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CONTENTS

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THE CAMEROON ANGLOPHONE CRISIS IN THE WAKE OF COVID 19 PANDEMIC: REFLECTIONS BEYOND THE CEASEFIRE

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ABSTRACT

When the United Nations Secretary General Antonio Guterres proposed a "global ceasefire" on the 23 March 2020, his appeal received mixed reactions from various warring parties across the world. Citing the "fury of the virus" Guterres' request had significant ramification on the perception of contemporary conflicts with the question of public health becoming an important rallying call for cessation of hostilities. This paper seeks to examine the relationship between conflict, conflict management and public health. It specifically looks at the Anglophone crisis in Cameroon as a case study given the Southern Cameroons Defense Forces (SOCADEF) were among the first armed groups to agree to the call for a global ceasefire. The paper interrogates how historical grievances and challenges of public health among the Anglophone Cameroonians combined with the nature of the ongoing conflict has left the region and its residents in a potentially vulnerable position while experiencing the pandemic. The authors question whether stopping violence without adopting other measures to cover for the unique socio -political, economic, and public health challenges in the separatist -controlled regions as well as Cameron as a whole will be an effective means of dealing with the current pandemic in the West African nation. The study thus concludes with a set of recommendations that address the gaps in the existing linear approach to confronting COVID 19 in regions experiencing conflicts.

I. INTRODUCTION

Within the last five decades, a zoonotic virus belonging to the larger coronavirus family has crossed from other species and infected humans three times. More recently has been the outbreak of 2019-nCoV, also known as COVID -19 first detected in Wuhan district of Hubei Province, China. The first infections are believed to have originated in a wet seafood market in the district. Although there were quick efforts to recognize the epidemiological and clinical aspects of the disease, its rapid spread from Wuhan to other parts of the world appears not to have been well managed. In less than six months since the disease was detected in December 2019, more than 185 counties have reported patients suffering from the disease. This can be attributed to the possible impacts of underestimating the human -to -human transmission potential of the virus in the early stages as well as the lack of full understanding of how the virus reacts in different environments, age groups, and individual lifestyle. What is clear, however, COVID-19 is showing similar characteristics (75 -80%) with previous pathogenic respiratory viruses such as the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) (Zhu et al, 2020; Huang et al, 2020; Zhou et al, 2020).

The rapid spread of COVID -19, which is a severe respiratory disease, has resulted in an unprecedented crisis not only in public health but also socio-economic spheres of many societies in the world. What is even more concerning is that despite the global number of recorded infections reaching 14 million and over 600, 000 deaths by July 2020, Doença (2020: 619) argues that these numbers could be much lower than the actual cases given that many infected individuals are asymptomatic or minimally symptomatic. This unprecedented situation is giving policymakers and international organizations a big challenge trying to contain the spread of the disease. Different governments have adopted various measures to counter the spread of the pandemic but despite these efforts, many health systems and economies are quickly being overburdened (Nicola et al, 2020; Baker et al. 2020). As governments and international organizations are increasingly being absorbed into activities aimed at containing the spread and negative impacts of COVID -19 pandemic, regions that were already and continue to face conflicts are facing a double crisis. From Yemen to Libya, Syria to Afghanistan as well as Somalia, Cameroon, and the recent altercation between India and China, a combination of conflicts and wars are threatening millions across the world. According to estimates by the International Crisis Group, 34 vulnerable countries that are either facing war or economic crises are at risk of between 500 million and one billion COVID-19 infections which could also result in between two and three million fatalities (VOA, April 2020).

It is similar concerns over the potential negative impacts of COVID-19 on conflicting societies that perhaps informed the passionate appeal by the Secretary-General of the United Nations António Guterres. In a statement he delivered during a virtual press on March 23, 2020, Guterres described the COVID -19 pandemic as "the most challenging crisis since the second world war." He went further to request for "an immediate global ceasefire in all corners of the world." Stating that "It is time to put the armed conflict on lockdown and focus together on the true fight of our lives" (Dickinson, March 2020). This call by the UN chief got mixed reactions from different groups involved in conflicts as well as critical international security organs such as the UN security council. In-fighting between China and the US made it difficult for the security council to pass a resolution calling for a global ceasefire during the pandemic. This much-needed resolution was only unanimously passed on July 1, 2020, three months after the UN secretary-general called for an urgent pause in all conflict. In passing the resolution, the Security Council appealed to all armed groups to implement a "90 –day humanitarian pause" of all conflicts to allow for medical evacuation and humanitarian actions. Without a security council resolution, the decision to adopt a ceasefire was left on the hands of the armed groups and governments involved in conflicts.

This is the dilemma Cameroon is facing amid the pandemic as different groups have taken opposing positions on the calls for a cease-fire despite the possible tragedy given the already fragile situation in the country caused by the war. Cameroon has been sharply divided for decades. However, the more recent crisis is attributed to the 2016 demands by the two English- speaking groups (which account for 20 percent of the national population) for the country to revert to the two-state federation (Agwanda, Nyadera, and Asal, 2020). These were the immediate post-independence/reunification demarcation that divided the country into the La Republic du Cameroon in the East and Southern Cameroons in the West. The unification of these two federal states in 1972 and the consequent renaming of the country (in 1984) to the Republic of Cameroon (La Republic du Cameroon) which was the original name of the colonial administered French territory sowed the seeds for future animosities. For the Anglophone Cameroonians, the renaming of the country meant that the government was seceding from the spirit of union which characterized the two-state federal -government system and could lead to forced assimilation (Caxton, 2017; Mbuagbo, 2002). Since then, resistance against the perceived assimilation of Anglophone Cameroonians has resulted in some of the worst post-independence confrontations between government forces on the one hand and armed groups as well as civil societies, academic institutions, and protesters on the other.

The outbreak of COVID-19 comes at a time of heightened conflict and insurgencies in Cameroon raising concern over the resulting impact of COVID-19 and internal war (Laurencin and McClinton, 2020; Ojong, 2020). Even more concerning is the lack of unity among the groups fighting in the Southern Cameroons as some have heeded to the call for a ceasefire while other groups have refused to pause hostilities. Similarly, government forces have not upheld the ceasefire with reported attacks on civilians during the pandemic. Activities of other groups such as Boko Haram in northern Cameroon during the pandemic also paint a worrying picture of the West African State (Nyadera, Kisaka, & Agwanda, 2020). This concern is further elaborated by the weak government response to the pandemic as well as insufficient investments in the health sector, inequality, high population density in urban informal settlements, and corruption.

This paper seeks to examine the relationship between public health crises/ pandemics and conflicts. It looks at the current Anglophone crisis in Cameroon and how that is shaping government COVID-19 response, epidemiology of the disease, and the impact of COVID -19 on the conflict. The paper argues that the consequences of historical grievances, inequality, marginalization, and conflict have the potential of worsening the spread and impact of COVID -19 in Cameroon. The paper examines the state of COVID-19 in Cameroon, the response by the government, and pro-independence groups as well as the opportunities and challenges facing the country during this pandemic. The authors urge the government and pro-secession movements in the country to pause hostilities until the pandemic is well addressed. The paper concludes with several recommendations policymakers, peace advocates and armed groups can adopt during the pandemic.

II. REACTIONS IN CAMEROON ON THE CALLS FOR A GLOBAL CEASEFIRE

Mr. Guterres' call for a global ceasefire provoked mixed reactions in Cameroon. In Cameroon, the Southern Cameroons Defense Forces (SOCADEF), a separatist group which operates in Fako and parts of the Lebialem divisions in the South West region, was the first among 15 separatist groups to heed the call. On March 25, 2020, the leader of SOCADEF declared the group is "prepared to support the ceasefire and will ensure the security and free circulation of international observers and humanitarian organization in Ambazonia… in accordance with human rights law"

(Olivier, 2020). On March 29, 2020, SOCADEF followed through with its ceasefire declaration by ceasing all combat activities for two weeks, while maintaining 'combat readiness' (Finnan, 2020). The prime motive for declaring this ceasefire, according to a statement released by the armed group, rests in the fact that "the people of Ambazonia are ill-prepared to face a major pandemic" (ibid). It was hoped that declaring a ceasefire would offer the people the opportunity to not only get tested for COVID-19, but also get the much-needed medical attention they deserve. Unfortunately, at the time of writing this paper, other separatist militias have not yet responded to the UN Secretary General's call for a global ceasefire. The Ambazonia Defense Forces (ADF) which is one of the largest armed separatist groups welcomed the UN global ceasefire call, but under strict condition of reciprocity by stating that 'permitting a unilateral declaration of ceasefire will be able to provide Cameroon with unhindered access everywhere in their towns and villages' (Ambazonia Governing Council, 2020). However, they promised to continue to work with and provide humanitarian corridors with international organizations provided these organizations are screened by them (ibid). While these moves did not and will not bring about resolution to the conflict, they provided a glimmer of hope to the citizens in the areas where SOCADEF had combat operations. In other areas, fighting has continued. One can argue that SOCADEF's decision to declare a ceasefire, and ADF's decision to keep a humanitarian corridor open for organizations vetted by them, points to their realization of the importance of the need for a functioning public health system in times of a public health crisis.

One would expect that these moves by SOCADEF and ADF would be welcomed by the government of Cameroon and set the stage for a ceasefire dialogue between the government and the separatist movements. However, the government of Cameroon has remained silent on the call for a ceasefire. According to Cameroon's Minister of Higher Education, the government had no plans to declare a ceasefire (Ochab, 2020). Given this situation, one cannot help but wonder why the government remains silent to the call for a ceasefire amidst the COVID-19 pandemic. Is it because the government thinks COVID-19 is going to make the separatist movements vulnerable, thus offering a good chance to hit them? Of course not. It should be noted that COVID-19 does not discriminate in selecting its victims. Civilians are the ones bearing the brunt of the conflict: the loss of life because of the fighting and diseases (COVID-19 included), the countless lockdowns imposed by separatists, the economic hardship, etc. The answer to the government's silence could be traced back to November 2017, when the President-Paul Biya- declared war against the separatist, calling them terrorists. He said he would "never negotiate with terrorists who are out to separate his country" and that it was "his duty to ensure public order, social peace, the unity of the nation and Cameroon's integrity" (Sonkey,2017). Should a pandemic which has the potential of decimating the entire human race not be a good reason for 'enemies' to settle their differences and cooperate to stomp it out? Common sense dictates that it is the most logical, and humane thing to do. The government's refusal to negotiate a ceasefire with the separatists is indicative of decades of its heavy-handed rule on the anglophone population. It only goes to frustrate the anglophones and further alienate them from the state.

III. METHODOLOGY

In examining the relationship between public health crises/pandemics and conflicts, we start by describing the current Anglophone crisis in Cameroon and how that is shaping the government's current COVID-19 response. We also assess specific measures adopted by both the government and pro-independence groups in addressing the ongoing coronavirus and how that has impacted the conflict. Our paper argues that the consequences of historical grievances, inequality, marginalization, and conflict have the potential of worsening the spread and impact of COVID -19 in Cameroon. Thus, in understanding the conflict, we are particularly interested in the factors that inform the acceptance or rejection of a ceasefire agreement during a pandemic.

Considering that many governments have implemented travel restrictions and border closures because of the virus, our analysis is based on secondary data from academic publications, government reports, media articles, resolutions adopted by international organizations, and data from civil society organizations. The Cameroonian conflict described in our case study also examines two related processes and research programs: the dynamics of intrastate conflict and rebel governance practices. We additionally examine the literature on conflict management, exploring resolution frameworks centered on the power-based, interest-based, and problem-solving approach in understanding the conditions under which state and non-state actors accept ceasefire agreements. Given the absence of vaccines or medical treatment, the authors urge the Cameroonian government and pro-secession movements in the country to pause hostilities until the pandemic is well addressed. We conclude our paper with several recommendations for policymakers, peace advocates, and armed groups to adopt during the pandemic, arguing that these recommendations can promote a win-win outcome for state actors and rebel groups while ensuring the health security of local populations in countries experiencing conflict.

IV. THEORETICAL/CONCEPTUAL FRAMEWORK ON CONFLICT AND PANDEMIC (PUBLIC HEALTH)

On July 1, 2020, the UN Security Council announced its decision to adopt resolution 2532 (2020) in support for Secretary-General António Guterres' global ceasefire appeal issued in late March. The resolution calls upon all parties engaged in armed conflicts to begin a humanitarian pause for at least 90 consecutive days to enable the safe, unhindered, and sustained delivery of medical assistance and evacuations (as needed in accordance with international law) in addressing the negative impacts of the pandemic in these regions (UNSC, 2020).

For many academic scholars and policy analysts, however, the Council's decision-- three long months after Guterres' call--had likely missed the window of opportunity to meaningfully engage armed groups (Hove, 2020; Gowan, 2020). Although a significant number of armed groups had initially responded positively to the call for a global ceasefire, the Council's delay in endorsing Guterres' call failed to give the ceasefire political credibility and discouraged conflict parties to take the call more seriously (Lederer, 2020). For these critics, the security council's delay in endorsing the idea of a global ceasefire squandered the window of opportunity that would have given political weight to the idea (Hove, 2020). The truce would have allowed pandemic responses to be carried out in areas and regions that have become generally too dangerous for medical personnel to access and would have additionally created opportunities for negotiations between warring parties in resolving conflicts in their respective regions and countries. Since mid-April, the ceasefire appears to have had little effect on ongoing conflicts, with fighting resuming in countries such as Columbia, Yemen, Libya, and Cameroon (ACLED, 2020).

So, what informs the acceptance or rejection of ceasefire agreements? To understand the conditions under which a group accepts or rejects a ceasefire, we first examine the relationship between conflict and conflict resolution mechanisms. In defining conflict, we adopt John Burton's concept of conflict and describe conflict as a relationship in which each party perceives the other's goals, values, interests, or behaviors as antithetical to one's own (Burton, 1990). It therefore follows under this definition that any analysis of conflict will require the examination of the totality of human relationships, whether conflictual or otherwise. This is because it is human motivations and values that are involved in any conflict situation, which are conditioned by the totality of the environment—economic, political, social, and ecological—where these disputes take place (Burton,1990: 2).

It is additionally important to note that one's assumptions about the nature of conflict is inevitably tied to how it is handled. As Burton posits, if conflict is believed to be caused by individual greed or by personal aggressiveness, it may seem appropriate and effective to employ coercive techniques against a party or parties (Burton, 1990: 3-8). In contrast, if the conflict is caused by some frustration of irrepressible human drive, the appropriate response would be to analyze the nature of the problem and adjust the institutional and normative environment that can address the conflict accordingly. Traditionally, conflict management frameworks and processes have usually focused on pragmatic ways in which each type of dispute--interpersonal, industrial, communal, international and others--may be tackled. This particularism, as Burton highlights, reflects a view that human conflicts and their management differ fundamentally according to the environmental setting of the human relationships they involve (Burton, 1990: 11; Brett, Shapiro, & Lytle,1998.). As such, researchers have generally identified three patterns for conflict management under this traditional framework (Poitras & Tareau, 2007; Lytle, Brett & Shapiro, 1999). The first is an approach based on power, which favors some competition that compels the application of force to exact a desired action. This approach is based on the logic of imposing one's will, a win-lose orientation, and is characterized by the prevalence of decisions by authorities, economic sanctions, and political games, among others. The second, a rights-based approach, aims to determine who is right based on preexisting rules. This approach, like the power-based approach, also has a win-lose orientation, but its orientation is based on the logic of respect for the rules established by the society that are deemed to be fair and just. Hearings and arbitrations are typical examples of right-based conflict management procedures. The third approach is the interest-based approach. This approach focuses on reconciling the interests of both parties from a win/win perspective and is founded on the logic of accommodation and concern for both parties. Negotiation and mediation are typical examples under this approach of reconciling party interests.

Yet in understanding and examining conflict, it is helpful to distinguish between two interrelated but distinct features of conflict—its degree of seriousness and its deep-rootedness—in assessing possible conflict resolution strategies that warring parties would be willing to adopt. "Seriousness" here refers to the impact of conflict on the individual or society, while "deep-rootedness" refers both to the causes and the nature of the conflict. Indeed, conflicts which are serious in its consequences, especially with regards to human security, cannot afford to be tackled by pragmatic and untested processes. Similarly, deep-rooted conflicts, in which there are issues at stake that are not negotiable, requires more sophisticated means of resolution (Burton, 1990: 7).

These distinct features of conflict might explain why some warring parties heeded the call for a global ceasefire, while other parties did not. Although the global ceasefire would have reconciled the interests of warring parties from a win/win perspective by addressing the pandemic and creating opportunities for negotiation in resolving violent conflicts, the call unfortunately failed to take into consideration that many ongoing conflicts are serious and deep-rooted. In superficial conflicts, interest-based disputes are generally negotiable. No one wishes to die over issues related to wages, territory, or roles in an organization. Deep-rooted conflicts, on the other hand, tend to be related to the defense of a culture, identity, or claims for equality of treatment. In such instances, these disputes (which are value or needs-based) reflect demands that are non-negotiable. This interrelated but distinct feature of conflict can explain why rebel groups, such as the Houthi Forces in Yemen, may have felt that the ceasefire would have a led to a suppression of their demands if they had accepted the global agreement (Burton, 1990: 11-16).

There have also been cases where warring parties have used the application of force during the coronavirus pandemic to exact a desired action in advancing their objectives. This is the case in Afghanistan. The Taliban announced its acceptance of the ceasefire in early April, but the group has continued to engage state security forces in areas that are not under its control. For research analysts, such as Adam Miller and Armida van Rij, the pandemic provides an opportunity for the Taliban to increase its governance role and win the eyes and minds of the local population by spearheading the fight against the coronavirus (van Rij, 2020). They both argue, for example, that it remains in the group's interest to avoid an outright ceasefire because this would allow the Afghan government the opportunity to spearhead this effort instead. Furthermore, continued fighting with the Afghan government during this vulnerable time gives the group a further advantage in the ongoing intra-Afghan peace deal negotiations (van Rij, 2020). In this instance, the Taliban is able to pressure the Afghan state to acquiesce to the group's demands of political power-sharing as negotiations continue over the peace process (Jones, 2020).

