 a.m. and, for me, ending at around 5 p.m. because of the 'Bridging module' course I had to attend. For those of us who lived in Witzenhausen, it was indeed 'marathon Monday'! The routine was to wake up as early as 5 a.m. and prepare to catch the train at 6 a.m., journey until 9:30 a.m., when the lectures started, and finally repeat the journey back home. We always arrived home only after 8 p.m. The highlights of Mondays were at the train station, where there was the sound of excited chatter from us students. It was great not to do a marathon Monday alone. At least, not without Eunice's cachinnate, Joseph and Michael's buddy-buddy welcomes, Adedayo and Micky's hilarious jokes and stories, Opeyemi's foghorn voice, Daniella's selfie-taking spree and the presence of all the other students. This had gradually become the definition of 'normal' as students.

Little did we know that the world would soon be hit by the COVID-19 pandemic, causing a shift in the paradigm of human activities, including that of us students. We made it past the first winter semester before the pandemic spread into the country. By the middle of summer 2020, COVID-19 had hit hard, leading to the shutdown of shops, restaurants, bars, schools and universities—literally everything. Life changed almost overnight, redefining 'normal'. The beginning of the next semester had to be postponed to enable restructuring. Soon after, the entire university community had to resort to virtual online meetings and lectures, denying us the privilege of physically meeting each other. There were undoubtedly a handful of advantages and disadvantages posed by studying virtually. It initially presented itself as an excellent escape from physically attending lectures, an opportunity to save and reinvest travel time into other ventures. Some lecturers adopted a hybrid approach to achieve learning outcomes, partly through self-learning and online lectures. A lot more reading assignments were given to facilitate self-learning, which I think was

meant to be beneficial in enabling us to better appreciate the information. But what I choose to call the 'lazy syndrome' always sets in—and it has required a great deal of discipline to not warm into the bedroom environment. The 'lazy syndrome' was the beast between me and studying. I am convinced that I speak for many other students in this regard. Although virtual platforms such as Zoom and WebEx tried to imitate an in-person lecture, it never quite matched it. For one, I am sure that the 'lazy syndrome' was caught by many other students. So very few of us liked to turn on our videos during class sessions and for obvious reasons. With temptations to sleep in or do something else, the bedroom environment was almost always not conducive for studying. It did not present the passion for learning or even following through to the end of class, which was not beneficial. I recall one module I took that initially had a class trip planned as part of its schedule. Unfortunately, COVID-19 left us with a virtual makeshift trip. Of course, I commend my lecturers for making an attempt to offer an alternative through the virtual platform. However, the challenge of internet stability defeated the purpose. It was not very interesting to follow a virtual tour with consistent and irritating breaks from an unstable internet connection.

It is still with deep regret that I look back on the cancellation of the IFBC trip for first-semester students to Ireland. This trip was organised to get students acquainted with some alumni, with visits to tourist sites as a side attraction at a very student-friendly price! Payments made, visa applications underway, minds daydreaming of the exciting memories to be made on this one-week get-away to Ireland, all of this was snatched away and exchanged with no memory at all except COVID-19. The once-in-a-life-time opportunity was seized, leaving no room for the next time. Those of us who were on the list to make this trip hoped for another opportunity the subsequent year. But alas, COVID-19 spread its wings in full length and breadth, casting its dark shadow on everything beneath it.

One other subject worth mentioning was the pressure of not working to support ourselves during the pandemic. Because everything, including our jobs, had been put on hold, it meant that our sources of income had been shut out, even though there were still bills to be paid. For some students, the mental drain from that, unfortunately, left no room for academic concerns. This does not mean to say there were no relief packages provided for students. On the contrary, it was at the onset of the pandemic that the 'Tafel' commenced—a weekly distribution of free groceries and other essentials. I will always be eternally grateful to the benefactors of the Tafel initiative. Thanks to them, food and groceries were crossed off my list of expenses.

COVID-19 also left us without any extra-curricular activities. Life before COVID-19 was not without one student gathering or the other: be it a party or an

outdoor activity. Saturday evenings always saw the Am Sande student hostel in Witzenhausen alive with lights, music, dance or students chit-chatting over a barbecue grill. But the student hostel with COVID-19 bore the semblance of a library. The once prolonged social interactions were reduced to terse exchanges for fear of catching the disease. No one wanted to face the possible stigmatisation accompanied by being diagnosed with the virus, forcing us all to keep our distance. Suddenly, I began to reminisce about 'marathon Mondays'. I wished for a chance to get fully dressed up to meet others in a lecture hall for class. To hear the chit-chat of enthusiastic and diverse personalities. An opportunity for my gaze to go back and forth as my lecturer paces, rather than a fixated gaze staring at the laptop screen.

I never imagined my life as an international student filled with lifeless train stations and shopping centres, virtual presentations and exams and a lifeless mask as a new companion for my mouth and nose. But COVID-19 sure did have its own plans. On a lighter and more positive note, the lockdowns provided time to catch up with family and friends back home. With nothing much to do but stay indoors, we explored the many applications that the tech world could offer and made beautiful memories out of them. COVID-19 turned our paces a few notches down, giving us the much-needed time to practice pause, to retreat and look within and, hopefully, to strategise for a comeback to our post-COVID-19 world.

Author

My name is Sharon-Rose Johnson, and I am a fourth-semester student of International Food Business and Consumer Studies. Seeing people's livelihoods transformed through the power of creating opportunities for everyone has been a great motivation for me and my career path. As a Ghanaian, I hope to someday own a food enterprise that contributes to the growing food sector. Outside academics and work, I like to toss or flip food in the kitchen and learn to play the guitar.

Reflections by Food Professionals

10

Changing Nature of Food Value Chain

Emel Kasim

Dear Emel,

I am writing this letter to you from the future, 15 years ahead to be more accurate. It is the year 2036, and some things have changed. The COVID-19 pandemic might still appear to be far from over, but I assure you it will be a thing of the past and will change the dynamics of different sectors, including healthcare, agriculture and food.

Through this letter, I would like to share with you some of the advancements that we have made and how far we have built resilience into the food value chain over the past 15 years. According to Neven (2014), the food value chain consists of four core functions, which are production, aggregation, processing and distribution. The regulatory apparatus plays a vital role in governing these functions. My intention is to share the overall shifts and developments rather than going through specific changes in each function. Advancements in the agricultural system, the use of online channels and the role of policies and regulations are some of the topics of which I want to give you a glimpse of the future.

As you have observed, the COVID-19 pandemic has had a ubiquitous impact on various sectors, including manufacturing and supply chains, which were a hot topic for research (Ivanov & Dolgui, 2020; Ivanov & Dolgui, 2021; Hobbs, 2021; Rowan & Laffey, 2020). This led to a greater focus on the concept of resiliency in value chains.

Currently, the share of agriculture in the world gross domestic product (GDP) is 6 due to growth in urban agriculture, peri-urban agriculture and hyper-local food systems. In 2019, this share was 3.4. Hyper-local food systems include short food supply chains that are generally located in rural areas near cities and usually include production, processing and vending. This system has been trending in the United States since 2015, and now, there are 20 hyper-local food hubs in Europe. Global food companies are investing more in short food supply chains (SFSCs) that support robust local supply chains as a parallel alternative to the conventional supply chains. Having two parallel systems is used as a method to provide protection against shocks during unexpected events. This shift was also needed because it aligns with meeting the societal demands of more conscious consumers, who are interested in food system sustainability and food security and quality.

In 2021, the agriculture sector accounted for 70% of global freshwater and occupied 40% of the global land area (Panchasara et al., 2021). It was also a significant contributor to greenhouse gas emissions. Smart farming will be more widely implemented both in developing and developed countries because it helps in reducing waste, better utilizing farming resources and reducing carbon emissions. The extent of adoption of modern information and communication technologies (ICT) into agriculture will, of course, vary depending on the technological infrastructure, costs and availability of resources. Through the extensive research and projects that were carried out between 2021 and 2030, tailored solutions have been made use of in rural communities that lack certain infrastructure and resources.