Nevertheless, research and empirical evidence demonstrate that although sufficient coercion and the lack of bargaining power can lead to suppression or the settlement of the dispute, this approach rarely ever leads to the resolution of the dispute. This is because the "loser" often tends to seek to even score, which creates a strong potential for conflict to re-emerge even after it has been settled (Poitras & Tareau, 2007: 73). This is why for us and for the purposes of this paper, conflict resolution is an outcome that is not only self-supporting but is also stable.

It means terminating conflict disputes by practices and methods that are analytical and that get to the root of the problem. Thus, as opposed to the settlement of conflict, conflict resolution aims to not only resolve the immediate social, ethnic, or political dispute, but may also provide insights into the generic nature of the problem, which can contribute to the elimination of the conflict's sources and the prevention of other instances (Burton, 1990: 2).

Conflict resolution processes like the problem-solving approach may address conflicts that are serious and deep-rooted, as this approach constantly promotes change in the direction of satisfying the values and needs of all parties involved in a dispute. Burton, for example, posits that the problem-solving involves providing opportunities for parties in three major ways. First, it allows each party to analyze their relationship in generating an accurate definition of the problem in terms of motivations and human needs. Second, it allows parties to cost their goals and policies once they are fully informed of all aspects the dispute, including the motivations and values of the opposing side. Finally, it enables all parties involved to discover other possible options that may be available that they may not have considered once there has been a full analysis of the conflict in all of its elements. Thus, problem-solving conflict resolution is a positive means of social control which seeks to establish non-conflictual relationships (Burton, 1990:19-21). This approach may also be viewed as a system of constant adaptation based on changing environmental conditions. This is because it allows "members of a society to interact in harmony by constantly and continuously dealing with the totality of relationships in the totality of the environment and adapting in whatever ways are appropriate" (Burton, 1990: 21). Thus, this approach has the potential to bridge or link person to person, group to group, and system to system, while preserving those aspects of societies which promote human needs and social stability.

In the context of pandemics and conflicts, we echo Burton's sentiments in the rest of our paper and argue that there unfortunately cannot be any resolution of a conflict unless it takes into account as political realities the perceptions and values of those who are at the forefront of the dispute. Representatives of rebel groups must either be provided with evidence of false perceptions and the need to alter their attitudes to accept a ceasefire agreement, or the options offered must meet the original demands made by the constituency concerned.

V. NATIONAL CRISIS AMID A GLOBAL PANDEMIC

On July 2, 2020, it was rumored the government was engaged in a ceasefire talk with the jailed leaders of the separatist movements, notably Sisiku Ayuk Tabe (president of the unrecognized Federal state of Ambazonia). News of the ceasefire talk was quickly picked up by local and international media outlets and was praised as a step in the right direction. However, on 6 July, the Government of Cameroon, through its spokesperson- the Minister of Communication-, rejected such rumors. Holding the rumors to be "inconsistent with reality", the Minister, in a communique dated 6 July 2020, reaffirmed the government's 'readiness to seek peaceful solutions to the crisis… particularly through dialogue", and called on "armed groups to put an end to the atrocities being committed against the civilian population as well as the destruction of development infrastructure and to accept the peace offer made by the Head of State" (Minister of Communication, 2020). Since the pandemic started, a significant deployment of troops to the Anglophone regions has been noted. For example, on April 21, 2020, the government admitted to a massacre its soldiers committed in January 2020 on unarmed civilians, including 13 children in the village of Ngarbuh in the North-West region (Finnan, 2020; Fisayo-Bambi, 2020). A month later (May 2020), the government established a military base in the same village, striking fear among residents trapped between a war and a global pandemic (Allegrozzi, 2020).

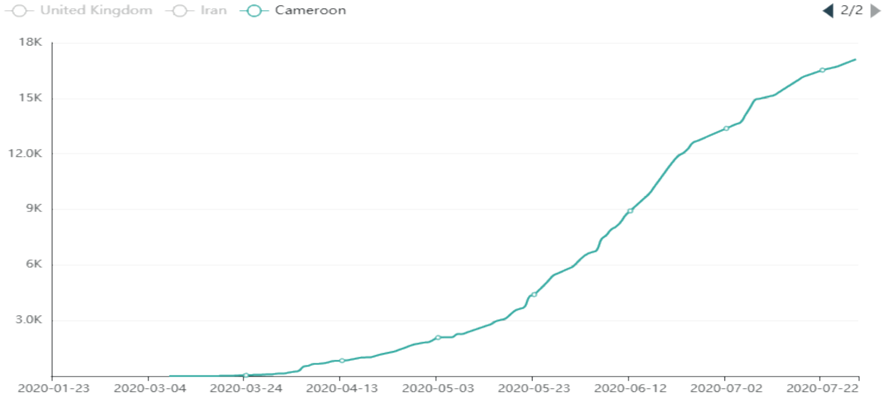
Considering the ongoing pandemic, one would think the government will adopt a humanitarian approach to the conflict in the two regions by setting up COVID-19 testing centres, health clinics, among others. But this has so far not been the case. Evidence on the ground points to the fact that the government still pursues a military approach to the conflict amid a pandemic. This is shocking to many who had nurtured hope for a return to normalcy. There continues to be a total lack of interest or investment on the part of the state in the health infrastructure of the two restive regions. Civilians and health personnel continue to bear the brunt of the actions of both government security forces and separatist forces. As a result of the fighting, several attacks against health personnel have been orchestrated and perpetrated by both parties before and during the COVID-19 pandemic. While examples of incidents of attacks abound and are well documented, there are few worth citing: On June 3, 2020, in the town of Ndop, located in the North-West region, a health worker was attacked her vehicle seized by separatist fights while she was transporting medical supplies. In an interview with the Voice of America (VOA), the said health worker revealed it was the third time she was attacked that week (Kindzeka, 2020). On May 30, 2020, seven staff of the Cameroon Baptist

Convention Health Services, in Bambui, North-West region were abducted by separatists (Journal du Cameroun, 2020). Such attacks against healthcare workers have as consequence, the disruption of life-saving assistance and services to people in need.

Healthcare infrastructure have continued to suffer because of the fighting in anglophone Cameroon. According to a report by Journal du Cameroun, as of April 2020, about 115 medical centres have so far been destroyed (Journal du Cameroun, 2020). Medical supplies have also been ceased and destroyed by some separatist groups. For example, between May 10-14, separatist fights in Mbengwi in the North West, burned COVID-19 sanitary kits donated by a community association, simply because government officials had attended the ceremony in which they were handed over (Bone and Nkwain, 2020). In a time of a public health crisis like the current COVID-19 pandemic, such actions have forced hospitals and clinics to be without routine support services, patients have been too scared to access health centres and hospitals for fear of being targeted by both soldiers and separatists. The people in these parts of the country have been rendered more vulnerable to the COVID-19 pandemic.

As of July 30, 2020, Cameroon has an overall 17,255 cases of COVID infection, with 387 deaths (WHO, 2020) making the country the second highest in sub-Saharan Africa after South Africa (Shaban, 2020). Fig.1. below offers a graphical representation of the overall COVID-19 situation in Cameroon.

Fig. 1. Number of confirmed COVID-19 cases in Cameroon (as of July 30, 2020)



Source: COVID-19 Tracker (July 30, 2020).

Looking at Fig.1. there is an up-ward trend in the number of confirmed COVID-19 cases. However, one should not be quick to conclude that this overall figure represents the number of active COVID-19 cases. Of this figure, 15,320 has been reported as Recovered cases. This leaves the number of Active cases at 1,548. Data on COVID-19 cases and deaths per region is absent. Therefore, it is difficult to say with certainty how many cases and deaths have been registered in the two Anglophone regions. Nevertheless, according to a press release dated June 23,2020 and signed by the North-West regional delegate for public health, of this number, the North-West region, as of June 23, 2020, counted 400 cases, 85 recovery and 45 deaths (Ministry of Public Health, 2020). With health facilities not enough and/ or properly equipped-only 34 functioning health facilities in the exist in the two anglophone regions (UNICEF, 2020)- it is worrying that continuous fighting will displace more civilians, and so lead to the introduction of COVID-19 and other diseases to communities of displaced person who already lack formal health care. The consequences will be disastrous.

VI. THE DILEMMA OF PUBLIC HEALTH, PANDEMIC AND CONFLICT IN CAMEROON

A strong healthcare system is essential in handling confirmed cases of COVID-19. However, Cameroon like other African countries, has a weak healthcare system (WHO AHWO Cameroon Fact Sheet 2020). The public health sector is one of the driving forces of Cameroon's healthcare system thanks to its prime objective of disease prevention and providing and improving health services to the population (Tandi et al., 2015). Public health facilities are organized into seven categories: general hospitals, central hospitals, regional hospitals, district hospitals, district medical centres, integrated health centres, and ambulatory health centres (Ministry of Public Health, 2017). Added to these, are private clinics, health facilities run by religious organisations and Non-Governmental Organisations (NGOs), and traditional health institutions. Quantitatively speaking, according to a 2016 data from the Ministry of Public Health, there were 4034 public and private health facilities in the country, of which 27.9% were private institutions (Ministry of Public Health, 2016). It is an undisputed fact that some public health institutions are not fully functional due to lack of equipment, and where equipment exists, it is or poor quality (see Tandi et al., 2015). In addition, the public health sector in Cameroon suffers from a health personnel human resources crisis. The ratio of health personnel (medical doctors, midwives, and nurses) to the regular population is 1.07 per 1000 inhabitants (World Health Organisation, 2017). A 2017 report by the United Nations Economic Commission for Africa reveals there are 0.8 doctors per 10,000 people, and 13 hospital beds per 10,000 people (UNECA, 2017). In some administrative regions, the proportion is as low as 0.3 doctors per 10,000 people as demonstrated in Table 1 below. In 2016, the government admitted that public health institutions are understaffed (Ministry of Public Health, 2016).

Table 1. Distribution of health facilities per region in Cameroon

Administrative Regions	Population (2012)	No. Health Institutions (2014)	No. of Doctors per 10,000 people (2011)	No. of Nurses per 10,000 people (2011)
Adamawa	1,098,165	157	0.4	8.8
North	2,240,649	272	0.4	8.1
South	720,833	310	0.8	11.4
Centre	3,803,931	838	2	14.6
West	1,840,137	628	0.8	12.8
East	818,139	227	0.7	11.3
Littoral	3,085,304	619	1.5	13.1
Far North	3,709,619	326	0.3	5
North West	1,870,148	367	0.3	4.7
South West	1,449,957	287	0.6	10.9
Total	20,636,954	4034		

Source: Own compilation adapted from data provided by the Ministry of Public Health (2011, 2017). It should be noted that these data are not recent. Therefore, in light of the ongoing conflict in the two anglophone regions, common sense dictates that the number of health institutions, doctors per 10,000 people as well as nurses per 10,000 people has dropped significantly.

Cameroon's public health sector has over the years suffered considerable neglect by the government. Public resources allocated to the health sector in Cameroon remain some of the lowest in Africa in terms of GDP (Ojong, 2019; World Bank, 2013). According to a World Bank report, out of the US$ 61 per Cameroonian spent on health care in 2010, the government contributed only US$17 (World Bank, 2013; Ojong, 2020). Therefore, individuals bear the cost of health care through out-of-pocket payments (ibid). The poor healthcare system has forced individuals in Cameroon to rely on out-of-pocket payments to cover health care costs related to the COVID-19 pandemic (Ojong, 2020). One could argue that the COVID-19 pandemic has exposed Cameroon's weak healthcare system. The country's prime minister, Joseph Dion Ngute, announced plans to transform eight venues into makeshift medical facilities to be used for the treatment and follow-up of COVID-19 patients (Cameroon Radio and Television, 2020). However, the construction of these makeshift medical facilities, as well as equipping them, has been slow (Ojong, 2020).

The fight against COVID-19 is one that requires a coordinated international response. No state can single-handedly deal with the situation. One continues to witness tremendous international support and cooperation among countries as they attempt to eradicate COVID-19. Donations in the form of medical supplies have poured in from UNICEF and Jack Ma's Alibaba Foundation into Cameroon. Cameroon has equally benefitted from financial support from countries such as the United States of America (United States Department of State, 2020) and Switzerland (Shaban, 2020). The NGO- Doctors Without Borders (Médecins Sans Frontières) has also been supporting the country's response to the COVID-19 pandemic. The government, in May 2020, received USD 226 million from the International Monetary Fund (IMF) to address the impact of COVID19 (IMF, 2020). Still in May 2020, the government of Cameroon disbursed the sum of 1 billion FCFA to the National Solidarity Fund to curb COVID19, and 4 billion FCFA to purchase cars for the newly appointed/elected senators (Ministry of Finance 2020). Such an act indicates that public health in Cameroon remain a priority of least importance to the government. Even though the government has taken some COVID19 preventive measures such as imposing on citizens the obligation to wear face masks and using the police to enforce such measures, it is lamentable that hospitals and health care facilities are still under-equipped or under-staffed to deal with this public health crisis. Currently, in the two restive anglophone regions, there only are 3 COVID-19 centres with one of them located in the North-West region (Song, 2020).

The United Nations has noted that the conflict in Anglophone Cameroon has created a humanitarian emergency affecting approximately 1.9 million people (UN News, 2019). Yet, for political reasons, the government has downplayed the severity of the humanitarian need, clashing with aid agencies. For example, the government has focused on blocking the delivery of aid to the two regions to show there is no humanitarian crisis in these regions (United States Department of State, 2019), and the government recently suspended flights by aid groups to these regions (Human Rights Watch, 2020). The government's official position of the ban of humanitarian flight is that it is aimed at preventing the spread of COVID-19 to these regions (ibid). However, one can argue that this has more to do with politics than the actual need to stop the spread of the virus. Both regions already have recorded cases of infection. Therefore, by suspending humanitarian flights to these regions, the government is preventing aid including medical supplies from reach vulnerable population. Looking at this, one sees a thread which connects the overall public health situation in the country, the public health situation in the two restive regions, COVID-19 and the mixed reactions to the ceasefire call.

Recently, the government announced it is pushing ahead with its reconstruction and development plans for the two restive regions designed to run for a period of two years. France pledged to support this plan with the sum of 40 billion FCFA (Journal du Cameroun, 2020) while a financial agreement worth 8.9 billion FCFA has already been signed between the government of Cameroon and the United Nations Development Program (Cameroon Radio and Television 2020). A total of 115 health centres are amongst the infrastructure to be rehabilitated in the two anglophone zones. With the conflict still raging on, a mobilization tour to the North West was made on June 21, 2020 by the head of the reconstruction commission. However, diaspora groups leading the separatist movements called for the lockdown of this region to disrupt the tour. Such lockdowns, which has been used by the separatist as a sign of disobedience with the goal of crippling the economy since 2017, has had significant hardship on the civilian population. With the government going forward with its reconstruction and development plan amidst the raging conflict, one can only wonder if the government is genuinely committed to the search for a sustainable solution to the anglophone crisis.

VII. DISCUSSION AND RECOMMENDATIONS

The endorsement of a UN security council resolution calling for a global ceasefire on June 24, 2020, by over 170 signatories shows the significance of taking courageous steps to silence the gun during the pandemic. What the world has already experienced as a result of the rapid spread of COVID-19 is unprecedented and shows the importance of collective and diplomatic efforts to ensure "global unity and solidarity in confronting this scourge". The central feature of defeating this virus is through collective action as the disease has not shown any bias on race, social class, level of education, developed or less developed countries, or religious identity. The major concern is the extent to which other factors such as conflict, corruption, health systems, and government responses will have on the spread and fatality by the pandemic. This means that it is not the right time to flex muscles or perpetuate violence with the aim of achieving political or social objectives. Giving peace a chance will not be a sign of weakness but a symbol of bravery to allow for a united response by channeling resources, personnel, and energy in curbing the spread of COVID-19.

This pandemic offers Cameroon an opportunity to reflect on the question of its future as a unified state by putting aside linguistic rivalry for a bigger course. Lessons from other parts of the world where the disease has already wreaked havoc should give leaders, policymakers, and citizens of Cameroon a chance to rethink the risks of being divided and the strengths of unity. In other words, the pandemic should offer different stakeholders in the country a chance to rethink of measures of restarting the process of nation-building, one that each individual will be proud to call home. Evidence of state destruction is visible from Yemen to Syria, Libya to Somalia, and with the addition of COVID -19 to conflict, Cameroonians ought to see that this will only lead to the collapse of the state. Already, the impact of decades of poor governance, systematic marginalization, conflict, and poor planning means that many people in the country irrespective of their linguistic identity are vulnerable to the possible devastation of COVID -19. The war has already displaced close to a million people, disrupted the provision of essential infrastructure and undermined equitable access to healthcare. This means affected individuals are facing a double crisis from the virus and socio-political and economic constraints.

With continued hostilities, processes such as testing which are essential in understanding the epidemiology of the virus and developing effective policies will be negatively affected. This will leave many people unaware of their status and not be able to limit the spreading of the disease to close family members and the community. COVID -19 is complicating conflicts in a manner that no one will claim victory if and when their allies or adversaries are devastated by the disease. The lack of cure or vaccine for the disease requires other measures of curbing the disease, lockdowns, curfews, cessation of movements as well as social distancing and sanitizing have been popularly applied. However, these measures are negatively affecting other areas such as food security, jobs, and other income-generating activities especially in the informal sector, and mental health. Both the government of Cameroon and the secessionist movements will struggle to overcome these challenges if they do not work together but also worse if confrontation and violence continue. In the end, the biggest loser will be the citizens on whose behalf these two protagonists claim to fight for. This paper, therefore, seeks to highlight key recommendations for the government of Cameroon, leaders of the secession movements, peace advocates as well as regional and international organizations.

Giving peace a chance: the history of the world is dotted with episodes of civil wars some of which shaped nations and even the world. It would be naïve for one to dismiss the potential of conflict among humans given their varying interests, identities, and attitudes. Social contract theorists such as John Locke, Thomas Hobbes, and Jean Jacques Rousseau dedicated a significant time of research into understanding how humans can live in harmony. Therefore, conflict is part of human interaction and there should be means to mitigate its causes and effects especially amid other forms of crises. Cameroon can borrow a leaf from other previous internal conflicts that such as Rwanda, the question of South Vietnam or at worse allow for a transparent referendum on the future of the Anglophone region as was the case with South Sudan and Eritrea. Although the question of a referendum should be the last option, there are several options that can ensure Cameroon remains a united state with the interest of both parties guaranteed. The first option is an intelligently crafted governance system that will ensure decentralization of power, resources and decision making across the country. The goal of such a system should be to ensure rapid and effective service delivery to the citizens of Cameroon and not simply creating political positions for the elites. Peace strategists can look at various federal, devolved, or decentralized system of governments that can best work for the people of Cameroon. Similarly, other hybrid options akin to the China -Hong Kong -Macau one country -two systems or the Russian Federation governance structure that allows different local governance mechanisms under one nation can be considered. The COVID -19 pandemic should be an eye opener for governments and independence movements across the world that most public health systems have been tested and found to be fragile to global pandemics and that collective action rather than conflict can help overcome this crisis and lead to prosperity.

National Dialogue: Amid the pandemic, discussions over possible peace can be achieved through a well-crafted, inclusive, and honest national dialogue. The main motivation to this bold step will be the desire for prosperity and willingness to sacrifice some of the conservative positions held by the conflicting parties. The September –October 2019 National Dialogue in Cameroon was hastily organized, less inclusive and characterized by mistrust. It was a top -bottom approach that excluded key actors in the country. The proposed national dialogue should be people driven and start with grassroot contribution by the citizens over what they consider to be the future of the country. It should be a process that should collect view from all corners of the country through local and regional forums before these opinions culminate into a national dialogue and a constitution reform process. Through the national dialogue the people of Cameroon must be courageous to identify and speak boldly of the things that ail the country and be willing to compromise personal interest for the good of the country.

Key issues: the agenda of the national dialogue and peace process should not only highlight the challenges facing the country but also offer solutions that will transform the lives of people in Cameroon irrespective of their identity or ideology.

Some of the key issues that can dominate the national dialogue is the urgent question of providing short, medium- and long-term solutions to the ailing health sector. Years of marginalization, poor planning and lack of prioritizing healthcare has left millions of Cameroonians without health insurance, access to proper health facilities and understaffed hospitals across the country. Health should therefore be made a matter of national security and access to healthcare should be affordable and inalienable. Secondly, an equitable wealth and redistribution formula that will be just to every part of the country has to be formulated and an implementation mechanism designed to ensure sharing of resources is not influenced by either politics or identity. Furthermore, as the COVID-19 continue to affect the education sector, a short, medium- and long-term education reform framework should be included among the key issues for discussion. This means that access to education, improving education facilities and fair opportunities for each student will be protected. The future of the country rests on the younger generation. This is the generation of future men and women that will be custodians of peace. This will be achieved through ideological and social transformation supported by the education system. Indeed, education plays an important role in promoting national unity and state building. Therefore, urgent measures are needed to ensure the negative impact of COVID-19 does not affect access to education and reforms within the sector.

Finding pride and strength in diversity: the disproportional spread of COVID-19 in Cameroon means different regions can appreciate strategies and mechanisms used by others and embrace them in different activities. Diversity, be it religious, linguistic, racial, and ethnic should not be a threat but opportunity for Cameroon to flourish. Indeed, the differences among the people of Cameroon should not be exploited to achieve political goals. Instead, those difference should help reflect the diversity of solutions during difficult times such as the COVID-19 pandemic. A national day of cultural diversity where different groups get to celebrate and share their culture can be introduced to further cement the relations between different group. Undoubtedly, not everyone will want to compromise their conservative believes and some people will attempt to undermine peace efforts. Such individuals must be dealt with within the law and discouraged from deterring possible progress in the country.

VIII. CONCLUSION

This paper has sought to examine the conflict in Cameroon during the COVID-19 pandemic. It identifies some positive gestures from groups which responded positively to the calls for a cessation of hostilities. It however acknowledges that there is a lot of mistrust among the different groups signifying a collapse in the social contract that binds people -people and people -government. The lack of a strong social contract creates a feeling that others do not have the legitimacy of being part of the society while others feel they have monopoly over resources and opportunities. Irrespective of which group one belongs to here, the COVID-19 has become an equalizer with each person at risk of being affected. This should humble Cameroonians and allow them to rethink of the merits of approaching the country's challenges as a united people using their diversity to offer solutions. Failure to this will see them perish together from the wrath of disease, war, and economic constraints.

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THE OIL CONSUMPTION OF THE EUROPEAN UNION

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ABSTRACT

This work is about the oil supply of the European Union. On the one hand, the conceptual and empirical foundations are discussed, as well as the distribution of the world's oil resources and the development of the oil market. In addition, the transport media, the choice of means of transport and the available reserves are discussed. It also deals with the definitions and the general overview of this topic. The aim is to get a good overview of the petroleum industry. Here, the different means of transportation are discussed and the main means of transportation and their use in the transportation of petroleum are described. The development of the international oil market is a key factor for the population, but oil reserves in different countries are also crucial. In this paper, an overview of the petroleum industry is given and definitions and explanations are also offered. In addition, it is also written in detail about the oil resources and reserves.

I. INTRODUCTION

Everything runs like clockwork, whether it's the way we live, travel or shop. All of these things are much easier to do today than they were decades ago. However, the high energy consumption that exists in Western industrialized countries has consumed about half of the oil that has accumulated over millions of years. But consumption will continue to go up and up.

There are plenty of questions: how much more oil can we find, how much more oil will the countries that are in a strong development phase need? There are also many undiscovered oil treasures, but nobody talks about it. Nevertheless, large oil fields do not really belong to it.

The crude oil has pushed itself especially in the last 35 years more and more into our consciousness, after the first oil price shock was caused by the Arab oil embargo and then also some years later also the 2nd oil price shock was pending. That oil was a limited source of energy everyone knew even then, and that the supply was largely dependent on just one region everyone also knew, but people also thought that the supplies were in the interest of the Middle Eastern states. During the oil price shocks but also afterwards, there was no real attempt to reduce this dependence on oil by possibly alternative energy sources and to build up and push new renewable and non-renewable energy sources as a substitute for oil. The European Union also depends on oil, and is trying to reduce its dependence, but at the same time to ensure a stable supply security for all member states.

- On whom and how much does the European Union depend on intra-European and extra-European oil supplies?

In order to reduce its dependence on oil, the European Union has taken various measures over the past decades. There have been various agreements with oil suppliers and various other legal frameworks, as well as diversification of import sources over the past decades, and the development of new sources.

- How has the supply of petroleum in the European Union changed over the past decades, and how is petroleum supplied in the European Union today?

This question is answered in the chapter of definitions and the general overview. In order for readers to also have a good overview of the petroleum industry and the terms used, the exact definitions and explanations will be discussed. On the one hand, the exact definition of petroleum resources and reserves is dealt with, on the other hand, the presentation of the lifetime of petroleum and the presentation of the factors that are important for the determination of the reserves.

The work gives an overview of the world-wide distribution of the petroleum resources, the petroleum-richest countries of the world and the world-wide production, the consumption of the petroleum and the means of transportation. It also discusses the different means of transportation and the main transport media, as well as their use in the transportation of petroleum.

II. DEFINITIONS AND GENERAL OVERVIEW OF PETROLEUM RESSOURCES

Petroleum resources are the worldwide deposits of crude oil. Of these deposits, only a small part is economically and technically recoverable. That part, which is technically not extractable, or which it is not economically worthwhile to extract, remains a resource for the time being; it is mostly non-conventional crude oil. Through the development of extraction technologies, better extraction methods and due to price developments, petroleum resources transform over time into petroleum reserves that are economically exploitable (Oilfacts-Petroleum Resources, 2007).

According to the definition of the Society of Petroleum Evaluation Engineers (SPEE), the World Petroleum Congress (WPC) and the American Association of Petroleum Geologists (AAPG), petroleum resources can be divided into discovered and undiscovered resources; see Fig. 1. ‚Discovered resources are those quantities of oil and gas estimated on a given date to be remaining in, plus those quantities already produced from, known accumulations. [...] Undiscovered resources are defined as those quantities of oil and gas estimated on a given date to be contained in accumulations yet to be discovered." (SPEE, 2002, p.5-7).

There is still considerable uncertainty about the magnitude of undiscovered petroleum resources, as not all parts of the world have been explored for petroleum to date. Petroleum is limited as a natural non-renewable resource. The International Energy Agency (IEA) estimates that the Earth contains approximately 15 trillion barrels of petroleum, about half of which can be produced as conventional petroleum in liquid form. The remaining amount consists of heavy oil, oil shales, and tar sands, which must be developed using various technologies other than conventional ones (Oilfacts-Petroleum Resources, 2007).

Petroleum reserves

Petroleum reserves are defined as petroleum already found in deposits that can be economically produced at today's price level and with the technologies available today. Petroleum reserves can be defined as the difference between the amount already produced and the amount expected to be produced from a field with existing technology and the current price level. Estimates of oil reserves can be divided into "assured", "probable" and "possible" reserves according to the probability of recoverability (Oilfact- Petroleum Reserves, 2007).

The Canadian Oil and Gas Evaluation Handbook defines oil reserves as follows: "Those quantities of oil and gas anticipated to be economically recoverable from discovered resources are classified as reserves. (SPEE, 2002, pp. 5-6). The SPEE definition basically says the same thing as the Oilfacts definition; what matters is the economically recoverable reservoir reserves. The SPEE definition does not subdivide into assured, probable, and possible reserves; however, one may assume that the SPEE definition is more likely to include only the assured reserves as defined by Oilfacts. The division into "assured", "probable" and "possible" reserves shows that petroleum reserves depend not only on historical production and existing petroleum resources, but also on economic and technological variables such as production technologies and petroleum prices. From this, we can also see that reserve figures are always a snapshot, as petroleum reserves change due to changes in the price of petroleum and advances in extraction technologies. Therefore, they cannot be understood as static or immovable quantities (Oilfacts-Petroleum Reserves, 2007).

Conventional petroleum

Conventional petroleum is petroleum in liquid form that flows naturally to the surface during production, or can be pumped to the surface without the need for further processing (Petroleum - Association, n.d., p. 12).

Non-conventional petroleum

This refers to petroleum that does not meet the definition of conventional petroleum, i.e. that cannot be extracted in the traditional way. In practice, this includes oil shale or heavy oils (Petroleum Association, p. 12).

Peak oil

Peak oil refers to the production maximum of a single well, a region, or a single oil field. When crude oil is extracted from a reservoir, the extraction starts at zero, then rises to a maximum, and then drops again. The high pressure facilitates oil production at the beginning, but as the pressure decreases, the viscosity of the oil affects the production behavior. There is a drop in the production rate until the reservoir is no longer technically or economically viable. Graphically, production can be represented as a kind of bell curve, also called the "Hubbert curve" (Petroleum Association, p. 14). The temporal course of oil production can thus be divided into three phases. The first phase is the phase of continuous expansion of production (pre-peak), then comes the phase of stagnation of production (at peak) and finally the phase of steadily decreasing production (decline) (Schindler, Zittel, 2001, p. 7).

Petroleum constant

The petroleum constant describes the initially paradoxical phenomenon that, despite petroleum consumption, the indicated petroleum reserves hardly change or do not change at all. The reason given for this is technical progress, since new technologies and processes make it possible to develop new deposits. As a result, existing resources become reserves (Chemie, 2007).

Road transport

Tankers are used to transport petroleum products by road. They serve as "local suppliers" and primarily deliver to industrial and commercial companies, service stations and households. They deliver products where no other means of transport can be used, in remote areas and in difficult topographical conditions. A tanker truck can carry about 36,000 liters of gasoline; it is usually emptied via officially calibrated metering systems at service stations (OMV-Transport, 2007).

Transport by sea

Tanker transport is very important for the global economy. This mode of transportation is also the most economical and outperforms any other mode of transportation. The size development of tankers shows how quickly they have gained importance. During the Second World War, the maximum size of a tanker was 12,500 tons. Meanwhile, they have increased to more than 500,000 tons. Not only the size of tankers has changed but also their speed. Today it is about 11-14 knots.

III. SELECTION OF THE MEANS OF TRANSPORT FOR CRUDE OIL TRANSPORT

Crude oil is seldom found where it is needed. The fact that the consumers and the oil fields are generally thousands of kilometers apart, petroleum industry faced with the task of developing and providing a put the extensive transportation system. A reliable and rational supply of crude oil would be impossible without a smooth interaction of pipelines, rail tank cars, road tankers, ocean-going tankers, and inland tankers (Issa, 1970, p. 5).

In the early years of the oil industry, crude oil was transported in oak barrels holding about one hundred and sixty liters, known as barrels, from the oil fields to the refineries, which were usually located nearby. Also in such barrels, the only widely used petroleum product at the time, petroleum, was then shipped onward. Over time, the refineries migrated from the inland to the coasts, where the raw material was then delivered in rail tank cars, in the early days still in simple wooden vats. Then, in 1865, the first pipeline was laid. It was located in Pennsylvania, covered a distance of eight kilometers and could transport a quantity of 40,000 tons per year. Petroleum importer Wilhelm Riedermann, one of the founders of Esso AG, put the prototype of the modern ocean-going tanker into service in 1886, having previously transported petroleum in barrels on sailing ships across the Atlantic (Issa, 1970, p. 6).

Then, as now, it is the calculating pencil that dictates the choice of means of transport, whether ships, pipelines, railroads or road tankers are used. The basic principle is that petroleum transports must be carried out as cheaply as possible and that the petroleum products must always be made available to the consumer in the desired quality and quantity at the places he chooses (Issa, 1970, p. 7).

Transport by rail

By rail, crude oil is transported on so-called tank cars. Tank cars are containers made of steel. They are mounted on a revolving base and a frame of steel girders attached to it. They are filled through an opening at the top and emptied through a valve at the bottom. A tank car for transporting fuels costs about 60,000 EUR depending on the technical equipment. The amount that can be transported by a tank car is about 65 tons of gasoline or diesel. This corresponds to a driving range of a medium-sized car of about 1,000,000 kilometers, or the fuel requirement of a family car for 70 years (OMV-Transport, 2007).

One of the most important ports for the European Union is the port of Trieste. The travel times to Trieste are (OMV-Transport, 2007):

- About 3-4 days from Libya (North Africa)
- About 8-10 days from the Black Sea
- Up to 21 days from Nigeria (West Africa)

In the ports, the cargoes are unloaded and pumped to the tank farms, from WHERE they are then transported further (OMV-Transport, 2007).

Transport on inland waterways using the Danube as an example

The Danube was already important as a transport route in prehistoric times. Industrialization increased the demand for raw materials, and transport routes were expanded, including the Danube. The opening of the Rhine-Main-Danube Canal in 1992 was of great importance for inland navigation. Transports from Rotterdam and Antwerp to the Black Sea can now be carried out on this waterway (OMV-Transport, 2007).

The navigable length of the Danube for the transport of raw materials from Kelheim in Germany to the Black Sea is 2,415 km. The total transport of all goods in 2003 amounted to about 12 million tons, of which only about 5% to 10% are petroleum products including crude oil. In the oil port of Vienna-Lobau, about 550 tankers are loaded annually with a total of more than half a million tons of petroleum products, about a quarter of which is exported to Slovakia and Hungary (OMV-Transport, 2007).

The transport time of the products from Rotterdam to Vienna is just under eight days. More than 60 locks have to be passed in the process. The route from Vienna to Constanta takes a further seven days, and the ships only have to pass through five locks before reaching their destination on the Black Sea (WKW, 2008).

Transport with pipelines

Pipelines are the classic gaseous means of transport for liquid and bulk goods. They are a means of transport, a transport container and a transport route all at the same time. Pipelines have been used since the beginning of oil production. Originally, pipelines were used to transport crude oil from the extraction areas to the shipping ports. Over time, a pipeline system developed in Western Europe after refineries were no longer built only near the coast, but in what are now consumer centers. In , the delivery of crude oil to the refineries is carried out almost exclusively by means of pipelines. Pipelines are not only used to transport crude oil, they are also used to deliver semi-finished and finished products from production centers to airports, tank farms and the chemical industry (MWV, 2006, p.3). Due to the possibility of comprehensive monitoring of long-distance pipelines, the number of accidents with product leakage is the lowest compared to the other types of transport (MWV, 2006, p. 16).

IV. THE DEVELOPMENT OF THE INTERNATIONAL PETROLEUM MARKET

The Discovery and Use of Petroleum in the Beginning As early as 1264, when Marco Polo visited the city of Baku, the capital of what is now Azerbaijan, he saw oil being collected. He also reported a large fountain from which gushed such large quantities of oil that one could have loaded more than one hundred ships. In 1828 Russia annexed Azerbaijan.

Fifteen years before Edwin Drake began drilling for oil in Pennsylvania, the Russian engineer Semyenov drilled an oil well, in the Bibi-Eibat oil field near Baku, which is still in use today (Regional History, 2007).

In the USA, the oil age began in 1859, when Edwin Drake's discovery caused an oil boom and transformed the small gold mining town, with town Titusville into a kind of hastily erected shacks and drilling rigs. To extract oil from more deposits, other large areas had to be developed that were under Indian control. The government sent soldiers and expelled the Indians in order to gain free access to the oil fields (Poelinger, 2006, p. 3).

V. THE MOST OIL-RICH COUNTRIES IN THE WORLD

The largest oil reserves in the world are located in the countries of the Middle Persian Gulf. In 1908, the first economic oil discovery in this region was made with the discovery of the Iranian Masjid-i-Sulaiman field. The largest deposits in the Middle East include the Burgan Kuwait, Ghawar and Safaniya fields in Saudi Arabia, Kirkuk and Rumaila in Iraq, and Gach Saran and Agha Jari in Iran. In Europe, with the exception of the North Sea, the deposits are fully developed and, with falling production, already in the phase of secondary and tertiary extraction (Pusch, Rischmüller, Weggen, 1994, p. 44ff). Since the start of development in 1964, the North Sea has become one of the most attractive exploration areas for the international oil industry. The discovery of the Ekofisk field on the Norwegian shelf in 1968 was the first success in the North Sea. The largest oil companies are applying their global expertise in this logistically difficult area. Due to great water depths, strong currents and extremely difficult weather conditions, specially developed drilling and production equipment must be used in areas of the North Sea like nowhere before (Pusch, Rischmüller, Weggen, 1994, p. 46).