While the shift to online channels was showing significant growth before the pandemic, the occurrence of COVID-19 led to a surge in e-commerce and accelerated digital transformation. As you know, this transition was also evident in the restaurant and food retail sector due to lockdowns and restrictions that somewhat forced consumers to use online channels. Food businesses that were able to adapt to digital platforms thrived during and after the pandemic. The boom in e-commerce will continue to grow; however, it will vary from one country to another, depending on factors such as internet access, supporting infrastructure and digital literacy. For example, in 2019, access to the internet in Organization for Economic Co-operation and Development (OECD) member states ranged between 70% and 94% (OECD, 2020), which was significantly higher compared with individuals living in less developed countries.

The digital transformation in the European Union was lagging behind the US until 2021. Nonetheless, it seized the opportunities provided by emerging digital technologies starting in 2022 through the support of certain policies and frameworks. As of September 2036, the European Union's digital strategy, which has set policies supporting digital skills, online platforms, e-commerce and digital inclusion (European Commission, 2021), has reached 97% of the planned goals, and 34% of the consumers in member states prefer online channels when purchasing food. Small- and medium-sized enterprises (SMEs) and brick-and-mortar shops operating in the food industry are more easily included in e-commerce. While smaller food enterprises are using e-commerce platforms to manage their businesses, food operators that have complex procurement and purchasing processes are using online sales portals integrated into their enterprise resource planning (ERP).

The governance structure that includes horizontal and vertical linkages plays a critical role in the food value chain. The COVID-19 pandemic has brought to light the vulnerability and fragility of the globally dispersed just-in-time production chains. Smallholder farmers were hit the hardest by the shock created from the pandemic. The vulnerability of food supply chains to

disruptions requires a special focus on policies. Policies, laws and regulations are essential to protect and provide a safety net to the most vulnerable actors along the value chain. This also ensures building a resilient future.

The European Union's adoption of the Unfair Trading Practices (UTP) directive (2019/633) was a great step forward in protecting the rights of the weaker players along the value chain. Buyers usually have the upper hand and may apply unfair pressure on suppliers. Some of the practices banned in the directive include late payments and canceling orders at a short notice. This directive was already adopted by many member states in 2021. To prevent companies attempting to transfer their locations to non-EU countries to avoid following the rules set in the UTP directive, the directive clearly has set forth that the rules apply whether the supplier, buyer or both are established in the EU. The UTP directive is now further amended to include rules that would protect smallholder farmers, and similar regulations have been created in less developed countries.

Having been involved in analyzing the regulations in the EMEA region and providing consultancy for food, agriculture and chemical industries, I find the legislation dealing with supply chains are crucial contributors in restoring secure and safe transactions. Legislation should be responsive to sudden unexpected changes because they are a key dimension of resilience. Laws and regulations will shift from evolving at a relatively slow and emerging pace as a response to high-profile scandals or cases to a more rapid and preventative approach. To provide more protection to the weakest players along the food value chains, due diligence laws in supply chains are set forth in more countries.

Some concepts, systems and ideas have been discussed for a long time and have gained momentum with COVID-19. For example, the European Union has been supporting rural development, which is seen as a vitally important policy. The concepts of supporting local markets and the use of short supply chains have already been defined and mentioned in Regulation (EU) No 1305/2013. Diversified supply chains, including sustainable and conventional, and the integration of the internet of things (IoT) are, currently, widely utilized in agri-food systems. They provide flexibility, contribute to global sustainability goals and allow rapid adaptability to sudden changes.

There have also been negative changes that I have not conveyed here. Nevertheless, I would like to end my relatively short letter by saying that the way forward will require continuous tuning and monitoring of local and global approaches in the food value chain.

Sincerely,

A handwritten signature in black ink, appearing to be the initials 'EK' or similar, written in a cursive style.

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Author

Emel Kasim is a 2017 IFBC graduate. She is multilingual and currently working as a regulatory research analyst for the EMEA region at a global compliance information provider. Prior to this, she was a specialist in food regulatory affairs at a leading European food manufacturer. In addition, she has been a volunteer research fellow at Kassel University in Management in the International Food Industry section. Some of the areas in which she has focused during her studies and career include strategic management, sustainability, corporate social responsibility, quality management and research and development. Through her experience in regulatory affairs and compliance, she has witnessed first-hand the importance of regulations in protecting consumers and the environment, as well as in helping businesses thrive. Emel enjoys learning and values teamwork, curiosity, integrity and a good sense of humor.

11

The COVID-19 Pandemic and Its Impacts on Food Businesses

Muhammad Farhan Iqbal

I am Muhammad Farhan Iqbal. I graduated from Hochschule Fulda University of Applied Sciences and Universitat Kassel in International Food Business & Consumer Studies since I was interested in the food business. In 2013, I commenced a new job in Bahawalpur, Pakistan. I had been doing different jobs for the long haul; meanwhile, I convinced myself to get into the food business for the reason that 'a business offers you more opportunities to flourish'. Nevertheless, I had prepared myself for that until March 2019, during the period I had been doing jobs, and I also got a bird's eye view of the business plan before starting.

In June 2019, I started my own business of carbonated drinks. In Pakistan, I have lived in the city of Bahawalpur, which is well known for severe weather conditions. Usually, the temperature reaches up to 49 °C in the summer, particularly from June to September. Sometimes, it also hits 50 °C, which is quite hot, and hence, I preferred the summer season since it was the best suited for this kind of business. This hot season should have been beneficial for my product, which was a soft drink. People consume soft drinks frequently in the summer, and expectedly, I received a good response from the people. Their feedback was quite amazing. That little success encouraged me to do something even bigger. It leapt to my mind that I should introduce a few drinks of those fruits that were not very popular in Pakistan in that particular season, such as cherry and passion fruit. I was supposed to launch their juices, and I was sure that it would be a great opportunity to improve my business and make more money. It was the concept I was pondering over.

I had done a statistical analysis for these new products, and I also performed a SWOT analysis. I analysed things thoroughly. A SWOT analysis is research on your business before the start. It is an estimate of the current position of your company before you decide on any new strategy. In a nutshell, my strength was that I studied in Germany, and there, I came to know about some exciting fruits that the people of Bahawalpur were not aware of. Knowing about new flavours was a positive opportunity, and it could have been a cut above my business opponents. My weakness that I identified was no availability of trained labour, which I had successfully overcome by training my workers. We worked hard to train them good and proper. They were all set to manage their work. The threat I could have withstood was the acceptance of new flavours. I was not very sure about whether they would be accepted by the people—new flavours were like a double-edged sword. They were a chance of being

problematic yet beneficial. I also endeavoured to overcome this issue with different techniques like marketing since marketing is a very important tool in any business. I was supposed to offer a free 200 ml juice bottle with the purchase of a 1-litre soda bottle.

Eventually, as I planned to take my business of fresh fruit juices forward by introducing off-season fruit drinks in the summer of 2020, unfortunately, the first wave of the COVID-19 pandemic hit Pakistan—two weeks before I was going to implement my new business strategy. At the time, I had already completed a lot of work and spent money on the project, such as business marketing at a local level, a suitable location and expenditures on the building, furniture for sitting arrangements and so forth.

The government imposed a complete lockdown in the country during the first wave of the COVID-19 pandemic—owing to the lockdown, the people were not allowed to come out of their homes unnecessarily, all streets were looking isolated, shops and markets were shut down, and even public places like parks, playgrounds and monuments were also closed as people were told to stay home. My business was suffering badly as I was not able to open my shop regularly, and by the time I got a chance to open my shop at a different time, I couldn't get enough customers because of the lockdown. The raw material I spent money on was going to waste, paying the rent, bills and salaries were getting harder, the capital also decreased significantly on account of the investments I made, and I started feeling that the business was becoming a burden on me! A few months before, I had the hope of improving my business and increasing its profits by 300%, but COVID-19 spelt disaster for me and all my countrymen. All my efforts ended in smoke. Everyone was affected by the deadly virus and sustained a loss in various shapes.

During the second wave of COVID-19, my father passed away in December 2020, another disastrous event—it was a gut-wrenching time for me and for my family. We were left exasperated; nothing was going well in those days.

My father was affected by the deadly virus, and he was taken to the hospital where he was admitted for treatment. He stayed there for 18 days, and meanwhile, I witnessed so many other patients who were also affected by COVID-19.

The implementation of COVID SOPs, masks on faces, prevention measures and restrictions were making everything seem petrified. People were so afraid; the situation was very deteriorating—a tough nut to crack for everyone. The demise of my father was a huge loss for me, and it was also a heavy cross to bear for my family—only the wearer knows where the shoe pinches. Having said that, we endeavoured to put our lives back on track little by little.

The people across the country were left in a lurch. They couldn't batten down the hatches since this pandemic came out of nowhere—like a bolt from the blue. Not only did the pandemic leave people dead, but it also high and dry . The pandemic had a very negative impact on their lives, such as people were jobless and had to suffer from starvation. They were about to stay at home all the time, which resulted in domestic disputes, quarrels and unpleasant experiences because they were frustrated and had to vent their disappointments somehow, which significantly increased the divorce rate during the COVID-19 pandemic.

It is also important to mention some positive things I have witnessed during the deadly pandemic, that is, humanity. People also helped one another as best they could, despite going through the most difficult circumstances. The people who were in a position to help the needy helped them wholeheartedly; this reality must be accepted, and those generous people must be given a pat on the back as they didn't forget to do good things for poor people, even during that crucial time. They helped the needy ones with monthly groceries and paid their bills/dues, and many landlords reduced the rent of their properties. These are just a few cases. It's good to see humanity is alive.

Which methods can actually work to run food businesses during lockdowns? First and foremost, home delivery can be a perfect example owing to the fact that restaurants are closed these days for dine-in services. People have been waylaid from eating inside restaurants because of COVID-19 SOPs. We must take the option of home delivery into consideration. We have to work on this to make the service even better. It can really help food businesses run. It is worth using Android/IOS apps to get food at your doorstep. Since technology has advanced, the use of technology is definitely worthwhile.

The second thing that can also be really important for food businesses during the COVID-19 pandemic is drive-through facilities. People must be provided with food inside their vehicles rather than eating inside restaurants. A good businessman must be able to think on his feet as it's high time to promote these trends, such as people sitting and eating in their vehicles during the pandemic. The media can run promotions in this regard and play a vital role in trendsetting. It will produce good results.

Let's summarise all that in a few words: my life was going well, and then, the first wave of the COVID-19 pandemic ruined everything in the world, my business was shattered due to lockdowns, I grieved as I lost my father, and people suffered a lot, but the factor of humanity also popped up during the pandemic. Food businesses can run during the pandemic with some methods, including home delivery and drive-through facilities, and there are many options that we can know about by conducting proper research. The more people travel these days, the more they will have a chance to carry the virus

with them, which can leave other people affected across the globe. So we have to mull it over gravely and prepare ourselves for daunting times, as apparently the world is on the brink of devastation because of COVID-19.

Author

I am Farhan Iqbal, and I am from Pakistan. I am always very enthusiastic and determined to travel around the world. Vince is the city that I fancy the most. I graduated from the International Food Business and Consumer Studies programme in 2013. Ever since, I have been doing several jobs in food businesses. IFBC created many opportunities for me in the food industry—a few of those were about safety and quality management. Having spent a few years in different jobs, I decided to start my own food business in my city of Bahawalpur in 2019. The corona pandemic negatively affected the purchase of food products because I could not import the standard raw materials from abroad. The sales also noticeably decreased because of the complete shutdown in the country that lasted over a year and that resulted in a huge loss for me.

12

The COVID-19 Pandemic and Its Effects on Food Production and Consumption

Jessica Amprako

The COVID-19 pandemic has caused damage to the world. Aside from its effect on human health, it has caused havoc to other vital areas such as the education, aviation and agri-food sectors. To control the impact of the pandemic, the education and aviation sectors were shut down to slow the spread of the virus. However, the agri-food sector, given its role in food security and human livelihood, remained one of the sectors to stay operational during this time. As a result, this sector was exposed to the adverse effects of the pandemic in a more complex way. The widespread concern about the impact of the COVID-19 pandemic on the entire agricultural and food systems has drawn attention to its impact from farm to fork. In view of the recent challenges in the food supply chain, there is considerable fear about the production, processing, and distribution of food.

To build a resilient food system and respond to the impacts of the pandemic on the agri-food sector, sustainable measures need to be developed to strengthen the entire food supply chain. Drawing insights from a developing country context, examples from Ghana will be used to illustrate how COVID-19 has impacted the agri-food sector. Agriculture sustains more than half of Ghana's labour force as the majority of smallholder farms cultivate their own plots of land with their families. Governmental interventions can go a long way to support workers in the informal agri-food sector during this time to prevent a food crisis. With the proposed recommendations, policymakers can effectively create more inclusive and sustainable solutions.

During the partial lockdown, many stakeholders in the agri-food sector experienced economic hardship, with some losing their means of livelihood. Imposition of the partial lockdown in major cities in Ghana like Accra and Kumasi led to the closure of markets. Traders across the various central markets in Accra and Kumasi recorded low sales because security officers prevented shoppers from entering the market if they could not prove that they lived close by. Consequently, market women, who solely depend on the sales of food items for their subsistence, were deprived of their means of income. Not only did the market women lose their livelihood, but also head porters, popularly called 'Kayayei', who usually carry the goods of shoppers to their destinations, were affected due to the closure of markets in the big cities. Considering that the pandemic could affect the financial sustainability of the stakeholders of the food sector, other ventures like home deliveries could be initiated by market women to distribute food to their customers.

Prior to the COVID-19 crisis, the sourcing of agricultural produce in Ghana was saddled with many issues. With minimal disruptions in the transportation system because of poor road construction and networks, sourcing farm produce from the villages to the bigger cities for consumption was a problem. The travel bans during the COVID-19 pandemic had a drastic impact on the essential flow of food from farms and producers to consumers. In response to this impact on the sourcing of farm produce from villages, companies in the field of agricultural technology could design digital platforms for mobile phones as a way forward. This platform could offer consumers the opportunity to purchase any produce of their choice. Market women could also order farm produce from farmers through this platform without any physical interaction. A digital solution would be a sustainable and efficient way to source food during these bad times.

Furthermore, temporary or seasonal employment is popular in developing countries, particularly for planting, sorting, harvesting, processing and transporting products to markets. The cocoa sector in Ghana, for example, was significantly affected by the absence of local workers due to the lockdown. The border closures also affected smallholder farmers who outsource labour from neighbouring countries like Ivory Coast as sickness and lockdowns prevented these seasonal workers from coming into the country. In the cocoa sector, the labour shortage due to the COVID-19 crisis and its associated movement restrictions caused severe disruptions in the planting and harvesting of cocoa. In view of this, digital technologies such as sensors, drones, satellites, climate-smart agriculture and blockchain are promising developments for cocoa and the entire food supply chain. The first concern is how to use existing platform technology to create digital inclusion. In this phase of the pandemic, online training programmes can be designed to provide instructions for farmers. Thus, farmers could be encouraged to use a mobile app to provide technical services.