In the CIS region, industrial oil production near Baku (Azerbaijan) began as early as the mid-19th century and then reached its first peak around 1900, when North American production was overtaken. After World War 2, there was a renewed upward trend due to the development of new petroleum reserves in what was then the Soviet Union. The opening of the CIS to the West led to a strong involvement of international companies, which were able to bring oil exploration and exploitation to a safe high standard due to the modern technology at their disposal (Pusch, Rischmüller, Weggen, 1994, p. 47).

Africa's oil reserves are concentrated primarily in the territories of the states of Libya, Algeria and Nigeria. Other notable deposits are located in Egypt, Angola, Congo, Gabon and Tunisia, among others (BP, 2006, p. 6).

The following table shows the ten most oil-rich countries in the world according to proven reserves, as well as the share of world reserves.

Tab. 1: Ten oil-richest countries in 2005, oil reserves 1990-2004-2005.

Rang	**Land**	**1990 In Mrd. Tonnen**	**2004 In Mrd. Tonnen**	**2005 In Mrd. Tonnen**
1	Saudi – Arabia	35,164	35,423	36,094
2	Canada	779	24,071	24,070
3	Iran	12,694	17,199	18,109
4	Iraq	13,417	15,430	15,430
5	Kuwait	13,097	13,717	14,054
6	United Emirate	12,892	12,851	12,851
7	Venezuela	8,257	10,801	11,151
8	Russian Federation	7,755	8,163	8,163
9	Libya	3,005	5,140	5,157
10	Nigeria	2,320	4,784	4,868
11	**Sum of the 10 states**	**109,380**	**147,579**	**149,947**
12	**Proportion of world oil reserves**	**80,60%**	**85,10%**	**85,50%**

Source: Exxonmobil, 2006, p. 5.

According to geological estimates, of the undiscovered potential, 33% is to be attributed to Russia, 29% to the Middle East and North Africa, about 8% to the Pacific region, and about 7% to Europe. This implies the following strategic consequences (Goldmann, 2003, p. 18f):

The dependence of the world economy on oil from crisis regions will be reduced overall.

The power of the Organization of Petroleum Exporting Countries (OPEC), which was established in 1960, will decline.

The importance of Russia and some CIS states will increase.

VI. THE DEPENDENCE OF THE EUROPEAN UNION ON OIL

In the face of increasing international demand for energy, unstable regions and potentially new economic cooperation, the importance of energy security and energy dependence is increasingly shaping the formulation of the Union's foreign policy. Energy has become a fundamental component, and the member states agree, of the foreign policy that a unified appearance of the entire European Union towards third parties is important for a successful foreign energy policy.

The main instruments of external energy policy are a comprehensive and cooperative dialogue with transit, and consumer countries important producer, as well as support for the diversification of energy sources, energy carriers and supply routes. Regular dialogues, agreements and arrangements with important producer and transit countries contribute to the security of energy supply. In particular, these include Russia, Norway, countries bordering the Caspian Sea and the Black Sea (Turkey and Ukraine), Central Asian states and the Maghreb countries. On the other hand, dialogs are to be conducted with other major consumer states such as the USA, China and India on energy efficiency and renewable energies and the associated technologies, in particular also contributions to climate protection (Auswärtiges Amt Deutschland, 2008).

VII. CONCLUSION

The oil supply, as well as the energy security in general, are important points of the EU foreign policy, and gain more and more importance. The reduction of the oil dependency on energy consumption as well as a broadly spread number of oil suppliers shall guarantee the security of supply for the next decades. To achieve these goals, cooperation with all partners involved, whether producer or transit countries, is of enormous importance. In summary, this paper will show on whom and to what extent the European Union depends for oil supplies and how the supply has changed in recent decades, partly as a reaction to the oil price shocks of the 1970s.

If you look more closely at the European Union's supply, you can see that only a quarter of imports come from intra-European sources, namely the United Kingdom and Norway. Norway, as one of the strongest oil exporters in the world, plays an even greater role here than Great Britain, mainly due to the oil deposits on the Norwegian Continental Shelf and the deposits still to be developed in the Barents Sea.

British exports to European Union countries will decrease in the next few years, and England will turn into an oil-importing country itself. Norway's sources will be available for several more years and will ensure a secure supply. Above all, the very high price of oil at present enables companies to exploit further deposits that have been difficult to develop and where extraction has also been uneconomical up to now.

The remaining three quarters of the European Union's oil supply comes from the Middle East, Africa, Russia and the CIS countries. Although the share of imports from the Middle East has decreased over the years, the region still plays a major role, accounting for about 23% of the European Union's imports. Saudi Arabia takes with almost half of all exports, the Soviet Union has clearly taken first place among the suppliers from the Middle East, with the Russian Federation, the former CIS countries and the remaining CIS countries accounting for all of the successor states. Together with these about 30% of all oil imports to region. Over the years, Russia has become the most important import partner of the European Union, and efforts are being made to continue strengthening the partnership through dialogues and agreements. For the Russian side, the European Union is an important consumer market, but it is trying to reduce its own dependence on the European Union and to diversify its oil supplies in the future, exporting to China and the USA.

The African continent accounts for about 20% of the European Union's oil imports, with Libya playing the strongest role, accounting for about 50% of Africa's total oil supplies. Overall, it can be said that the supply of the European Union has changed fundamentally in recent decades.

The decisive beginning of this change was the oil price shocks of the 1970s, when European countries realized how much they depended on supplies from the Middle East. As a result, they tried to diversify oil imports and find new sources to avoid such shortages in the future. At the beginning of the 1970s, more than 60 %

of all supplies came from the Middle East, with Saudi Arabia, Iran and Iraq as the main suppliers at that time.

The one-sided dependence was made clearer by the supplies originating from OPEC countries; at that time, these accounted for almost 95% of all imports. The oil price shocks made it clear that a restructuring of imports would have to take place in order to be better able to respond to such bottlenecks in the future.

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ANALYSIS OF CULTURAL DIFFERENCES IN CONSUMER BEHAVIOR BETWEEN AUSTRIANS AND AUSTRALIANS

Dragana Rašić

ABSTRACT

In recent years, the Austrian food retail industry has been confronted with challenges on the market and changes in consumer behaviour. The focus on food retail is increasing. Therefor it seems to be very important to expand the business to other markets. In order to be successful in foreign markets, it is essential to gain information about the consumer behaviour between two cultures. Therefore, the objective of this thesis is to investigate the culture factor in the context of consumer behaviour in food retailing between Austria and Australia. The theoretical part of this thesis focuses on the general and cultural influences on consumer behaviour in retailing. After this overview, a detailed account of Austrian and Australian food retailing is given and similarities and differences are presented. This is followed by the empirical part, which is presented using an online survey in which grocery retail customers were interviewed. The survey was conducted in both countries. The results show a tendency that consumer behaviour regarding the influence of general factors in food retailing is similar between Austria and Australia. Cross-cultural differences could not be demonstrated. However, it can be pointed out that culture influences consumer behaviour. "All business is local" - with this statement, Philip Kotler points out that there are only a few standardized products worldwide and that adaptation to the respective cultural conditions is necessary. Both in Austria and Australia, consumers have developed similar requirements for food in recent years. The Australian food industry has grown steadily in recent years and further growth in the industry is also forecast.

I. INTRODUCTION

The food industry in Austria is one of the largest sectors in the country. The approximately 200 companies supply consumers with food every day and were able to achieve a production volume of around eight billion euros in 2015. Export business is also of great relevance. More than 60% of the production volume scooped in Austria is due to exports (http://www.ots.at/presseaussendung/OTS_20160601_OTS0170/jahresempfang-der-lebensmittelindustrie-hersteller-wollen-wissen-ueber-lebensmittel-foerdern-bild, 2016).

Since the 1970s, there has been talk of a globalization of economic relations. International trade agreements were created to overcome the many years of recession triggered by oil price shocks. Technological developments in communications, logistics and infrastructure further drove globalization (Müller/Gelbrich 2015, S. 5f.).

The situation in the Austrian food retail sector has worsened in recent years. With the bankruptcy of the grocer Zielpunkt in November 2015, market concentration has increased even further. Due to this situation, it is of particular importance for food retailers to focus on growing and economically attractive markets in addition to the home market (ORF Online und Teletext GmbH & Co KG, http://orf.at/stories/2311938/, 2015).

II. RESEARCH QUESTION AND RESEARCH GAP

The starting point is given by the current literature. Despite some comparative cultural studies, a weakness in the field emerges. Previous studies in the context of culture do not simultaneously address consumer behavior in food retailing in Austria and Australia.

For example, a 2015 comparative culture study by Hoffmann/Röttger/Ingenhoff/Hamidati compares five countries, including Austria and Australia. However, correlations between culture and internal corporate communication are shown in detail. However, the link with consumer behavior in food retailing is disregarded (Hoffmann/Röttger/Ingenhoff/Hamidati 2015, S. 483f.).

Furthermore, in the current literature there is, among others, a study by Leo/Bennett/Cierpicki on the topic of cultural differences in consumer behavior in the Asia-Pacific region. In detail, the behavior of consumers from Singapore and Australia is compared, but a comparison of two Western-oriented countries is thus disregarded (Leo/Bennett/Cierpicki 2005, S. 17f.).

In addition, Anzengruber analyzes socially oriented consumer behavior in food retailing on the basis of subcultures. The 2007 study compares the shopping behavior of German consumers and German-Turkish consumers. Although the cultural background of consumer behavior is discussed here, this study neglects the Austrian and Australian aspect (Anzengruber 2007, S. VIIf.).

With the help of empirical research, the following central research question can be derived:

Which influencing factors have an effect on consumer behavior in food retailing and how does it differ when comparing Austria and Australia, or what influence does culture have?

III. SPECIFICS OF CONSUMER BEHAVIOR

The term consumer behavior refers to both the observable and unobservable behavior of individuals in the purchase and consumption of economic goods. Consumer behavior research had its beginnings in the 1920s in the U.S., but it did not become established until after the Second World War. The consumer behavior research is to analyze the background of the buyer behavior more near. It should be clarified why and how a consumer makes a purchase (Kroeber-Riel/Gröppel-Klein 2013, S. 3f).

IV. CROSS-CULTURAL FACTORS INFLUENCING CONSUMER BEHAVIOR

In this thesis, culture is treated as the second factor influencing purchasing behavior. In this chapter, the term culture is first defined. This is followed by various models for classifying culture; however, the focus is on the cultural dimensions according to Hofstede, which are examined in more detail. The chapter concludes with a comparison of Austria and Australia based on Hofstede's research findings.

The origins of the term culture can be traced back to the Latin word "cultura", which means "care of the soil" (Usunier/Walliser 1993, S. 21.). The Latin term "cultus," which translates as habit or cult in German, is also seen as the origin (Eagleton 2009, S. 8.). According to Ferraro, over 160 different definitions of culture exist, with different opinions prevailing again depending on the discipline (Ferraro 2002, S. 19.)

Under the anthropological approach, culture is understood as the totality of the intellectual and artistic expressions of a people. This understanding of culture is decisive for intercultural marketing. The respective national culture is expressed through taboos, norms and values and has a direct effect on the information, communication, decision-making and purchasing behavior of a cultural group (Müller/Gelbrich 2015, S. 15ff.).

V. CULTURAK COMAPRISON AUSTRIA AND AUSTRALIA

The five-dimension model according to Hofstede provides an insight into the motivations of Austrian and Australian culture and contrasts the respective characteristics. The orientation of a culture is measured relatively using a 100-point scale (Hofstede, 2016).

In the following section, Hofstede's model of cultural dimensions is used to compare the cultures of Austria and Australia, and to work out similarities and differences (Hofstede, 2016).

Austria is characterized by a very low power distance with a value of 11. The Austrian style can be defined by the concepts of independence, hierarchy only for convenience purposes, equality, accessible superiors and empowerment of employees. Power is decentralized and supervisors rely on the experience of employees. Employees expect to be consulted and control is largely rejected. Communication within an organization is direct and participative (Hofstede, 2016).

Australia also scores low, although it is higher than Austria at 36. Within organizations in Australia, hierarchies are also practiced only for purposes of convenience. Supervisors are accessible to employees, and managers rely on individual employees, or teams, and their experience. Both supervisors and employees expect to be asked for advice and information is readily shared. As in Austria, communication between individuals is direct, although exchanges tend to be more casual than in Austria (Hofstede, 2016).

With a score of 79, Austria is a masculine-oriented society driven by ambition and success. Austrians live to work and superiors are expected to make decisions, with great emphasis on equality. Competition and achievement are also emphasized. Conflicts are resolved by fighting it out. With a score of 61 in this dimension, Australia is considered a rather masculine society. Behavior in school, work and leisure is based on shared values, and individuals should always strive to do their best, as winning is of great importance. Australians take pride in their success and achievements in life. This attitude forms the basis for promotions at work. Conflicts are addressed on an individual level, with the goal of coming out victorious.

Austria is an individualistic society with a score of 55. This means that there is a strong preference for a loose social system. Individuals are expected to take care of themselves and their immediate relatives. Misbehavior often brings feelings of guilt and loss of self-confidence. Business relationships are based on mutual benefits, and furthermore, promotions must first be earned, with leadership seen as the guidance of individuals (Hofstede, 2016).

Australia, with a score of 90, can be described as an extremely highly individualized society. The social framework is very loose and individuals are expected to take care of themselves and their close relatives, similar to Austria. In business, employees are expected to work independently and show initiative. As a result, promotions must also be earned first and an employee must certify what work has been done (Hofstede, 2016).

Uncertainty Avoidance - Uncertainty Avoidance Austria is characterized by a high score of 70 points in this dimension, which means that uncertainty is to be avoided. Rigid behavior and beliefs characterize society. Austrians have an individual desire for rules, time is money and for this reason individuals are driven to work hard. Precision and punctuality are as important to an individual as personal motivation. Decisions are made after careful analysis of all available information (Hofstede, 2016).

In contrast to Austria, Australia is in the middle of the pack with a score of 51. As a result, uncertainty avoidance is not something that people want to avoid at all costs. Unorthodox behavior and ideas are endorsed by society (Hofstede, 2016).

With 60 points, Austrians follow a pragmatic culture. The short-term oriented society believes that what is true is situational, guided by context and time. They have the ability to adapt traditions to modern circumstances. Furthermore, they tend to save and invest, as goals are achieved with economy and perseverance. Australia, on the other hand, is a long-term oriented society with 21 points (Hofstede, 2016).

Individuals in this culture have a strong interest in establishing absolute truth in their thoughts. They have a strong interest in traditions. Likewise, they have a low tendency to save for the future and focus more on achieving goals quickly (Hofstede, 2016).

In summary, it can be said that the culture of the Austrian and Australian society approximately resembles itself. Both in Austria and Australia there is a low power distance. In the culture dimension masculinity versus femininity, Austria and Australia record high percentage points, which means that both cultures are described as rather masculine. In the culture dimension Individualism versus Collectivism, both countries have a tendency toward individualism, with Australia's score being higher. With a high value in the culture dimension uncertainty avoidance, Austria strives to avoid uncertainty. Here, Australia is in the middle, which means that uncertainty is not avoided at all costs. In the culture dimension of short-termism versus long-termism, Austria with a higher value is more inclined to combine tradition and modernity. For Australia, with a low value, it is more interested in preserving traditions.

The literature research showed that the Austrian and Australian structures in food retailing are very similar. Therefore, the assumption was made that the purchasing behavior of Austrian and Australian consumers is also similar in terms of average shopping frequency. However, the empirical study found that Austrians visit grocery stores more frequently on average to make their purchases, in contrast to Australian consumers. Thus, the research question can be answered as follows: It can be seen that consumer behavior in the grocery trade is very similar between Austria and Australia and that culture also has an influence on this.

VI. SURVEY METHOD

When selecting the survey method, a distinction is made between primary research and secondary research. Primary research is understood as the original acquisition of data and information. In the context of this thesis, secondary data was collected, which was applied in the first section of the research. Often, secondary market research cannot provide the necessary information to solve the research problem (Broda 2006, S. 26.). Primary data collection is applied in the empirical study.

The data instruments available to primary research are survey, observation, and experiment. Surveys have the greatest importance in market research and thus the desired, targeted information can be obtained. The goal of the survey form observation is the observation of the behavior and reactions of persons, which are to give conclusions on marketing-relevant facts. The survey form of the experiment represents an experimental arrangement, with whose assistance effects of marketing-relevant factors under controlled conditions are tested (Broda 2006, S. 26.).

In the present thesis the method of the questioning finds application, since attitudes would like to be raised. Observations are excluded, because no precise behavior is observed. Also excluded is the experiment, since no effects of measures are tested.

The basic idea of the survey is that respondents themselves give information about the subject of the survey. The survey is the most common type of primary research. Surveys can be conducted in writing, in person, by telephone or online. Furthermore, the survey methods can be differentiated according to the methodological approach. Quantitative survey methods are mainly used in descriptive studies that aim to obtain a large amount of statistically evaluable data. In this way, the results of a sample can be applied to the population. In a quantitative survey, a standardized questionnaire is used. Qualitative survey techniques are used with small groups and have an explorative character (Fantapié Altobelli/ Hoffmann 2011, S. 25ff.). Typical fields of application for qualitative surveys are the exploration of deep-seated customer needs, the generation of new product ideas, the testing of prototypes, and the early identification of market trends (Homburg/ Krohmer 2008, S. 26.).

In the context of the present research work the method of the quantitative questioning is suitable, since it pursues the goal of analyzing consumer behavior and a large number of persons can be questioned. The data collection of this thesis is to be carried out by means of an online survey in Austria and Australia. Advantages of the online survey are, among others, the short realization time. In addition, an online survey is very cost-effective and the motivation of the respondents increases due to an interactively designed questionnaire. Another advantage of an online survey is that biases, which occur due to the possible influence of the interviewer, are eliminated (Fantapié Altobelli/Hoffmann 2011, S. 27ff.).

VII. RESEARCH RESULTS

In the theory section, motivation was discussed in more detail as a factor influencing consumer behavior. Through the empirical analysis of the motives in the purchase and consumption of food, the needs pyramid, which divides motives into physiological and psychological motives, can be applied in its entirety. It was found that for the respondents in Austria as well as in Australia, the consumption of food does not only have the purpose of food intake.

Other motives, such as social motives, are also in the foreground. In Austria and Australia, sociability is expressed through the consumption of food, for example by cooking for family and friends. This aspect could be used in the customer approach.