Another effect of the lockdown of food production is the issue of postharvest losses. Many smallholder farmers in Ghana, for example, were unable to regularly visit their farms. With insufficient monitoring of farm activities due to the lockdown, farm produce was abandoned. Consequently, the majority of farm produce perished, and with inadequate storage facilities, which has always been a problem, most of the harvest was lost to spoilage. Farm owners are therefore advised to invest heavily in postharvest storage and handling technologies. An example is the building of large warehouses, the design of solar dryers and the promotion of public-private partnerships for food storage. This is an initiative that the government could also support by offering incentives like warehouse receipt systems for farmers to store their harvest. Such a support system would improve food security, reduce poverty and ensure the availability of selected food crops.

As the COVID-19 jeopardised the health of many across the globe, the health and safety conditions of the working facilities of food companies should be prioritised. Food companies could invest in healthcare protocols that can improve working conditions and ensure the health and safety of personnel. It is also essential for food companies to introduce the World Health Organisation's (WHO) safety guidelines for COVID-19 in their standard operating procedures (SOP). Training sessions could be virtually organised for employees in well-established food companies, which may have the needed infrastructure to bring the sessions into fruition. Regarding the informal sector, the government of Ghana must organise educational campaigns to clarify the stereotypes of COVID-19 of just being a myth.

To build a resilient agri-food system, times of great stress and disturbance offer opportunities to identify and confirm key contributors. The impact of COVID-19 is great and has adverse effects on the entire agri-food sector. The closure of market centres as a constructive action has robbed a lot of traders of their livelihoods. Travel bans and movement restrictions have reduced the labour force, causing delays in the harvesting and handling operations on farms. The issue of postharvest losses has worsened, threatening food security. Ignoring the impact of the pandemic in this sector will not augur well for a sustainable food system.

To provide a roadmap to numb the pain of COVID-19 on the agri-food sector, especially with a focus on developing countries, recommendations such as digital platforms for communication and alternative delivery systems would be the right direction. Also, the training and education of workers on WHO regulations regarding COVID-19 are vital. The government can also support farmers and food companies with preventative materials, such as washing hands and using masks. Vaccines can also be administered without any charges to vulnerable farmers who have to produce food for the community. Therefore, the implementation of these suggestions may mitigate these challenges.

Author

Jessica Lucinda Amprako is from Ghana. In 2013, she designed a plant for the production of multiple products from maize and obtained a B.Sc. in Food Process Engineering degree from the University of Ghana. She dedicatedly served as a teaching assistant.

In 2014, she was awarded a scholarship by the Katholischer Akademischer Ausländer-Dienst to pursue an M.Sc. International Food Business and Consumer Studies in University of Kassel. She completed her thesis on the "Optimization of Herb Dryers: Case Study on the Drying Process of Three Hop Farms in Strasbourg, France" and graduated in 2016.

She has diverse skills which includes a training in Quality Management and Marketing of Organic Agricultural Commodities (Food standards, ISO 17065, marketing strategies, IFS, HACCP) from Deutsches Institut für Tropische und Subtropische Landwirtschaft, GmbH. In 2017, she participated in a number of conferences including UN Lecture Series on Sustainable Development, Food Security and Humanitarian Assistance and Citizen Science for Responsible Food Consumption and Production.

Currently, Jessica is pursuing her doctoral studies in University of Kassel with the focus on comparative studies of CSR in food supply chains. She investigates the influence of different market economies on CSR reporting of food companies in sub-Saharan Africa. Her results will be useful for policymakers and researchers since it will provide a roadmap to regulate food companies in the Global South and safeguard the environment.

In addition to her professional life, she loves to paint portraits and bake different types of cakes. She loves new scenery and enjoys traveling across the globe.

13 **Comparison of Advantages and Disadvantages of Panic Buying Behaviour in Pandemic Situation**

Dessy Wijaya

Introduction

The World Health Organisation (WHO) has stated that the COVID-19 pandemic affects not only the health sector, but also other areas, such as economics, social, politics and psychology. One phenomenon that has happened during the pandemic in almost all countries is panic buying. This behaviour inevitably causes severe negative effects on society (Chua et al., 2021). The main purpose of this paper is to evaluate both the advantages and disadvantages of panic buying behaviour and its impact during the pandemic situation. In addition, this paper is expected to further emphasise the interrelationship of several factors resulting in panic buying behaviour and to provide recommended solutions for relevant stakeholders to manage panic buying in future pandemics or crises.

Panic Buying Behaviour

In theory, panic buying is defined as a complex behaviour fuelled by diverse and multiple motives and psychological reactions in response to stress, anxiety, depression, fear and uncertainty about the future (Hall et al., 2021). Furthermore, the act of collecting and safeguarding a large quantity of purchased products for future use finely describes the result of overpurchasing or stockpiling behaviour. Bentall et al. (2021) mention that hoarding the necessities of life to anticipate supply-side scarcity is a form of rational survival strategy.

There are three different variables associated with panic buying and overpurchasing behaviour. First, the demographic and situational factors such as pre-existing health conditions that yield vulnerability to oneself, a large number of people in one household and long distance to the local supermarket or grocery stores. A second variable is the facilitatory moderator, which includes neuroticism or trait disposition to experience negative effects like anger, anxiety, self-consciousness, irritability, emotional instability and depression. These characteristics further lead to limited personal control and increased sensitivity to the existential threat of pandemic situations (Bentall et al., 2021). Finally, the last factor is household income. Some households with higher incomes have a bigger opportunity to panic buy. However, panic buying has also occurred in situations in which household income is failing due to fear of future scarcity and anticipated regret of economic loss (Chua et al., 2021).

Furthermore, panic buying items vary from place to place. For example, in Indonesia, large numbers of people panic buy medical masks, hand sanitiser, vitamins and basic needs of food supply such as rice, eggs, cooking oil and drinking water (Wahyu et al., 2021). According to Hall et al. (2021), the sales of canned fruits and vegetables increased 126% and 137% in Germany, and milk products and fresh chickens increased more than 50% in Canada after the outbreak of COVID-19 in March 2020 compared with the previous year. In addition, people in Australia, Italy, Japan, Singapore, Spain, the United Kingdom and the United States have experienced a temporary shortage of toilet rolls (Bentall et al., 2021). Other than essential items, there is also an increase in home and recreation products sales, which reflects individuals' need to create activities and discover new hobbies during stay-at-home or lockdown periods (Hall et al., 2021).

Advantages

The main benefits perceived by people who do panic buying are to satisfy a sense of calm, fulfil their desire and lower the risk of a significant price increases of a certain product in the near future (Wahyu et al., 2021). According to Chua et al. (2021), panic buying is a form of protection motivation behaviour of consumers when they are faced with the threat of a disease outbreak. It is relevant to effectively prevent oneself from experiencing a stockout of essential products. In addition, panic buying can increase self-efficacy in coping with the pandemic by managing their stress and anxiety through proactively taking precautions.

In addition, population mobility restrictions in most countries also both directly and indirectly affect panic buying behaviour. In this regard, panic buying gives a lower risk of contracting COVID-19 due to less frequent store visits and reduced exposure to external environments. Wahyu et al. (2021) also describe that the feeling of fear and anxiety will drastically subside when a range of necessary products are stocked up for a longer amount of time.

Disadvantages

Regarding the law of supply and demand in economics, panic buying and overpurchasing behaviour are strong factors of disequilibrium. The risk of scarcity due to a significant increase in demand and insufficient availability of products certainly is positively correlated with the price increase. In addition, disaster capitalists may play a big role in exploiting human-influenced and natural calamities through price gouging and profiteering via raised prices during supply or demand shocks. As a result, more severe effects are seen in lower-income countries with no safety nets (Klein 2007).