The literature research revealed that attitudes, values and opinions are used to explain and predict consumer behavior and companies can use these findings in their favor. Based on the empirical evidence regarding attitudes towards the purchase and consumption of food, it can be stated that here, too, the respondents in Austria and Australia have similar motivations and follow similar lifestyles. In both countries, the origin of the products plays a major role. This characteristic could, for example, be used as a quality feature in both countries. A varied diet was assumed by the theory and could be confirmed on the basis of the empiricism both in Austria, and in Australia. Of extremely great importance for Austrian food producers and food retailers is the fact that respondents in both countries indicated that they like to try new products. It can be assumed that consumers in Australia are curious and positive towards new products and concepts.

In addition, the culture factor was considered using Hofstede's culture dimensions in Austria and Australia. The literature review revealed that the culture of Austria and Australia are similar in the dimensions of power distance, masculinity versus femininity, individualism versus collectivism, and uncertainty avoidance. This is also in line with the results obtained in the theory section. In the cultural dimension of short-termism versus long-termism, the literature review showed that Austria strives to combine tradition and modernity, whereas Australia is more inclined to preserve traditions. In the present empirical study, statements were formed with reference to the purchase of food in order to investigate whether culture also has an influence on the purchase of food. It was found that here, too, the consumer behavior of Austria and Australia is very similar. With regard to the influence of culture on consumer behavior directly, it can be stated that social motivations and values also have an influence and, with the exception of the cultural dimension of short-term versus long-term, coincide with the results of the literature research. Companies are therefore strongly advised to take the respective culture into account, as it has an influence on the respective purchasing behavior. This information should also be used by food retail players who intend to establish themselves in the Australian market. Here, the factor of culture and its triggered needs in consumer behavior in food retailing should be discussed in more detail.

VIII. CONCLUSION

The objective of this thesis was to shed light on factors influencing consumer behavior in food retailing and to highlight differences between the countries of Austria and Australia. The general factors of motivation and attitude in consumer behavior in relation to food retailing were discussed in more detail, as well as the dimension of culture in this context.

The first part of the theory was devoted to the factors influencing consumer behavior in food retailing. In detail, the motives, attitudes and the cultural aspect were dealt with. Maslow's pyramid of needs showed that individuals have both physiological and psychological motives for buying food. The literature review showed that attitudes, values and opinions can be used to explain and predict consumer behavior. The knowledge about consumer lifestyles can be used by companies to their advantage and to adapt their offer to the needs of consumers.

Mazanec's model has shown that attitude has the perceived suitability of an object to satisfy motives. Using the model of cultural dimensions according to Hofstede, the factor of culture was studied in detail in both Austria and Australia, and similarities and differences between the two cultures were presented. It was found that the societies of Austria and Australia have the same tendencies with regard to the culture factor. The second part of the theory was a secondary data analysis of the food retail markets, both in Austria and Australia.

The secondary data analysis showed that both markets are similar. In both Austria and Australia, food retailing is dominated by three to four retailers, each with an approximate market share of 80%. In both countries, sales increases are forecast for the coming years. However, the market power of the large players will increase as smaller grocers are forced out of the market.

In the empirical part of the thesis, the methodology of the work was first described. The empirical investigation was conducted by means of a quantitative survey through a standardized online questionnaire in Austria and Australia. By means of quota procedures, the test persons were divided according to age and origin. The evaluation of the results was carried out with the help of the statistical program SPSS.

After processing and interpreting the questions presented in the questionnaire, findings could be obtained. Through the results obtained, the tendency could be established that both the respondents in Austria, as well as in Australia are not only guided by physiological motives to buy food, but that psychological motives also have an influence. Thus, above all, social motives also play a role. Furthermore, it was shown that the Austrian and Australian subjects are similar in their attitudes towards buying food. In both Austria and Australia, attention is paid to the origin of food.

Another determining factor is a varied diet. Price and brand are not decisive factors for the Austrian and Australian respondents to this survey. This suggests that quality, regardless of price or brand is the determining factor, as the respondents also believe that there are large differences in quality between the individual brands. In addition, it was found that subjects in Austria and Australia like to try new food products.

It was shown that the cultural dimensions according to Hofstede have an influence on purchasing decisions, whereby Austria and Australia are again similar in their agreement with the statements based on Hofstede's cultural dimensions.

It could be shown that culture also tends to be seen as an influencing factor on purchasing behavior in food retailing. In the dimensions of uncertainty avoidance, power distance, individualism versus collectivism, and masculinity versus femininity, agreement between theory and empiricism was found. Regarding the dimension of long-termism versus short-termism, according to the empirical results, subjects in both Austria and Australia are not guided by traditions. However, the literature review revealed that Austria, as a short-term oriented society, tries to combine tradition and modernity, whereas Australia, as a long-term oriented society, tries to preserve traditions rather.

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IMPACT OF THE COVID-19 PANDEMIC ON THE GLOBAL STOCK MARKETS

Lana Soldo

ABSTRACT

Throughout history, the world has already confronted many outbreaks of infectious diseases, but none of them wreaked havoc on the stock markets like the COVID-19 outbreak. This paper aims to provide an overview of the most important data and scholarly findings related to the unprecedented impact of the COVID-19 pandemic on the global stock markets. The literature research methodology was used, while the data and sources for the overview were obtained from multiple databases. The COVID-19 pandemic began as a provincial health concern in the city of Wuhan and from there it spread like wildfire to almost every corner of the world. Even though the pandemic started primarily as a health crisis, through its effects on demand, supply and productivity it turned into one of the biggest financial and economic crises in history. The global stock markets responded with a massive and sharp decline erasing trillions of dollars in value and leaving investors with shattered confidence in the markets. Introduced various drastic measures of social distancing and the high level of uncertainty arising from the fact that the whole world was dealing with something unknown triggered the deepest global recession since the end of World War II. This paper represents the basis for defining the direction of further research, but it could also help investors, the financial industry, and policymakers to understand better the investors' behavior in the context of crises and to respond more efficiently and effectively when the next crisis occurs.

I. INTRODUCTION

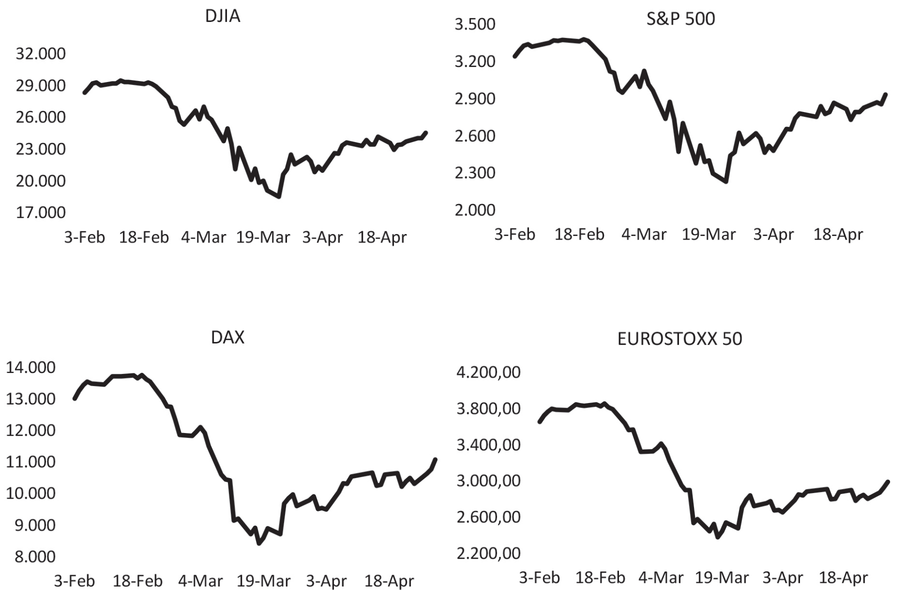
Officially, the first COVID-19 case was reported on 31 December 2019 in the city of Wuhan in China but at that time the rest of the world did not pay a lot of attention to it believing that the virus will stay a China crisis. The World Economic Forum`s Global Risks Report, published on 15 January 2020, ranked environmental issues as the top five risks for the world to face in the long term, the "infectious disease" was placed at number 10 in terms of its impact. Clearly, the world did not expect another pandemic and was caught completely unprepared to deal with the rapid global spread of the novel virus. During the second half of January 2020, COVID-19 cases were reported globally, but the world became aware of the real threat of COVID-19 when Italy decided to put the Lombardy region under strict lockdown on 24 February 2020. The World Health Organization (WHO) declared the novel coronavirus (COVID-19) a global pandemic on 11 March 2020 and by April 2020 more than 3.9 billion people were under partial or complete lockdown. To stop or at least slow down the spread of COVID-19, people were recommended to stay at home, a home office was introduced, schools and universities were closed, and international travel was limited (on 12 March 2020 the US restricted the travel from EU). Amid extreme levels of uncertainty, risk, and fear of dealing with something completely unknown, the global stock markets plummeted and experienced historic losses in a very short period. Volatility in the markets reached record high levels due to panic among investors, the presence of herding behavior, and a massive restructuring of investors` portfolios. Worldwide lockdowns and other restrictions brought economic life to a standstill and put the livelihood of millions of people at risk. The measures introduced to stop the health crisis caused at the same time unprecedented damage to the global economy. Governments across the world had an extreme challenge in front of them, to protect the population`s health and to help the people and businesses to overcome economic and financial losses caused by the COVID-19 pandemic. Various economic, fiscal, and monetary decisions were introduced, including support packages, delayed tax payments, and bank loan moratoriums. COVID-19 is the first pandemic in history that wreaked havoc on the stock markets and triggered the worst global economic crisis since World War II. The following chapters explain how the global stock markets responded to the COVID-19 outbreak and how COVID-19 pushed the global economy into recession.

II. GLOBAL STOCK MARKETS CRASH

This chapter focuses on a period between February and April 2020 when the global stock markets shocked by the COVID-19 outbreak faced some of the worst trading days in history and record volatility levels. The COVID-19 pandemic is not the first pandemic that the world has ever witnessed, but it is the first one that brought chaos and historic losses to the global stock markets. Even the Spanish flu from 1918, the deadliest pandemic of modern history that killed more than 50 million people, had only a moderate negative impact on the markets.

In January 2020 the novel coronavirus started to spread globally, but the markets were still optimistically climbing to their all-time high levels. S&P 500 and S&P Europe 350 reached their all-time high values on 19 February, but in the following weeks, the global stock markets responded to the COVID-19 outbreak with a sudden and sharp drop as the pandemic came as a great shock to market participants. Investors were making their investment decisions focused on every virus`s move and pandemic-related news (e.g., the number of new COVID-19 cases, vaccine advancements, and the length of lockdown). The US market circuit breaker mechanism, a temporary measure that halts trading to curb panic-selling on the stock exchange, was hit four times in only ten days (since its inception in 1988, it was activated only once in 1997). The market circuit breaker mechanism was hit on 9, 12, 16, and 18 March, triggered by a 7% decline in the S&P index. The worst days for DJIA Average Index were 9 March (Black Monday I, -7.79%), 12 March (Black Thursday, -9.99%), and 16 March (Black Monday II, -12.93%). In less than a month the global stock markets have plummeted more than 30% from their peak. Trillions of dollars have been wiped from the markets gripped by fear and uncertainty, leaving investors with shattered confidence. The most severe losses were recorded in the period between 19 February and 23 March 2020; S&P 500 dropped more than 33%, DJIA 32%, FTSE100 32%, DAX 38%, and EURO STOXX 50 38% (Figure 1). According to Shehzad et al. (2020), the USA and Europe financial markets were more affected by the COVID-19 pandemic compared to Asian financial markets.

FIGURE 1. MAJOR WORLD INDICES PERFORMANCE (FEBRUARY-APRIL 2020)

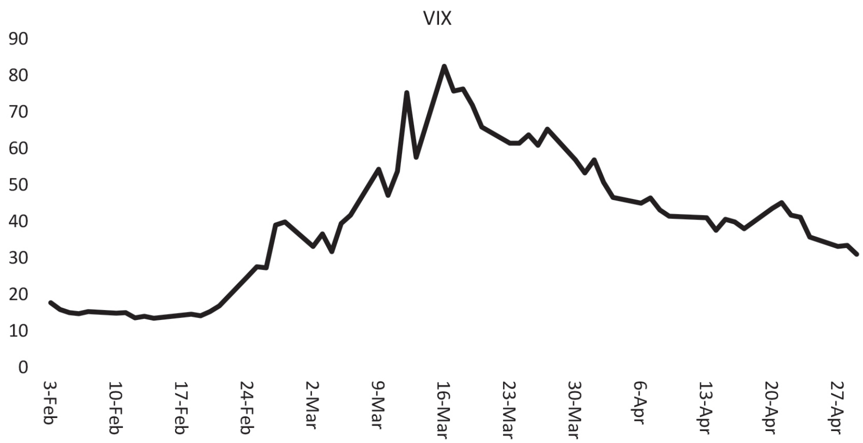


Source: Yahoo Finance

After facing some of the worst days in the stock market's history, the investors started to analyze which sectors or companies will prosper during the pandemic and which one will struggle. As a result, certain sectors emerged as "COVID-19 winners" and some others as "COVID-19 losers". Mazur et al. (2020) find that natural gas, food, healthcare, and software stocks earn high positive returns. One of the biggest winners was the e-commerce industry because consumers switched heavily to online purchases as a result of the pandemic. Netflix, an American subscription streaming service, gained millions of new subscribers who turned to at-home entertainment for comfort because of COVID-19-related social distancing measures. Introduction of the home office wherever it was feasible boosted investments in digital technologies bringing massive profits to software companies such as Microsoft, Apple, Google, Zoom, etc. On the other side, sectors such as entertainment, hospitality, real estate, airline, and petroleum were hit hard by the pandemic losing more than 70% of their market capitalization and putting at risk millions of jobs. After decades of uninterrupted growth, the tourism industry was brought to a standstill facing losses in the trillions of dollars.

During the period between February and April volatility in the stock markets surged and reached historic high levels, due to the fear of the unknown virus and its consequences. The strong presence of herding behavior (the phenomenon where investors rather follow and imitate other investors than make their own decisions) additionally fueled high levels of volatility. While confronted with fear and panic and general uncertainty, many investors decided to follow to crowd believing that this is a better and safer strategy. Same as the stock prices, volatility was moving up and down with any pandemic-related news. Baker et al. (2020) examine the US stock market volatility based on the daily headlines news and find that COVID-19 has an unprecedented effect on stock market volatility, especially after 24 February 2020. The most common measure of market volatility is Chicago Board Options Exchange's CBOE Volatility Index (VIX Index), incepted in 1990.

FIGURE 2. VIX INDEX FEBRUARY-APRIL 2020



Source: Yahoo Finance

The VIX index value usually spikes during periods of extreme uncertainty and is often referred to as a "fear index" or "fear gauge". In a low-risk environment VIX index usually stays below the level of 20, but in March 2020 its value surged and hit the all-time highest close of 82.69 on 16 March. The previous all-time high level of 80.86 was reached during Great Financial Crisis, on 20 November 2008.

The COVID-19 pandemic did not only severely disrupt the stock markets, but through its negative effects on demand, supply and productivity it pushed the global economy into a historic recession which is discussed in the following chapter.

III. DEEPEST RECESSION SINCE WWII

Despite certain political and trade tensions, the global economy was on its expansion path with a projected rate of growth of 3.3% in 2020 according to IMF World Economic Outlook Update published in January 2020. The COVID-19 pandemic started primarily as a health crisis but through the effects on supply, demand, and productivity it has morphed into an unprecedented global financial and economic crisis.

As already stated, none of the previous pandemics had such a disastrous impact on the economy, but COVID-19 emerged in completely different social, political, and economic circumstances than for example Spanish Influenza in 1918. We are living in a service-oriented economy, the manufacturing relies heavily on international supply chains and international travel for business and leisure purposes is at high-frequency levels. The information about COVID-19 was also much richer and more accessible than ever which probably triggered additional panic and overreaction. Also, the interventions to fight the coronavirus pandemic were more aggressive, more globally spread, and lengthier than ever before. After the outbreak, authorities across the world in order to contain the pandemic were forced to take drastic measures such as restrictions on cross-border travel, closure of schools and universities, public life restrictions, and the home office implementation wherever it was feasible. All these measures caused a sharp decline in economic activity and triggered a recession after ten years of expansion.

The countries with the worst pandemic situation and the ones that heavily rely on global trade, tourism, and external financing were suffering the most. The biggest Q2 GDP 2020 losses were reported in India -25.4%, the United Kingdom -20.4%, France -13.8%, Italy -12.8%, Germany -9.7%, and the United States -9.1% (Figure 3). China was the only country with positive GDP growth of 11.5% in Q2 2020 as it started the pandemic recovery phase earlier than the rest of the world.

FIGURE 3. GDP GROWTH – FIRST AND SECOND QUARTER OF 2020

	EU	Canada	France	Germany	Italy	Japan	United Kingdom	United States
Q1 2020	-3,2%	-2,1%	-5,9%	-2,0%	-5,4%	-0,6%	-2,2%	-1,3%
Q2 2020	-11,7%	-12,0%	-13,8%	-9,7%	-12,4%	-7,8%	-20,4%	-9,5%

Q1 2020 Q2 2020

Source: OECD.org

Supply disruptions were hindering production since the pandemic at first hit the world`s manufacturing heartland (East Asia) and quickly spread to industrial centers such as the United States, France, Germany, etc. The high transmission speed of the virus limited labor supply and consequently negatively affected productivity. Demand was disrupted because billions of people were under some sort of lockdown and were generally spending less due to increased unemployment and extreme uncertainty in every aspect of their lives. In the United States, the unemployment rate skyrocketed to 14.7% in April 2020, from 3.5% in February. Additionally, delaying all non-essential purchases and investments resulted in tremendous losses for sectors such as real estate or the automotive industry.