Moreover, the negative effects of panic buying also appear when perishable foods and household essentials are bought in excessive amounts and left to waste. This contributes to wasted energy and resource inputs utilised to produce panic buying items, which can lead to excessive greenhouse gas emissions. The next important issues range from supply chain disruptions to volatile changes in freight volume for retail logistics. Although some groups of people experience mild negative effects, panic buying situations cause the greatest detriment to the most vulnerable segments of society, such as the elderly, the young undergoing education at a critical time, women caring for the family and low-income people (Chua et al., 2021).

Discussion

After comparing some benefits and deficiencies of panic buying, the author agrees that some actions need to be assigned to manage its severe impacts on society. First, it is important to minimise consumers' exposure to cues of action. The actors responsible for reducing the number of triggers prompting consumers to panic buy are the media, community and religious leaders, social media influencers and family and friends. Information and images play an important role in creating a certain behaviour. Hence, it is crucial to show more images of fully stocked shelves instead of empty ones, minimise mentioning the panic buying phenomenon and give mental health protection prompts alternatively besides prompts to panic buy products (Chua et al., 2021).

In addition, Wahyu et al. (2021) suggest that as a policymaker, the government should give more certainty regarding the current pandemic situation. Besides emphasising the chaos, policymakers should deliver reassuring messages. On the other hand, some regulations to limit the number of critical stock purchases per person or transaction, as well as to give priority to vulnerable groups in society, must be well implemented. This aims to reduce consumers' perception of scarcity. Moreover, investment in marketing campaigns to raise awareness of the availability of national stockpiles is one recommended solution to convince consumers that the level of scarcity is manageable (Chua et al., 2021).

The next important role is at the market level. Retail shop owners can increase the frequency of restocking shelves in smaller amounts to reduce the appearance of empty shelves. Furthermore, overpurchasing may be prevented if the available items on the shelves have a short expiration date. Thus, it is important for store owners to place items with a more immediate expiry date, especially for food items. As one advantage of overpurchasing is to lower the risk of contracting COVID-19 due to less frequent store visits, retailers can consider limiting the number of people shopping in the store at any given moment, as well as ensuring all workers and shoppers implement good health protocols and disinfect the stores routinely (Chua et al., 2021).

Finally, there are several important solutions for consumers to refrain from panic buying. For instance, consumers can have an effective preparation method by making a shopping list prior to a store visit. For perceived severity, consumers can refocus on things that can be controlled, such as maintaining good physical and mental health by regularly exercising, getting enough sleep and managing stress and anxiety. In addition, a greater capacity for analytic thinking or cognitive reflection of individuals in filtering external information, as well as finding more facts over a viral issue, will lead people to resist overpurchasing behaviour (Bentall et al., 2021).

Conclusions

In conclusion, panic buying causes many disadvantages and detriments to various stakeholders, including food producers, supply chain transport operators, retail store owners, society and the environment. Therefore, it is important for all stakeholders to understand the factors resulting in panic buying, such as perceived scarcity of consumers, to better manage the outcome. Understanding the unconscious coping mechanisms of individuals or households due to the shock of sudden changes or pandemic situations may help shorten the amount of time and mitigate the severity level of panic buying.

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Author



My name is Dessy Wijaya, and I come from Palembang, Indonesia. I earned my Master of Science degree in International Food Business and Consumer Studies in 2016. After graduating, I joined the marketing department of a food retail company in Jakarta, Indonesia. I have been assigned to help food and beverages companies meet their potential customers through offline and online media. In addition, I was not only focusing on increasing the sales of products, but also understanding the changes in consumer demands and other factors affecting purchase behaviour. Afterwards, I started my family and quit my job at the end of 2018.

In 2020, I started working again in a small company that engaged in industrial poultry farming to produce, distribute and sell eggs. Currently, I continue my career in the marketing team, which is closely related to retailers, supermarkets, restaurants and direct customers. During the pandemic situation, there have been many restrictions, but fortunately, the demands for eggs as one staple product are still considered high. However, the challenge is to manage production to meet consumers' needs and make sure the stock is well distributed, thus keeping stable the price of eggs.

Other than working in a company, I am also a wife and mother who loves reading books and travelling. As an individual, I find reading books and travelling enrich me with different points of view toward things in life. Different manners in speaking, dressing and eating interest me as I am learning to understand different cultures. In addition, as a mother, I hope that I will be able to give my children the opportunity to experience various things in the world.

14

The COVID-19 Pandemic and Its Effects on Food Production and Consumption

Jigish Shah

Food value chains had their test of the century in 2020 when COVID-19 swept across the world, hampering livelihood and everything else around it. Life came to a standstill in most of the countries across the world for a couple of months. India entered into a never-before-seen state of complete lockdown for a period of three months, with just essential commodities allowed, which included food production and pharmaceuticals. The country witnessed drastic measures being taken to control the spread of the deadly COVID virus, which included complete halting of the movement of people across federal state borders and restricting certain food imports.

In India, production units and supply chains that relied heavily on manual labour were affected the most during this pandemic. There was an unprecedented amount of labour migration, which led to the closure of a lot of businesses, either permanently or for prolonged periods. This led to a shortage of many processed products, as the manufacturing units could not produce enough due to the lack of labour. Due to a lack of labour, there was a disruption in the supply of fresh fruits and vegetables, and this industry relies primarily on labour. There is an urgent need for automation in production processes wherever possible, for example, packing, loading, unloading and using it, to reduce human touch as much as possible to upgrade hygiene standards and also to ensure higher levels of efficiency in production. Also, production facilities should increase and improve working conditions to maintain the health and safety of their employees, and COVID-19 protocols like social distancing and masking should become permanent measures at workplaces.

Technology, which includes artificial intelligence, needs to be adopted at a much higher scale. Food delivery apps were the most used apps during the lockdowns. Even big Indian supermarkets came out with their own apps to cater to the delivery market. Online e-commerce portals saw a big jump in grocery deliveries¹. This taught a very important lesson in usage and integration of tech and that tech should be adopted more in day-to-day life and be made easier to use for people of older age groups as well, some of whom might be technologically challenged. The use of AI would also help to determine the amount of stock to be stored in various regions in the future per the current demand as there was a huge surge seen in the initial days of the lockdown amid fears of food shortage, and there were many store shelves that were temporarily empty.

Cold chain infrastructure is developed primarily in only 3 out of 28 states in India and eight union territories. During multiple lockdowns, all food products with a shorter shelf life expired. There has to be a strong focus on developing cold chain infrastructure at the farm level and in cities as not only would this help during emergencies, but it would also reduce postharvest losses to a great extent. Multiple commodity cold storages of smaller capacities need to be developed at each city and regional level to help restaurants and other small food businesses store their fresh and frozen produce. Smaller reefer transport vehicles based on alternative energy like electric also need to be used more. They are currently used by ice cream and frozen dessert distributors to do last mile delivery. Making them electric would greatly reduce the associated transportation costs in the future.

The most in-demand products during the first wave of COVID-19 were Ayurveda immunity-increasing foods and herbs. There were only a handful of major brands focusing on this. During COVID-19, all major brands, including international MNCs, came out with Ayurveda-based health products. This showcases an increasing trend of Indians adopting health- and Ayurveda-based foods, and there is a huge future market that should be focused upon by developing new products in this sector². There is a separate Indian government ministry called the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy) that gave out recipes of the traditional Ayurvedic drink 'Kadha/Kwath', which was adopted by many companies and launched into the retail market. People across the country started following healthy diets and consuming foods that included functional foods. As the COVID-19 virus was reported to have been spread by consuming meat, a lot of people also stopped consuming meat for a very long period and moved to vegetarian and vegan food. The foods of the future should be ready-to-eat foods, which can be achieved by using freeze drying and retort technology as they have a very long shelf life, can be made 100% natural and can serve as emergency use foods, as well as travel companions. Meat replacement plant-based foods, which are already popular in Western countries, also have great potential in India, with even Bollywood actors starting their own brands.