After taking rigid measures to keep the pandemic health crisis under control, the authorities had a complex task in front of them to milden as much as possible emerging financial and economic crises. In March 2020 governments across the world started to respond swiftly by adopting the various scope of fiscal and monetary policies to support companies, financial institutions, and households. The European Central Bank (ECB) introduces Pandemic Emergency Purchase Programme (PEPP), the United States Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act worth trillions of dollars, and The Fed (The Federal Reserve System) announced a zero percent interest rate policy and an unlimited quantitative easing (QE) program to provide the necessary liquidity for the markets. Afterward, governments dedicated themselves to developing, purchasing, and distributing an effective vaccine against COVID-19. As a result of the coronavirus pandemic and shutdown measures, in June 2020 the World bank forecasted a contraction of 5.2% for the global economy, 6.1% for the U.S. economy, and 9.1% for the Euro Area. Mainly due to the rapid development of vaccines and fiscal and monetary support, the economic downturn slowed down in the second half of 2020. The global economy in 2020 shrank by 3.6 yoy, the U.S. economy by 3.5% yoy, and the EU economy by 5.9% yoy. Although the economy shrank less than initially estimated, it was still the deepest recession in post-World War II history.

IV. CONCLUSION

The COVID-19 outbreak in January 2020 shocked the world and very quickly affected every single aspect of our lives. Ferguson et al. (2020) from the Imperial College London COVID-19 Response Team claim that COVID-19 is the most serious episode since the 1918 Spanish Influenza pandemic. The coronavirus pandemic devastated the global stock markets, paralyzed the global economy, and pushed it into a historic recession. After the initial shock on the stock markets, the sectors positioned to benefit from the pandemic emerged as pandemic winners with high positive returns (e.g., telecom, healthcare, and food). On the contrary, social distancing measures and fear of the virus severely hit sectors such as airlines, tourism, and hospitality wiping out trillions of dollars of their market capitalization. To slow down the pandemic and prevent the health crisis, unimaginable extreme measures in the shape of lockdown, school closures, and travel restrictions were introduced. To preserve economic and financial stability, worldwide governments and authorities responded with a wide scope of monetary and fiscal policy measures. Even though the global economy contraction decelerated in the second half of 2020, the world faced the deepest recession since World War II. As COVID-19 is still an ongoing pandemic, its final impact on the economy and the stock markets will be a subject of further research. Understanding how the stock markets and individual sectors react and perform under sudden global crisis circumstances helps the market participants and policymakers better prepare for the next crisis and overcome it more efficiently. Also, analyzing the effects of introduced monetary and fiscal policy measures to perceive the most effective ones can contribute to developing a "crisis playbook" that policymakers could use for future crises.

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REINFORCEMENT LEARNING APPROACH TO THE ITERATED PRISONER'S DILEMMA

Jovanoski Davor

ABSTRACT

The Iterated Prisoner's Dilemma is a well researched subject which takes interest in the long term actions of rational players. There are a vast number of researched strategies which address different approaches to the idea of an iterated Prisoner's Dilemma. Q-learning as a reinforcement learning policy which seeks the best action given a current state, which makes it well suited to be used in repeated games against an unknown opponent. This paper evaluates our variation of a QLearnerPlayer within the iterated Prisoner's Dilemma, and how our QLearner compares to other existing player strategies, for example tit-for-tat (TFT), Defector, Cooperator. and we further investigate the relationship with other reinforcement learning QLearnerPlayers. The research is based on the Axelrod library, an open framework that allows for reproducible game theoretic research into the Iterated Prisoner's Dilemma.

I. INTRODUCTION

In situations where we need to anticipate, act and react, previous experiences present a crucial source of information for any future actions. The Prisoner's Dilemma is a well-researched model in game theory (Axelrod, 1980), which studies what happens when self-interest agents interact on its binary action as cooperation or defection.

Considering the option of a repetitive game and presented in a competitive environment as a tournament, various strategies can compete against each other for maximizing their payoffs. Robert Axelrod held a series of digital tournaments of various algorithmic-strategies for the prisoner's dilemma considering the iterative model as a repeated game. Each strategy specified whether to cooperate or defect based on the previous moves of both the strategy and its opponent.

With the extensive reach in various research areas one such technical implementation of the tournament is offered by (Knight et al., 2021) named "Axelrod" library, with over 170 distinct opponents including the well-known classic strategies. Including a variation implementation for the decision making under uncertainty, commonly known as reinforcement learning. In this paper we describe our own implementation of an artificial intelligence player which relies on its play as a reinforcement agent seeking the best action with a given state, based on the set of Q-Learning algorithms.

Q-learning is arguably one of the most applied representative reinforcement learning approaches and one of the off-policy strategies. Since the emergence of Q-learning, many studies have described its uses in reinforcement learning and artificial intelligence problems, as stated in (Jang et al., 2019).

Our choice of the approach is triggered by observing the implementations and advancements in the area of Deep Q Learning of other games which rely on binary actions to make their decisions as seen in the OpenGym CartPole-v1 game in (Hafiz & Bhat, 2020).

The implementation relies on using the technical tournament by (Knight et al., 2021) adjusting an existing Q-Learner as MediocreQLearner and an implementation of a DeepQLearner by using Keras (Chollet, 2015) and Tensorflow (Developers, 2022).

We run our experiments and compare the implementation against the following strategies: Cooperator, Defector, TitForTat, MediocreQLearner, DeepQLearner, Adaptive, RiskyQLearner, Grudger, Random, Alternator, all part of (Knight et al., 2021).

II. PRISONER'S DILEMMA

The story of a prisoner's dilemma as described in (Leyton-Brown & Shoham, 2008) is a famous game-theoretic situation derived from the original story. An example of a game theory challenge that shows two completely rational individuals might not cooperate, although it might be in their best interest.

Two criminals are caught after committing a crime. The police have not enough evidence to convict the criminals on the principal charge, only put them away for a lesser charge. Simultaneously both are taken to separate interrogation rooms and offered a bargain. With no means of exchanging information with each other. Each can either confess to the crime, or deny it, alternatively cooperate or defect. If both deny, they only serve the principal charge. If both confess, they get mid-range punishment, and in the case of one confessing and another denying, the confessing one goes free, and the denying serves the maximum punishment. With each criminal not knowing what the other would choose describes the dilemma for our future prisoners.

As one single game is set-up, a prisoner's dilemma game consists of two players. Each player has a binary choice of actions to cooperate or defect. With a payoff matrix specifying the reward given for the action pairs with four possible round outcomes (Table 1): Temptation (T), Reward (R), Punishment (P) and Sucker (S). For constituting a valid Prisoner's dilemma game, the following must hold T > R > P > S. In the (Knight et al., 2021) implementation we have: R=3, P=1, S=0, T=5 (Table 2).

Table 1. Outcomes in a Round

	Cooperate	Defect
Cooperate	Reward, Reward	Sucker, Temptation
Defect	Temptation, Sucker	Punishment, Punishment

Source: Axelrod Library (Knight et al., 2021)

Table 2. Payoff Matrix

	Cooperate	Defect
Cooperate	3,3	0,5
Defect	5,0	1,1

Source: Axelrod Library (Knight et al., 2021)

A. Repeated Game

In the repeated games, the game is played multiple times by the same players. Here we must consider whether the players have memory and whether they know the history of the previous games played. Important to differentiate is also whether the game is played infinite or finite number of times. Initially the players do not know what the other player will play, and with the second game there is already history.

For the payoff as described in (Leyton-Brown & Shoham, 2008) the payoff function of each player is additive, meaning it is the sum of payoffs in the multi-stage game, extending the strategy space for different approaches from different players. Making the history of previous plays crucial for the next game decision. As both players try to maximize their profits and minimize their losses, having knowledge of the past outcomes provides an opportunity to learn from the experience and improve on the future decision making.

The iterated prisoner's dilemma game provides a base for many theories of trust and human cooperation. Modeling transactions between people with cooperative or competitive behavior may be observed as an iterated version of the game

B. Reinforcement Learning

Reinforcement learning, and games have always shared an entangled history. Game present a challenging domain for training a reinforcement algorithm which focuses on learning by making its own experience.

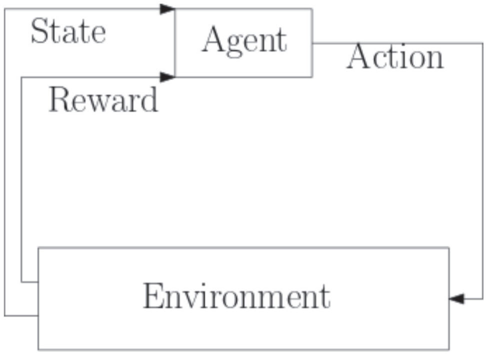
As an area of machine learning, reinforcement learning idea is based on making a suitable action to maximize reward given the state. Initially there is no answer on what makes an action rewarding or not, and with the reinforcement agent deciding upon different actions, receives different outcomes, rewards and punishments in a potentially complex environment (Figure 1). Thus, allowing the agent to learn how to achieve a goal based on the experience. Reinforcement learning bases its approach on making decisions sequentially, thus the output depends on the state of the current input.

With the agent interacting with the environment, its goal is to find the policy which would maximize the reward. Such an environment is often assumed to be a Markov Decision Process (MDP). In (Jang et al., 2019) described as a sequential action decision problem with a probabilistic environment meaning the state of the transition and the compensation are random after the action is performed.

Furthermore, as discussed in (Barnett & Burden, 2022) the next state depends only on the current state and the actions taken, and not explicitly on any previous state, such a system being memoryless, and therefore storing the memory with the environment.

Paraphrased from (Wiering & van Otterlo, 2012), in RL has been applied to many other games. There are many promising results and many lessons to be learned. Both in classical games and computer games, real-time strategy games, first person shooters, role-playing games. Most notably, reinforcement learning approaches seem to have the upper hand in one of the flagship applications of artificial intelligence research – Go.

Figure 1. Reinforcement learning agent and environment



Reinforcement learning is extensively researched topic in combination with the prisoner's dilemma (Harper et al., 2017), (Barnett & Burden, 2022), (Ueda, 2021), and other games (Hafiz & Bhat, 2020), In our approach we differentiate from the investigated approach in (Barnett & Burden, 2022) and focus only on the agent itself and its reward based solely on its actions.

C. Deep Q-Learning

Q-Learning in short is a Reinforcement learning policy that will find the next best action, given a current state. As described in (Jang et al., 2019) is arguably one of the most applied representative reinforcement learning approaches and one of the off-policy strategies.

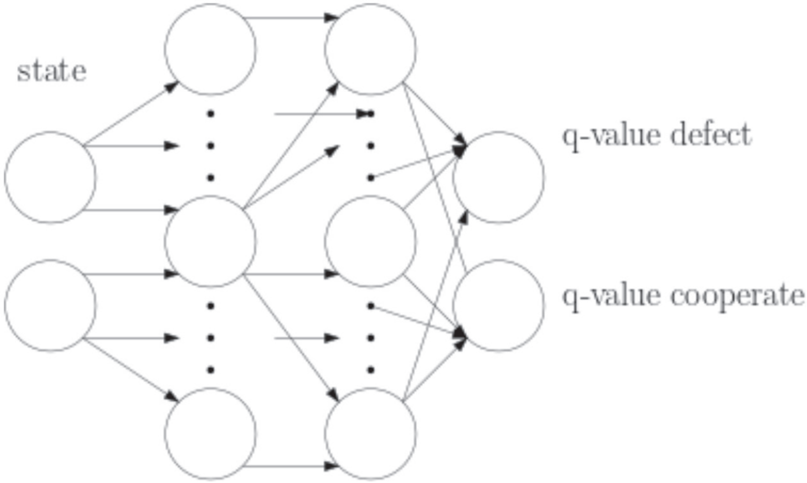
Q-Learning is modeled as an action-value function *Q(s, a)*, representing the willingness of the agent willing to take an action *a* in given state *s*. In The value of *Q(s, a)* returned is called Q-value. Considering the Bellman Equation we define the q-learning update in Eq(1). For calculating the new Q-Value dependent on the current Q-Values we introduce the learning rate α and the reward *R(s, a*) and the maximum expected future reward given the new state(s') and all possible actions at that state considering the discount rate λ. With larger Q-value, representing the possibility of the action a is taken as the agent expected reward has large Q-value. There are various implementations and improvements of the Q-Learning algorithm as described in (Jang et al., 2019). We are focusing on its basic approach using deep-q-learning. There are other approaches to Q learning classified in the same paper, double-q-learning, hierarchical-q-learning, modular-q-learning, ant-q-learning, nash-q-learning and swarm-q-learning, each of them proposing a possible improvement over our current strategy implementation.

$$Q_{new}(s,a) = Q(s,a) + \alpha * \left(R(s,a) + \lambda \max Q'(s',a') - Q(s,a)\right) \qquad (1)$$

In the core of the Q-Learning algorithm is the state table with maximizing rewards which in our approach similarly to (Hester et al., 2017) we place a neuronal network instead of a maximization table. Such approaches are commonly researched with game playing (Mnih et al., 2013).

Q-Learning is required as a pre-requisite for deep-q-learning approach which is practical for very small environments and quickly loses its feasibility when the number of states and actions in the environment increases. With our strategy and the realization that the values in the matrix only have relative importance brings us to the idea of using deep q-learning which uses a deep neural network to approximate the values. We only need to decide the next step and keep the relative value in consideration. The basic step for deep-q-Learning is that the initial random state is fed into the neural network (Figure 2) and it returns the q-value of all possible actions as an output, which for our case is whether the player defects or cooperates.

Figure 2. State to q-value action (defect or cooperate)



III. METHOD

The method is fully based on the tournament technical implementation of (Knight et al., 2021) and both of our players are implemented as an extension to the existing QPlayers list of provided strategies. With the existing QLearners found in (Table 3) our additions were MediocreQLearner and the DeepQlearner. MediocreQLearner a full copy of the existing table QLearner implementation with adjusted learning and discount rate, and the DeepQlearner based on the idea from (Hafiz & Bhat, 2020) using Deep-Q-Learning reinforcement learning algorithm with binary action agents, which in our case would mean the binary action of cooperate or defect.

Table 3. Outcomes in a Round

Model	Learning rate	Discount Rate
Risky QLearner	.9	.9
Mediocre QLearner	.5	.5
Deep QLearner	.2	.8

Source: Current research with addition of values from the Axelrod Library (Knight et al., 2021)

To build the deep network we use the sequential model structure from Keras (Chollet, 2015) and train it with the model parameters listed in (Table 4).

Table 4 . Parameter details for the Deep Q Learning player

Variable	Meaning
Input & Dense Layers	Each layer deeply connected with its preceding layer (2,16,8,2)
Initializer	HeUniform variance scaling, draws samples from a uniform distribution within limits
Activators	ReLU, sigmoid, linear
Loss	Huber, combination of mean squared error and the absolute value
Optimizer	Adam - Adam optimization is a stochastic gradient descent method

Source: Current research

A. Implementation:

We are reusing the previous QLearner implementation from (Knight et al., 2021), we already have most of the state and reward handling befitting a QLearning model. We only took care of implementing our own strategy and action selection function.

The output layer of the Deep Q learning implementation each of the two nodes represents the action that we predict to take, cooperate or defect. With 10% of a chance to call for a random action, we first calculate the prediction from the previous opponent's action, similar to the reward from the payoff matrix. We need the random chance in order to allow for the model to consider other options when the reward focuses on one. With that output we calculate the Q value, and retrain the model based on the adjusted value, allowing the experience to update the neuronal network. With the idea of a selfish player which only considers his moves and adjusts them according to the received reward.

B. Experimentation

In this section the results follow from the use of the Axelord library including our own strategy and players. We have played our strategy multiple times with a difference of turns per match, and number of repetitions of each player against another. With this paper we consider the following strategies in the tournament setup: Cooperator, Defector, TitForTat, MediocreQLearner, DeepQLearner, Adaptive, RiskyQLearner, Grudger, Random, Alternator. With the rules set in the "Axelrod" library descried in (Harper et al., 2017):

We investigate three cases of the strategy, when it has only a low count of training possibilities, with 200 turns and 200 repetitions, following with increased count of 200 turns and 500 repetitions.

Table 5. Statistics for 200 turns and 20 repetitions

Rank	Name	Median score	C_ rating	Wins	Initial C rate	CC rate	CD rate	DC rate	DD rate
0	Tit For Tat	2.581	0.731	0	1.000	0.635	0.096	0.094	0.175
1	Grudger	2.541	0.262	6	1.000	0.258	0.004	0.262	0.475
2	Deep QLearner	2.420	0.328	5	0.539	0.279	0.050	0.226	0.446
3	Adaptive	2.163	0.277	5	1.000	0.133	0.144	0.258	0.466
4	Alternator	2.138	0.500	5	1.000	0.207	0.293	0.261	0.239
5	Defector	2.100	0.000	9	0.000	0.000	0.000	0.277	0.723
6	Random: 0.5	2.085	0.504	4	0.478	0.241	0.262	0.239	0.258
7	Mediocre QLearner	1.904	0.692	2	0.956	0.495	0.198	0.027	0.281
8	Risky QLearner	1.886	0.697	2	0.956	0.493	0.204	0.025	0.277
9	Cooperator	1.663	1.000	0	1.000	0.573	0.427	0.000	0.000

Source: Current research

By observing (Table 5), we notice that given small number of repetitions the MediocreQLearner performs better than its twin RiskyQLearner and the DeepQLearner strategy ranks higher compared to the both QLearning strategies. Considering the increased wins and lower cooperation rate, however higher defection rate. The DeepQLearner performed better than the Adaptive and Alternator, Defector and Random, which was against the hypothesis that the DeepQLearner will have comparable results to MediocreQLearner and the RiskyQLearner. Similarly, from (Figure 3), and (Figure 4) in the boxplot notice the tendency for high payoff and the payoff differences. From (Figure 5) we observe that our DeepQLearner played well against Cooporative, Alternator, RiskyQLearner and MediocreQLearner and worst against the Grudger. When we consider the rates for Temptation, Reward, Punishment and Sucker (Table 1), our DeepQLearner model choices led for it to be in the Punishment section and less in Sucker state. The MediocreQLearner tends to value cooperation more as it differentiates against our DeepQLearner therefore it tends toward Temptation. Highest wins remain with the Defector and no wins for the Cooperator. With increasing the repetitions number to 200 our hypothesis was that the DeepQLearner will overcome some other strategies, like the Grudger or Tit For Tat. By observing the (Table 6) and (Figure 6), (Figure 7) and (Figure 8) we notice the increase for higher payoff however still not sufficient in regard to the other strategies.