Exports were either stopped or controlled for a very long period of time (three to six months) for a lot of food items, which in a way forced people to only consume things that were available in India. India has been blessed with all types of climate, including cold, temperate, warm and arid. Almost all types of fruits and vegetables grow in India, from chamomile and kale to mulberries and avocados. Apart from this, a lot of indigenous products grow here, which have a host of health benefits. Prominent among them are Amla, Ashwagandha, Brahmi, okra, bhut jolokia (one of the spiciest chillies in the world) and so forth. There is food for all weather available here, and seasonal recipes have been passed down generation to generation. The focus in the near- and long-term

future should be on the cultivation and promotion of all indigenous products of India and increasing consumer awareness about their advantages and uses. This would give a great impetus to local agriculture and local, regional food, the essence of which is being lost in the younger generations. India is the largest producer of milk in the world. There should be an increased focus on developing novel milk- and milk-based products like Greek style yogurt, desserts and so forth as consumer demands increase day by day for innovation in each sector.

To summarise, four major aspects—production automation, adoption of technology, cold chain infrastructure and health plus immunity-based ready-to-eat foods—can be improved upon in the future in food supply chains to increase food safety and avoid any major disruptions in consumption and food production.

Apart from this, the central government and state governments provided various subsidies, cash deposits in bank accounts and free basic food and grocery supplies to the agriculture-based communities and persons living below the poverty line in India. Initiatives like this in the future could also help weather the initial shocks and financial stress that many sections of the society would go through during times of a pandemic.

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Author

I am Jigish Shah from India. I graduated from the International Food Business and Consumer Studies programme in 2016. Since then, I have been actively involved in the food business. I have been heading the New Business Development department at Aumfresh. Aumfresh works on the processing of organic-certified freeze dried Ayurveda herbs, fruits, flowers and vegetables and exports its products regularly to the US and EU. In 2019, I established a new consultancy firm—SJR Lebensmittel LLP—wherein we offer end-to-end food processing solutions right from the farm-to-fork level. Services include new product development, postharvest technologies, the latest food trends research, turnkey project execution, production process enhancement, cold chain management, organic certification and others. The COVID-19 pandemic proved to be a blessing in disguise for us professionally because everyone wanted to start a food business and was either looking for products, ingredients or consultancy. Personally, my interests include cooking, a hobby which I developed during my stay in Germany, football, table tennis, swimming, travelling and networking. I particularly enjoy trying different local food and beverages across regions and countries because it helps me understand the culture and people.

15 **Interlinkage Between Personal Experiences with the COVID-19 Pandemic and a Reflective Perception of Global Food Value Chains**

Luna Shrestha

I came from Nepal, one of the poorest and underdeveloped countries in the world. The first time that I was out of Nepal was to pursue my master's degree in Germany. Nepal is a small, landlocked country, situated between two huge countries, China (in the north) and India (east, west and south). Nepal is rich in biodiversity (118 ecosystems, 75 vegetation types and 35 forest types) and diverse socio-ecological features delivering a variety of resources. Hence, it was a big shocking moment for me to see the abundant availability of different types of fruits and vegetables throughout the year in the supermarkets of Germany. In Nepal, one grew up eating seasonal fruits and vegetables, where people keep on counting the days to eat specific seasonal fruits and vegetables such as mangoes and papaya. From one prospective, it is also good to have all fruits and vegetables accessible and available most of time. However, at the same time, anticipation and happiness to consume certain seasonal fruits and vegetables is reduced, with nothing seeming unique anymore. This situation is clearly different between developed and developing countries. Consumers in developed countries are more selective towards aesthetic aspects such as uniformity, shape, size and colour of fruits and vegetables. Consequently, these consumer behaviours lead to a huge amount of food waste.

With increasing industrialisation and globalisation worldwide, an international network in the agri-food sector based on efficiency and profitability is more and more emerging. Most European countries have always focused on resilient food supply chains and effective policy measures to permanently preserve food security and food sovereignty. A free market economy is determined by capitalism and is profit-driven, which has brought this approach completely out of control. As a result, foods are produced considering the highest financial benefits and neglecting social and environmental aspects. Noticeably, these foods are easily available at the cheapest price and, thus, govern the product, causing centralised production. For instance, in the countries of the European Union, each food product needs to be transported on an average of 500 km until it arrives at the supermarket. If all the people of the world live with the same standard as industrialised countries, then we would need five planet Earths. Moreover, food security and sovereignty no longer exist for most of the countries worldwide due to the global supply chains. Europe is very dependent on many agricultural products from outside, that is, highly dependent on an agri-food resilient supply chain network. For example, Germany no longer has any food sovereignty for animal feed production, such as soya and corn, as most of the feeds are imported from Brazil, Argentina or the USA.

As I became more and more aware of these issues while doing my master's studies, I decided to engage in depth in this area. This brings me to do research concerning my country, Nepal, where most of the foods are imported from our neighbouring countries, India and China. Foods available within the nation are being wasted and lost. Hence, a small step from everyone could bring a positive change to the nation. With this belief, I did research on the resources available in Nepal and found a way to develop food products rich in nutrients and aesthetical value that are accessible to the people. With a continual motivation towards food security and sovereignty, I continued my research, extending it to PhD studies in the field of sustainable food processing.

In the last phase of my PhD studies, when I started writing my final dissertation, the outbreak of the COVID-19 pandemic started in December 2019. With the increasing infection rate of COVID-19, restrictions in our daily lives were implemented, for example, online class, home office, no private and public gathering and so forth. Since I was in the last stage of my studies, that is, the writing phase as well as carrying a new life within me, I felt the COVID-19 pandemic did not hamper me as such. Everything went well, and I could submit my dissertation as expected almost three weeks before the delivery of my baby. After two months, I went to the Swiss Alps, and the restrictions of COVID-19 did not make such a difference to my life unless when I read the news. Once I returned from the Swiss Alps for my dissertation defence, my in-depth wish and hope to have a public disputation and to make a big celebration afterwards all were in vain due to the pandemic, as a never-ending story. I ended up finishing the disputation on a digital base. The realisation and happiness of achieving the greatest success of life was quite different compared with the one if I would have a chance to make in person. That moment made me feel, and I missed many friends who could have come to attend my disputation easily in a normal situation but due to the COVID-19 pandemic, life was changed.

Not only the education sector but also the COVID-19 pandemic has been affecting public health, food systems and the world of work. Hence, when it was clear that COVID-19 was not going to be over after a few months, different actors, especially political actors and governments in different countries, started to amend their policies, strategies and measures to handle the challenges caused by the devastating pandemic. Various steps, such as lockdown and border restrictions, have been implemented by the government in each country to control the pandemic. This led to uncoordinated and unpredictable measures, which drastically influence the agri-food sector and have had a huge impact on the international food supply chains. Additionally, this new pandemic shows that every actor and sector is highly interlinked and dependent on each other. When one single part of the network is disturbed, everything comes to a standstill. COVID-19 started to be a part of humans' daily lives, and consumer's behaviour started to change regarding diet patterns.

For example, people are eating more at home, making fewer activities and reducing social contacts, as well as sports, which resulted in the fact that in Germany, people gained 5 kg weight on average.

Reports, documentaries, books, information campaigns and so on about industrial animal husbandry and monocultural crop production problems, food waste and general problems associated with food production have alerted the population. Actors from all types of society, such as environmental and animal rights associations, scientists, students and so on, started to engage and united to fight for a change, and a new movement started. These issues have increasingly become thematised in mainstream social media and politics. One can observe the first result of this movement; for example, many companies investing in environmentally sustainable products with a huge range of new labels such as regional products, climate neutrality and so forth. Furthermore, innovative products have been developed to replace animal products with vegetal products like milk, yogurt, butter, cheese, meat substitutes and many more. Many new ideas are emerging from the universities and start-up scene, such as the CSA community supporting agriculture, urban agriculture, vertical farming and so forth to tackle global issues like climate change and the COVID-19 pandemic.

The COVID-19 pandemic has accelerated the aspects mentioned above and once more demonstrates that there is need to change, especially for the young people who are fighting for improvement in the environmental and food problems. The pandemic illustrated, once again, how much the globalised and industrialised world is interlinked and how high the dependency is among all countries around the world and among the industrialised countries. The monitoring of policy responses to COVID-19 shows that agri-food systems proved to be more resilient than other sectors of the economy in developed countries, but other sectors have been facing significant problems with supply chains. In developing countries like Nepal, where many people depend on a single source of income, the pandemic has affected people the hardest through reduced employment, lower incomes, long-term lockdowns and migration remittances. Therefore, this issue made the politicians more aware of the interdependency among the different actors, and a new debate emerged regarding how to build up permanent, efficient and resilient supply chains that would also function in catastrophic conditions like the worldwide pandemic. How can such constraints be avoided in the future? Which policy measures must be approached to build up innovative management strategies to develop a resilient supply chain network to ensure and preserve food security and food sovereignty? These are the questions on which we must work together to find fruitful and decentralised solutions.

Now is the time for a paradigm shift; one can no longer say my region first or my country first. The world and global problems such as food security, climate change or the pandemic are now worldwide interlinked and can no longer be solved alone, only together. Certainly, everyone must make their own contribution, and regional approaches must be aimed, but only a global approach like global solidarity and support can cope with the huge challenges of today.

Author



I am Luna Shrestha from Nepal. I came to Germany to pursue my master's degree in International Food Business and Consumer Studies (IFBC) in October 2013, and I graduated in November 2015. Then, I continued with a PhD study at the Department for Agricultural and Biosystems Engineering, Witzenhausen, and succeeded to achieve the title of doctor in November 2020. Since January 2021, I started to work in Ceres Certification of Environmental Standards as an evaluation officer and country coordination for Egypt and Saudi Arabia. Before coming to Germany, I had worked in the food industry, such as pita-bread industry and ice cream industry, and worked as a Food Technology and Quality Control specialist at the National Entrepreneurship Development Centre (NEDC), supported by the Micro-Enterprise Development Programme (MEDEP). Beside my professional life, I love hiking, travelling, cooking and exploring new things. I enjoy learning and new adventures but sometimes appreciate also quiet time doing meditation and yoga while listening to calm mantras or music.

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The Strongest Tree

Nicolás Veloso Martínez

Earthlings depend entirely on what soil is going to bring us up. This primordial level of existence nourishes and compromises our entire society, economy and environment. At the beginning of the outbreak, society experimented with the fragility of our system and lives. We did think we were the strongest link in the food chain, but a tiny little fellow showed us otherwise.

Consumer consciousness was pushed to grow up. The word 'health' started to make sense again; the entire society wanted to be protected from the unknown, while nutrition and immunity became trends. Then, the dynamics of this change moved the entire sector into a new paradigm. Thousands of broadcasted reports and videos showed how bad the situation was just by our intense meat habits. Plant-based meat companies grew explosively worldwide, market leaders became prepared with new plant-based meat solutions, small natural companies were being bought, and merges between market leaders will now be frequent. The change is at our doorstep, basically because we realise that it is better to keep loved ones healthier than in the hospital.

In some point, the economy starting to collapse driven by fear, and the food companies were doing their best to read the markets. In a one-year period, the consumption patterns changed, and we restricted ourselves to certain areas and types of food. The flexitarian movement undoubtedly arose, even though years ago veganism was the promised land, regular consumers have found their own way through this new pandemic scenario

Food businesses saw this opportunity and began to rapidly go in this direction, even though certain steps have been walkthrough for the past 10 years, this little fellow was the nitro-gas that encourages food companies to bridge the gap between food and health. These concepts were spread so furiously that consumers started to pay attention, since it has been showed that nutrition can be one of the most powerful interventions to reduce the burden of disease, having a direct effect on individuals and therefore, on society.

In this context, it is well known that setbacks are recognised and seen as opportunities. The simplicity of this statement could be somewhat annoying but does not lack of truth. A strong wind makes a tree stronger in the same way that the right nutrition makes us stronger, capable of many achievements just as a vegan bodybuilder (Jim Morris) or a fruitarian ultra-runner (Michael Arnstein). Food production has been affected not because trees are not growing or blooming, just because we are in the middle of everything. Hence, the opportunity is in front of us, and our mission is clear: revitalise the health of human beings and grow strong.

Author

Nicolás Veloso is my name, and I come from Chile. I graduated from the International Food Business and Consumer Studies programme in 2016. My career was marked by the food industry since the beginning, working abroad with a global food company, to later leading the internationalisation and promotion of several Chilean food companies with the Chilean government. Those experiences encouraged me to enrol myself in the IFBC programme. Since then, I have been involved in commercial areas of different companies and sectors. Exporting fresh table grapes to Asia, building and managing the sales team with a regional winery located in the Limarí Valley in northern Chile and today, as part of the sales team with a global natural nutrition company. The corona pandemic brought huge changes and opportunities where the imagination was put into action. During this time, the aim was to promote the regional wine culture with a small wine and consultant business founded in 2020. However, my two kids, Aurora and Franco, are the main core of my life, along with fanaticism for food, sports and books.

Jury Members



Prof. Dr. Christian Herzig

Prof. Dr. Christian Herzig has been a Professor of Management in the International Food Industry at the Faculty of Organic Agricultural Sciences at the University of Kassel since 2014. He is Vice Dean (Research) of the Faculty and heads the PhD programme Food Economics and Technology with a focus on Sustainability along the Food Chain, which is jointly run by the two institutions that also offer the Master of Science Programme in International Food Business and Consumer Studies (IFBC) (Kassel and Fulda). Prof. Dr. Herzig is a member of the Board of Directors of the Exceed Centre "Global Partnership Network" (SDG 17) and heads the Graduate Centre for Environmental Research and Teaching at the University of Kassel. His research revolves around the societal role of the food economy. A particular interest lies in practices that make the interrelationships between food businesses and their ecological and social environments visible (or invisible), measurable and manageable. Prof. Dr. Herzig has been Kassel's Programme Director of the IFBC programme from 2017 to 2019 and 2020 to 2022. In addition, he has been Kassel's Programme Director of the Master of Science Programme in Sustainable Food Systems (SusFoods). He enjoys teaching in international and intercultural contexts.



Prof. Dr. Marc Birringer

In 2011, Prof. Dr. Marc Birringer became a Full Professor for Applied Nutritional and Environmental Biochemistry at the Department of Nutritional, Food and Consumer Sciences of Fulda University of Applied Sciences. Since 2021, he has been the Programme Director of the joint Master of Science programme in International Food Business and Consumer Studies (IFBC) (Kassel and Fulda). Prof. Birringer is a Board Member of the Centre for Nutrition, Food and Sustainable Catering and Supply Systems (ELVe Fulda) and of the Cluster for Innovation and Sustainability in Agriculture and Food Systems (Green Food Cluster, Fulda). Prof. Dr. Marc Birringer is also a Board Member of the Gesellschaft für Angewandte Vitaminforschung e.V and member of the Editorial Board of NFS Journal (Nutrition and Food Science). In 2020, he became Chief Editor of the Journal Applied Research (Wiley). He is the author and coauthor of more than 100 peer-reviewed publications and reviews. His current research focuses on dietary micronutrients such as vitamins, trace minerals and secondary plant ingredients and on the assessment of new food trends.