Figure 3. Payoff, with 200 turns and 20 repetitions

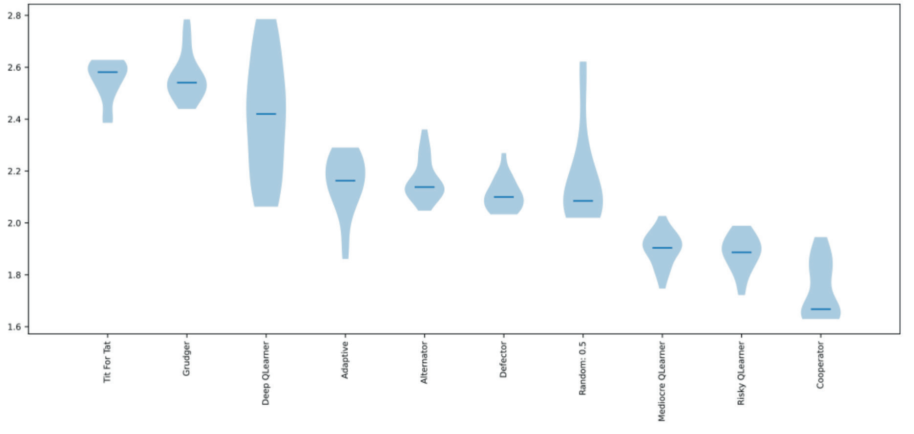


Figure 4. Payoff-differences, with 200 turns and 20 repetitions

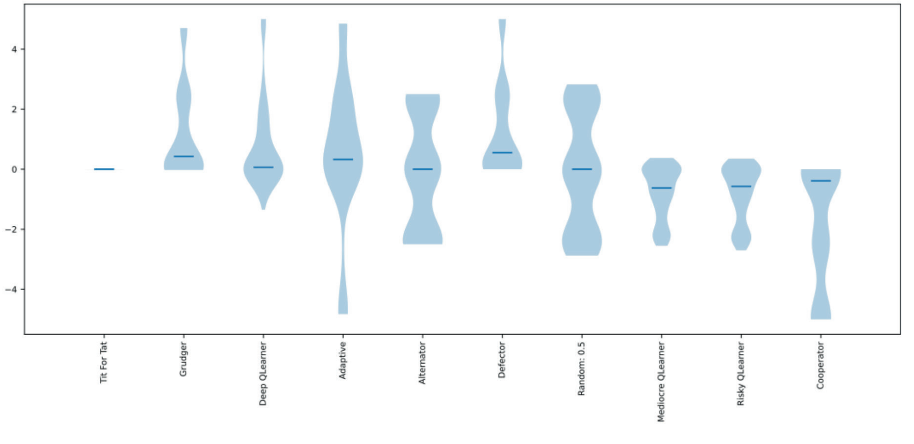


Figure 5. Payoff(left) & Payoff-differences(right) with 200 turns and 20 repetitions for each setup

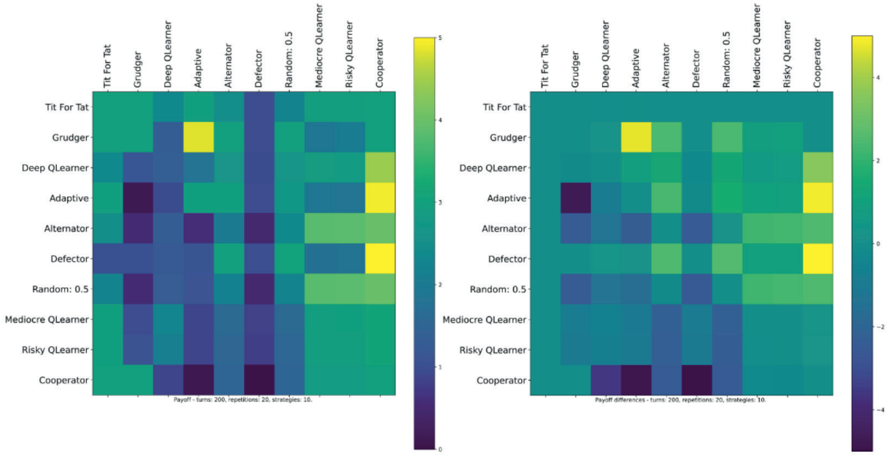


Table 6. Statistics for 200 turns and 200 repetitions

Rank	Name	Median score	C_ rating	Wins	Initial C rate	CC rate	CD rate	DC rate	DD rate
0	Tit For Tat	2.577	0.730	0	1.000	0.633	0.097	0.095	0.175
1	Grudger	2.536	0.262	6	1.000	0.258	0.004	0.261	0.477
2	Deep QLearner	2.386	0.339	5	0.499	0.283	0.056	0.220	0.441
3	Adaptive	2.183	0.269	5	1.000	0.137	0.132	0.258	0.473
4	Alternator	2.165	0.500	5	1.000	0.208	0.292	0.263	0.237
5	Random: 0.5	2.119	0.501	4	0.502	0.240	0.262	0.238	0.260
6	Defector	2.094	0.000	9	0.000	0.000	0.000	0.277	0.723
7	Mediocre QLearner	1.914	0.695	2	0.946	0.498	0.197	0.027	0.278
8	Risky QLearner	1.909	0.702	2	0.953	0.500	0.202	0.026	0.272
9	Cooperator	1.663	1.000	0	1.000	0.573	0.427	0.000	0.000

Source: Current research

Figure 6. Payoff, with 200 turns and 200 repetitions

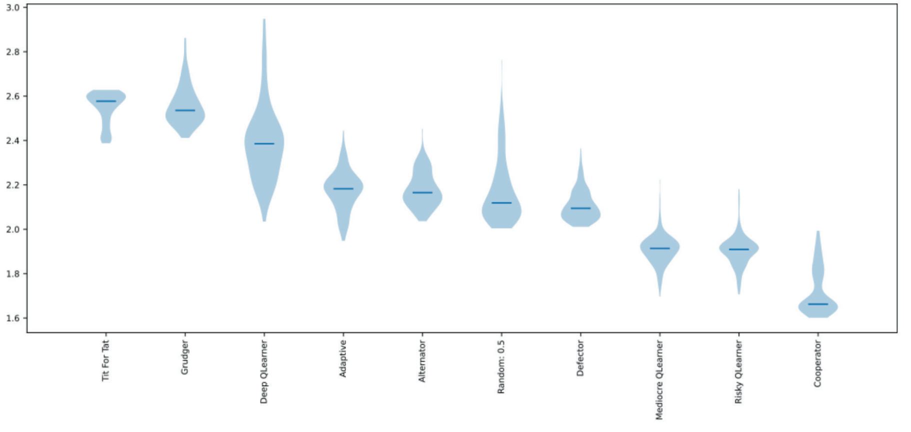


Figure 7. Payoff-difference, with 200 turns and 200 repetitions

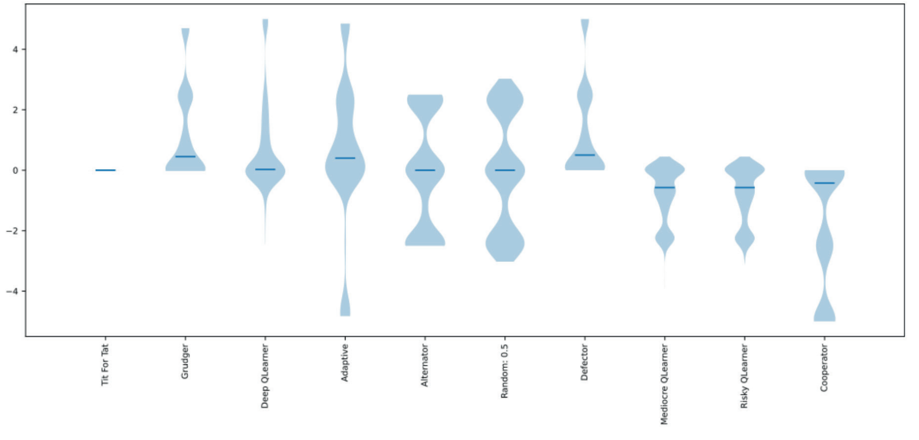


Figure 8. Payoff(left) & Payoff-differences(right) with 200 turns and 200 repetitions for each setup game

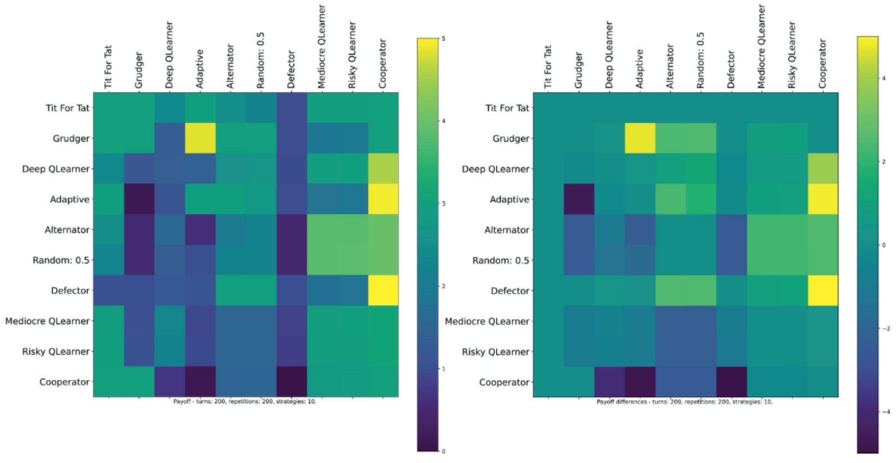


Table 7. Statistics for 200 turns and 500 repetitions

Rank	Name	Median score	C_ rating	Wins	Initial C rate	CC rate	CD rate	DC rate	DD rate
0	Grudger	2.469	0.235	6	1.000	0.234	0.002	0.253	0.512
1	Tit For Tat	2.432	0.710	0	1.000	0.610	0.100	0.099	0.191
2	Deep QLearner	2.295	0.324	4	0.504	0.248	0.076	0.223	0.453
3	Adaptive	2.127	0.251	6	1.000	0.127	0.124	0.247	0.502
4	Alternator	2.090	0.500	5	1.000	0.208	0.292	0.264	0.236
5	Random: 0.5	2.072	0.500	5	0.504	0.242	0.259	0.242	0.258
6	Defector	2.018	0.000	9	0.000	0.000	0.000	0.256	0.744
7	Mediocre QLearner	1.942	0.662	2	0.950	0.470	0.192	0.025	0.313
8	Risky QLearner	1.941	0.663	2	0.953	0.471	0.192	0.025	0.311
9	Cooperator	1.937	1.000	0	1.000	0.603	0.397	0.000	0.000

Source: Current research

Figure 9. Payoff, with 200 turns and 500 repetitions

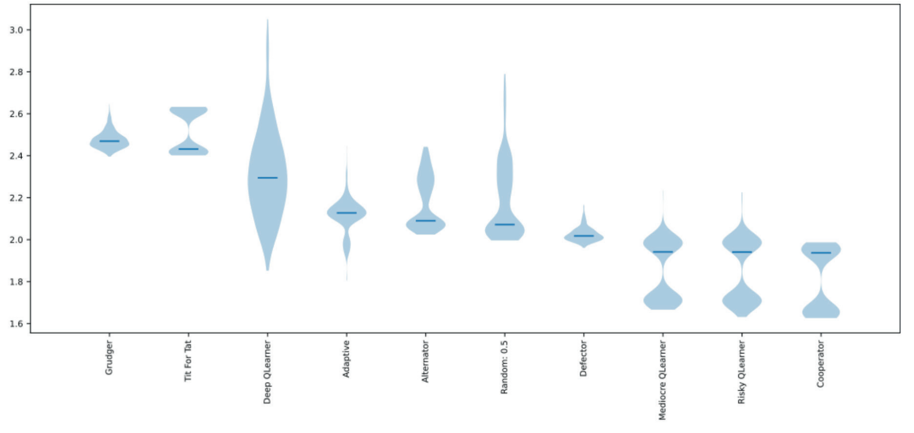


Figure 10. Payoff-difference, with 200 turns and 500 repetitions

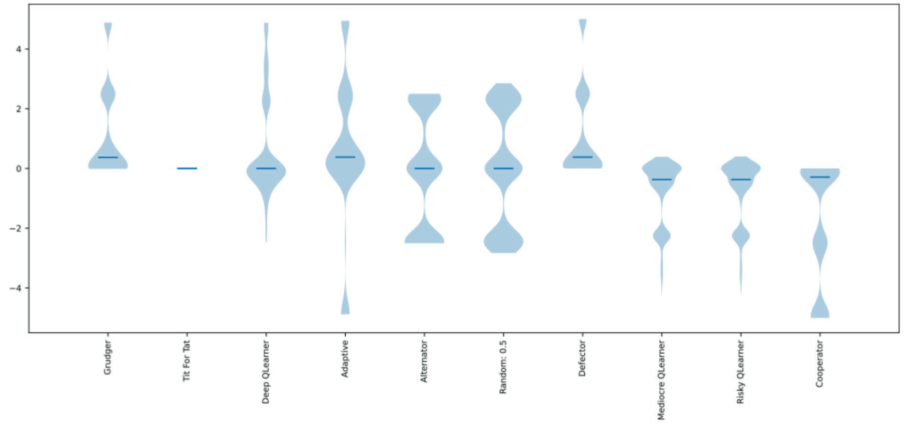
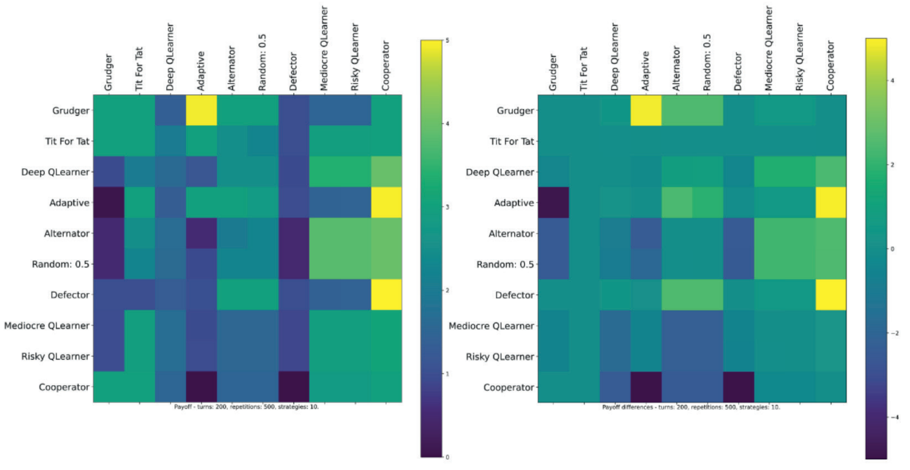


Figure 11. Payoff(left) & Payoff-differences(right) with 200 turns and 500 repetitions for each setup game



With the increase of repetitions to 500 as we can see in (Table 7) and (Figure 9), (Figure 10) and (Figure 11) we can identify that although other strategies produced other results, our DeepQLearner did not differentiate from its previous experiences with a huge margin.

IV. CONCLUSION

The here presented Deep Reinforcement Q-Learning model adds a possible extra opponent to the list of available opponents in the "Axelrod" library. With our strategy basing its competitiveness against the available opponents, it focuses its learning against that specific list. Therefore, it only can get as good as the opponents regarding the rewards in the games played. In our scenario we have shown that the learning algorithm performs strictly better than the MediocreQLearner, and the RiskyQLearner. The same algorithm performs well also against other opponents depending on the number of turns and repetitions. Moreover, we have not trained our strategies extensively, and we notice the progress they make with the increase of turns and repetitions. For future work we expect to extend the algorithm to the other improvements like double-q-learning in combination with other advancements in reinforcement learning decisions for binary actions actors in other games. Future expectation is also to run the model with extreme amounts of repetitions and turns to verify the observation of self-improvement.

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DEVELOPMENT OF RUSSIA'S AGRICULTURAL SECTOR SINCE THE IMPOSITION OF COUNTER-SANTIONS ON THE WEST

Christopher Schagerl

ABSTRACT

Due to the annexation of Crimea in 2014, the USA, the EU, as well as other countries imposed sanctions on Russia.

As a reply, the Russian Federation imposed counter-sanctions not only to support its import substitution program but also to develop the agricultural sector and gain more independence in production.

This article answers such questions as how the Russian imports of agricultural products have changed during the sanctions regime; how Russia has answered with the focus on the local production development during this time; and whether the local production could compensate part of the banned imports. The basis is literature review that captures trends from various sources, including scientific papers, journals, and, in particular, statistical data, for example from the Russian Federal Service for State Statistics (hereinafter – the "Rosstat").

The focus is on the recent information from 2015 until 2021, not taking into account the developments of 2022.

I. INTRODUCTION

As a reaction on the annexation of Crimea, the United States issued Executive Order No. 13660 of 6 March 2014, as the first stage of sanctions on Russia in this regards (U.S. Government, 2014). The same day the European Union suspended bilateral talks with Russia focusing on visa matters before imposing their sanctions on Russia, mainly travel restrictions and assets freeze of the persons responsible for actions which undermine or threaten the territorial integrity, sovereignty, and independence of Ukraine. This includes persons, entities or bodies associated with them as the EU's reply on the actions focusing on the destabilization of the situation in Ukraine. The legal basis for this is the European Union Council Decision 2014/145/CFSP of 17 March 2014, and the EU Council Regulation No. 269/2014of 17 March 2014 (European Council, 2014).Further, European sanctions were formulated in Council Regulation No. 833/2014 as of 31 July 2014 ("COUNCIL REGULATION (EU) No. 833/2014 of 31 July 2014,"Concerning Restrictive Measures in View of Russia's Actions Destabilizing the Situation in Ukraine", 2014).

Other countries, such as Australia, Japan, etc. from their side also imposed sanctions on Russia as economic measures. On 6 August, the Russian President issued Order No. 560, which bans the import of certain types of agricultural products, raw materials, and foodstuffs to Russia which country of origin is the state that has decided to impose economic sanctions on Russian entities and/or individuals or has acceded to such a decision (the Government of the Russian Federation, 2014a). The same order says that the government implements price monitoring for such products.