Prof. Dr. Tonia Ruppenthal

Prof. Dr. Tonia Ruppenthal has been a Professor of Business Administration, Management and Marketing at the Department of Nutritional, Food and Consumer Sciences at Fulda University of Applied Sciences since 2013. She examines business models and conducts research in the field of market and consumer research in the food industry. A particular focus is on the out-of-home catering with trends and future expectations, as well as possible functional and structural changes in the organisation of nutrition for different social milieus. Prof. Dr. Ruppenthal has been Programme Director of the Master of Science Programme in International Food Business and Consumer Studies (IFBC) from 2013 to 2021. In addition, she was Programme Director of the Master of Science Programme in Sustainable Food Systems (SusFoods) from 2015 to 2021.



Prof. Dr. Dr. h.c. mult. Angelika Ploeger

Prof. Dr. Dr. h.c. mult. Angelika Ploeger at Kassel University has been creating and leading the Organic Food Quality and Food Culture (Faculty of Organic Agricultural Sciences) section for 17 years (until 2018). Before this position, she was working as a Professor for 15 years at Fulda University of Applied Sciences. Because of her position at both academic institutions and her previous work in the food industry, she encouraged colleagues from both universities to work together in offering expertise in agriculture and food, which led to the establishment of the Master of Science Programme in International Food Business and Consumer Studies (IFBC) (Kassel's Programme Director from 2006 to 2017). Her research focus aims to include aspects of sustainability in product development and in the food chain (from farm to fork) and a wide range of methods to evaluate products and processes. The topic of sustainability has to be included in higher education, too, for example, at universities offering agricultural and food sciences. Therefore, some of her international research projects aim to install a curriculum for the European Master of Sustainable Food System (with seven European partners) and the Structured PhD Programme for Sustainability in Agriculture and Food (SAFS) with the Agriculture University in Tbilisi, Georgia. Currently, she sits on the Advisory Board for the programme Organic Hubs for Africa (Federal Ministry for Economic Cooperation and Development).



Dr. Friedrich-Karl Lücke

Friedrich-Karl Lücke was a Professor at Fulda University of Applied Sciences for 27 years until his retirement (September 2016). He taught food microbiology, management of food safety and quality and basic food science for over 25 years. His main fields of interest in research and development include the assessment and control of microbiological risks in the food chain, food safety assurance systems in small- and medium-sized enterprises and food fermentations, with a focus on meat processing and other solid-state fermentations (using fungi). He was (and still is) involved in various research and extension projects in these fields and a member of various commissions and working groups on food hygiene and microbiological standards. He has been coresponsible for the IFBC programme, which he developed jointly with the Faculty of Organic Agricultural Sciences of Kassel University and acted as Fulda's Programme Director from 2006 until 2013. He is a member of Scientists for Future and advises this organisation in issues related to sustainable food systems.

Essay Competition Project Team



Gervasius Harwin Wangrimen

Gervasius Harwin Wangrimen is a third-semester master's student of the International Food Business and Consumer Studies (IFBC) programme. He holds a bachelor's degree in Nutrition and Food Technology. Food is something we meet, something we have, and something we encounter every day. These circumstances urged him to wander more about food. That was the brief about how he first fell in love with food and its technologies. Before continuing his study at IFBC, he was working as the head of a field unit in the quality department of a food-producing company in Indonesia. He aims to master the science behind market research as one of the vital points in the food business and be able to find answers to the problems that arise relating to consumers. This will help in understanding more deeply how we can deliver something that is more needed and beneficial to the community, utilising the technologies we have now to meet consumer demand. In terms of the scientific field, he has written two scientific publications. One is about Rendang and its culture (2018, DOI: 10.1016/j.jef.2017.10.005). Another one is about the effect of light intensity and the given nutrient on the growth of oyster mushrooms (2017, DOI: 10.24252/bio.v5i2.3878). His recent research is about the optimisation of Achira flour modification to increase its resistant starch content and the satiety index assessment conducted in vivo on human subjects. The research was fully funded by the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia. Besides this serious stuff, he loves to play sports and music.



Viola-Maria Cußmann

Viola-Maria Cußmann graduated in 2019 with a bachelor's degree in Industrial Engineering Food Production from Osnabrück University of Applied Sciences. Her interest in intercultural exchange and management led her to pursue a master's degree in International Food Management and Consumer Studies in 2020. Currently, she is on a semester abroad at Ghent University in Belgium. Growing up on a farm and having early exposure to primary food production, she developed a special passion for food. In addition, Viola is particularly interested in politics, all kinds of sports and ecology. In the future, she would like to make an internationally operating food company a bit more sustainable.



Pious Tetteh Anoi

Pious Tetteh Anoi comes from Ghana, and his passions and motivations lie in many different fields. Out of them is to be an expert in matters relating to the food industry; he is also a lover and player of soccer. This passion in the food business led him to pursue a bachelor's degree in Food Process Engineering and, currently, a master's degree in International Food Business and Consumer Studies (enrolled in 2020), which even the COVID-19 pandemic did not deter him from pursuing. Pious has worked in a few food companies in Ghana, with Nestle Ghana being the most notable. His COVID-19 experience has not been different from others around the world who were hit one way or the other by the pandemic because it delayed his timeline for travelling abroad to pursue his master's degree. But as always, passion should speak louder than circumstance; no matter how long it takes. On a positive note, he learned within the waiting period about the importance of family and friends and to enjoy the little moments with those who matter the most in this life. He was also able to undertake a product innovation project to make convenient fried anchovies. Pious hopes to have a food business of his own that would one day be known overseas.



Prof. Dr. Christian Herzig

Since he took over the chair of Management in the International Food Industry at the University of Kassel's Faculty of Organic Agricultural Sciences in 2014, Christian has enjoyed the close collaboration in teaching with international students of the IFBC programme. Every year, he devotes a two-semester project seminar to current topics that have a connection to international food business. One example of the consistently impressive project results from the past is the organic food business guide for the island of Mallorca (www.mallorca-organic.com). In the 2021 anniversary year of the IFBC programme, he developed the idea of holding an essay competition to give both students and graduates of the programme a space to reflect on the impact of the pandemic on their professional, private and educational situation and to express this in the form of an essay. The project, carried out together with Gervasius, Viola and Pious, resulted in an online event in December 2021 that brought together many current students and alumni to celebrate both the anniversary of the IFBC programme and the writers of the awarded and short-listed essays. All 15 selected essays have been compiled in this volume to mark the programme's 15th anniversary.

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Book series "Economic and social science studies on sustainable agriculture and food business"

The book series presents practice-oriented and innovative studies on sustainable agriculture and food business. The economic and social science studies often have an exploratory character and are based on projects and studies carried out by graduates and scholars of the University of Kassel's Organic Agricultural Sciences Faculty. Volumes with thematic focuses are published in loose order, aim at practitioners from the agricultural and food sector (farms, associations, institutions, initiatives, etc.) as well as researchers and lecturers with a special interest in topics of a responsible and sustainable agri-food sector.

Volume 1:

Herzig, C., van Elsen, T., Krikser, T., Mühlrath, D. (2020). *Landwirtschaft und Mensch: Herausforderungen und Gestaltungsmöglichkeiten im Miteinander*, Kassel University Press (in German).

This volume deals with social topics in agriculture, with a particular focus on human-centered issues. Contributions look at: Internal communication of farm communities, vocal education in agriculture, burnout in agriculture, cooperation between farms and sheltered workshops for people with disabilities, integrative learning processes in social farming.

Volume 2:

Herzig, C., Wangrimen, G. H., Cußmann, V., Anoi, P. T. (2021). *The pandemic's impact on food business education and food value chains: global reflections*, Kassel University Press.

The COVID-19 pandemic is one of the most challenging crises the world has faced in recent decades. This volume provides a collection of awarded and short-listed essays on the pandemic's impacts on food business education and food value chains. The essays were written by students and graduates of the Master of Science programme in International Food Business and Consumer Studies. Each essay provides unique reflections on how students and food professionals have been affected in terms of their education, business or jobs and personal life.

NACHH ALTIGE

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