The explanatory note issued by the Prime Minister defines that the countries which imposed sanctions are the Unites States of America, the countries of the European Union, Canada, Australia, and the Kingdom of Norway. It falls under the scope of the Federal Customs Service to ensure the control over the implementation of such measures. The list of banned goods include HS codes of group 02 'Meat and edible meat offal', but excluding some meat, e.g. lamb, goat or horse; almost the entire group 03 'Fish and crustaceans'; group 04 'Milk and Milk products', excluding eggs; group 07 'Vegetables and some edible root vegetables and tubers'; group 08 'Edible fruits and nuts including peels of citrus fruit or melon peels'; group 1601 'Sausages and similar products of meat, blood or insects'; group 1901 and 2106 'Prepared foods, including cheese and curds based on vegetable fats and other milk-containing products'. Food for children was excluded from the ban. (Government of Russian Federation, 2014b).

Since then, the list has been updated several times and additionally includes such countries as Ukraine, Albania, Montenegro, the Republic of Iceland, Liechtenstein, the UK, and Northern Ireland. From products side, it also now includes live pigs, edible offal of cattle, sheep, goats, etc. (HS group 0206), pig fat and some produces of salt. There are a few exceptions, such as salmon. Firstly, the list was limited to one year, but recently, on 20 September 2021, was prolonged for another year until 31.12.2022 (Government of Russian Federation, 2014b; 2021). The sanctions regimes are widely documented in the literature.

The sanctions from the USA and the EU mainly focus on individuals and entities, aircraft or vessels. They were placed on the Specially Designated Nationals List (SDN). Also Sectoral Sanctions were put in place via the Sectoral Sanction List (Welt et al., 2022). The President of the Russian Federation, Mr. Vladimir Putin, explained in his interview that the Russian sanctions support the import substitution program and the agricultural sector. He note that since 2000s, the agricultural production has grown 2.6 times (*On sanctions as an incentive for economic development (TASS interview*, 2020). Import substitution programs are widely used in different economies. The Russian implementation is a bit unique as it puts strong focus on the agricultural production. Albert Hirschman identifies four major areas for the import substitution strategy. They are a) wars and economic crises leading to a disruption in international trade, b) growth of the domestic market and increased income of population, c) a balance of payment deficit d) the official state policy on the development of the economy (Podoba et al., 2019).

Major goals of the Russian import substitution program are:

1. Ensuring national security,
2. Reduction of technical and technological dependence in the areas of production with large share of imports,
3. Strengthening of the trade balance,
4. Creating conditions for the export of national companies to foreign markets.

These actions have dramatically affected the trade of agricultural proceeds and food between Russia and the sanctioned countries. How has the pattern of the import for the sanctioned goods changed? Has the Russian agricultural production changed since the start of the sanctions regime eight years ago? In case the Russian sanctions are not prolonged further, it is essential for any exporter to understand the market potential before considering re-starting of allowed exports to Russia or thinking about local production. This paper should provide an overview about the development of the sector from the Russian perspective, considering it of strategic importance for the country.

II. MATERIALS AND METHODS

The core of the current article is based on the review of publications of Russian and international authors, focusing on the counter-measures from the Russian side, but also giving special focus to the normative and legislative acts put in place, in particular, at the beginning of the conflict. This includes Order of the Russian President No. 560 of 5 August 2014, focusing on the specific ban on imports as well as connected documents, including the prolongation of the import restrictions, and Order of the President No. 204 of 07 May 2014, on the strategic development of the country. The important data for this article regarding the volume, value, and changes of imported and locally produced goods is derived from the Rosstat. Rosstat is the Russian Federal Service for State Statistics. This information is available in Russian, translated by the author of this paper. The data is freely available on the official website (https://rosstat.gov.ru/). Further information is obtained from the Federal Customs Service available under (http://stat.customs.gov.ru/). In order to use the data efficiently and to prepare visible content, MS Excel was used.

Several product groups based on HS customs codes were chosen for the analysis. The customs code of the Eurasian Economic Union and the HS standards are very comparable with minor differences. By choosing product groups, the largest groups were used in order to make it visible how the value of the import has changed, starting from 2013, before the bans were put in place, during the phase of adaption, and by 2020, seeing the most recent data of the imports. Additionally, the local production from the period 2014 - 2021 was analyzed. This gives an indicator to compare whether the substitution of banned products was achieved by local production.

The importance of the future development of the agricultural sector, including applying new technologies, is also highlighted in Order No. 204 "On national goals and strategic objectives of the Russian Federation through to 2024". The Order says that agriculture, as one of the priority sectors (among healthcare, education, industry, construction, transport, energy, infrastructure, and financial services), should be developed by the use of digital technologies and solutions. Special attention should be thereby given to the creation or reconstruction of cultural and leisure facilities in agricultural areas. Also, within the timeframe until 2024 the national project should ensure creation of a system for farmers support, targeting at small and medium-sized businesses as well as individual entrepreneurs. (*Decree* *of the President of the Russian Federation of 7 May2018, No. 204 "On National Goals and Strategic Objectives of the Russian Federation through to 2024" (as amended)*).

This is of particular interest, according to Connolly (2018), that in the agricultural sector large, privately owned companies hold an important role in the industry, and the owners have close cooperation with local and federal government officials. Also the Order foresees that the following goals will be achieved in exports: manufacturing industry, agriculture, services sector in global competitive non-resource sectors should increase to a total share of at least 20% of the country's GDP. The current developments of 2022, resulting out of the conflict between the Russian Federation and Ukraine, when many new sanctions were imposed on Russia, mainly from the Western countries were not taken into account. As to this date, Russia has not yet responded with strong economical counter-sanctions, at least not officially, by issuing Presidential orders or other related documents like it was in 2014. Nonetheless, the sanctions imposed on Russia may motivate the country to issue counter-sanctions in future.(*Decree of the President of the Russian Federation of 7 May 2018, No. 204 "On National Goals and Strategic Objectives of the Russian Federation through to 2024" (as amended)*, 2018).

III. RESULTS

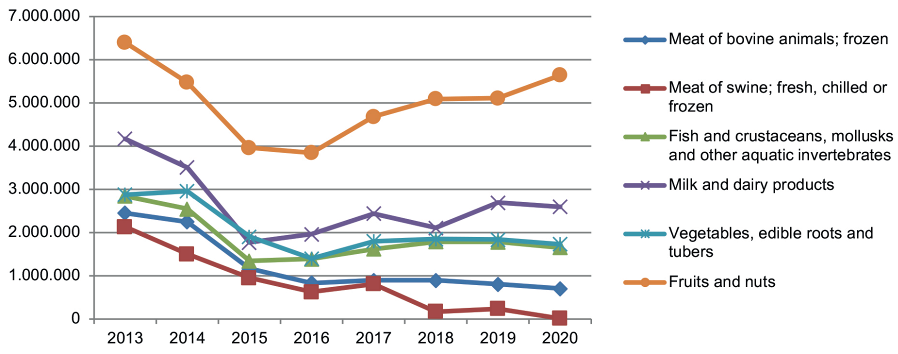
CHANGE IN IMPORTED VOLUMES

The basis for the following research is the explanatory note which was issued by the Russian Prime Minister, defining the implementation of the goals according to Presidential Order No. 560 of 6 August 2014. It defines that the ban on the import of certain agricultural products from the USA, the EU, Canada, Australia, Norway comes into force. The types of products are based on the particular list of products (see Appendix 1 thereto "Import ban based on HS codes").The list has been partially updated. It falls under the scope of the Federal Customs Service to ensure the control over the implementation of these measures (Government of the Russian Federation, 2014b). It is clearly visible that the list contains very large areas of the HS customs codes of food products and agricultural produces. Therefore, it is also highly interesting to understand what products are not included. These are, for example, meat of sheep, goats, horses, bird's eggs, and natural honey.

To provide the first overview about the change of import patterns over time, Figure 1 shows the gradual development of the import of selected sanctioned goods. The selection was based on groups of the HS codes with the import value of more than USD 2 billion in 2013. For further research some sub-codes of the

HS codes were used. The main categories in Figure 1 are "Fruits and nuts", "Milk and dairy products", "Vegetables, edible roots and tubers", "Fish and crustaceans, molluscs and other aquatic invertebrates", "Meat of bovine animals", and " Meat of swine; fresh, chilled or frozen". The data is derived from the Rosstat. When interpreting the graph it, should be considered that 2013 shows the data "before" the ban on import took place; 2014 - "during" the implementation of the ban, and from 2015 - the development since the ban was implemented.

Figure 1. Development of import of selected goods; usd tSD



Source: Author's calculation, based on data from the Rosstat

In particular, the import value in 2013 for "Fruits and nuts" was very high with the value of about USD 6.4 billion. With the ban introduction, the value decreased to 38%, below USD 4 billion in 2016. Since then the import value is steadily increasing. "Milk and dairy products" had a comparable decline from an imported value of more than USD 4 billion in 2013 to less than USD 2 billion, which represents more than 50% of decline. Since then, the import value is increasing, but less sharply than the import of "Fruits and nuts".

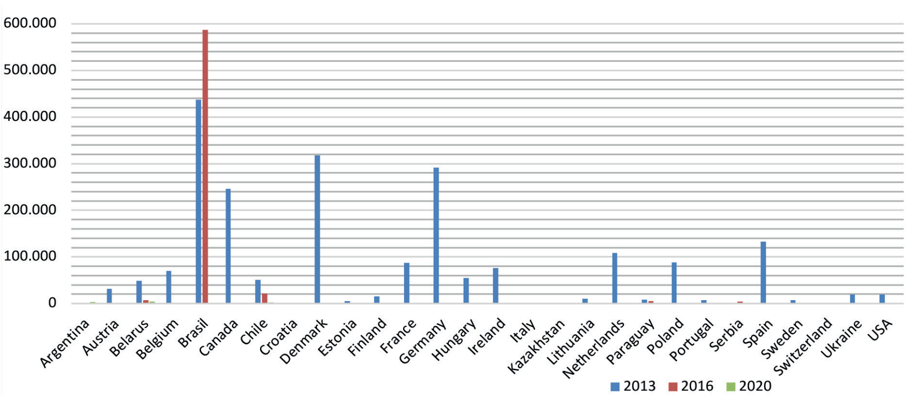
Categories "Fish and crustaceans" and "Vegetables, edible roots and tubers" have quite a comparable value of imports of less than USD 3 billion for each in 2013. After a strong decrease in 2016, the rebound was smaller than for other categories. During the last years, from 2018, the import value is slowly decreasing. This could be a sign of less consumption, higher prices for the imported goods or, on the other hand, an increased local production.

"Pork" and "Meat of bovine animals" have a slightly comparable trend, even though the trend of meat of swine is more obvious. In 2013, the imported volume of Pork was USD 2.1 billion; the value of bovine animals - USD 2.4 billion. While for both categories the further trend, even after 2016 and at least until 2020, was declining, the value of import of meat of swine fell to a very low level of USD 12.3 million in 2020. This might be a strong indicator that the policy of import substitution has been successful in at least the area of local production of pork.

According to Maslova et al. (2019), the agricultural development in Russia has two main constraints, while the situation of the food security of the country population is quite favorable. On the one hand, due to the low income level, the differentiation in consumption of agricultural products and staple food is very high. On the other hand, for some areas the share of imported resources (material and technical) is very high. The income level leads to food consumption which is not in accordance with the targets of healthy nutrition. There is a clear correlation between the income level and the consummation of necessary food products. It should be noted that the article only focuses on the effects of the Russian counter-sanctions while the effects and various sectoral sanctions from the West are not taken into account. Limited to the import ban on agricultural products, the article also does not consider further counter-sanctions such as possible export of technological equipment for agricultural production. In some areas, such as grain, vegetable oils, and sugar the country is also a strong exporter. In other areas, such as pork and poultry, Russia is on the way of becoming totally independent from imports, while in vegetables, fruits, and cattle this process still needs time (Maslova et al., 2019).

Analyzing deeper the import of pork in HS code group 0203, the details of the trend mentioned above are getting more obvious. While before the ban many large European countries were exporting (in a bigger extent Denmark, Germany, and Spain), in addition to Brazil (the largest exporter), the picture has changed dramatically.

Figure 2. IMPORT OF PORK, USD tSD



Source: Author's calculation, based on data from the Federal Customs Service

While in the short term Brazil increased its leading function, as the export from Europe was banned to zero, Chile could maintain a smaller share as well as Belarus. These volumes further decreased by 2020, having Belarus as the largest exporter with the value of slightly less than USD 4 million, followed by Argentina with USD 3.6 million in 2020. The overall imported volume of pork in 2020 was only 6.4 thousand tons.

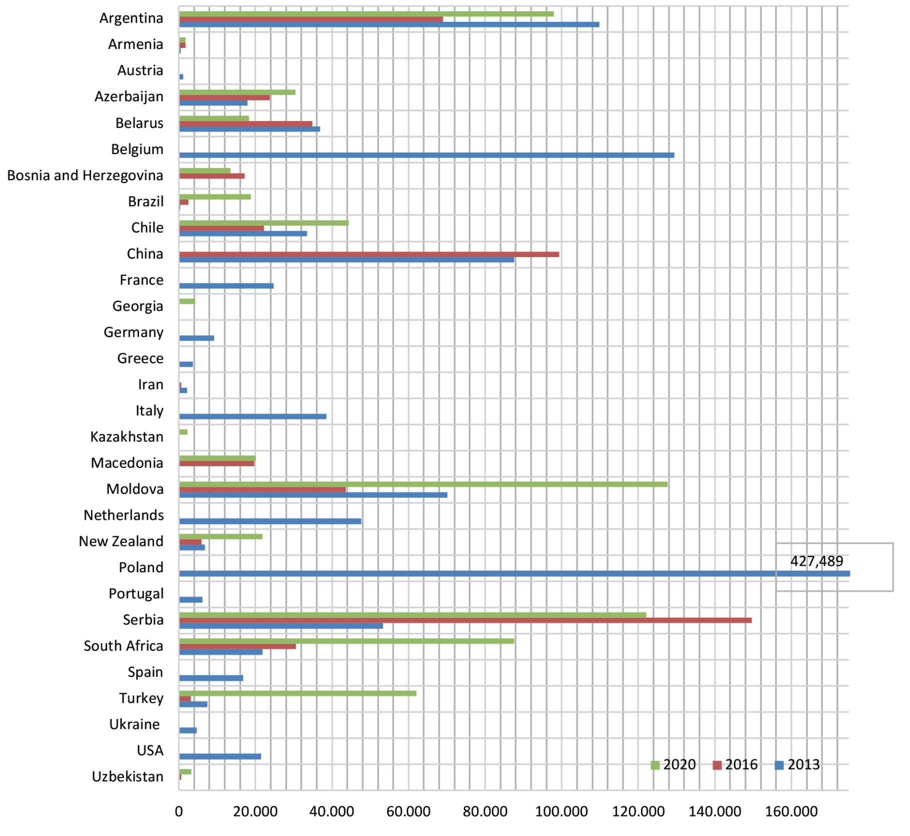
Table 1. IMPORT OF PORK IN 2020

0203	**PORK, FRESH,CHILLED OR FROZEN**	**tons**	**USD TSD**
AR	ARGENTINA	2.252	3.605
BY	BELARUS	2.151	3.976
BR	BRAZIL	422	1.368
KZ	KAZAKHSTAN	181	299
PY	PARAGUAY	176	378
CL	CHILE	1.205	2.667

Source: the Federal Customs Service

Within the largest group "Fruits and nuts" there is, for example, a large group with HS code 0808 "Apples, Pears and quinces, fresh". Historically, Europe was a large exporter of apples to Russia. The main exporting country in 2013 was Poland with the export volume of almost USD 430 million, being responsible for about 12% of overall import in Russia. Certainly, Poland was hit very hard by the ban in 2013, seeing its exports falling to 0% in the later years. In Figure 3, the countries are introduced according to their export volume to Russia in 2013 - more than USD 1 million. There are certainly other exporting countries but their share of the overall exports is minor.

Figure 3. IMPORT OF APPLES, PEARS, and quinceS, USD tSD



Source: Author's calculation, based on data from the Federal Customs Service

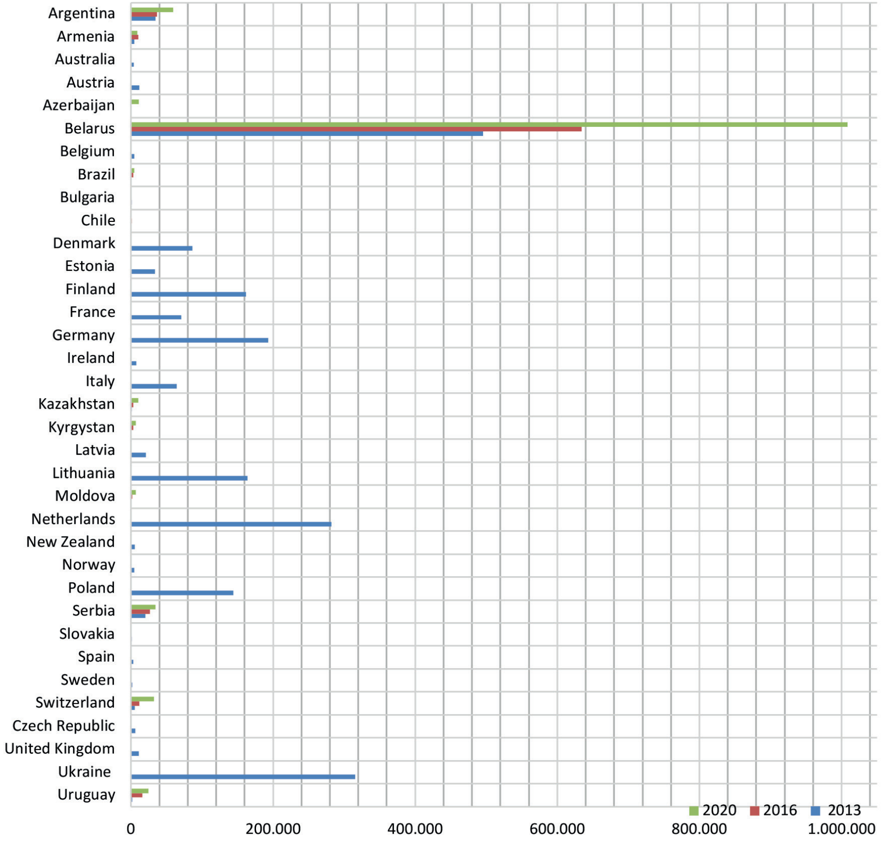
Besides Poland, Belgium was also a leading exporter of apples to Russia, followed by Argentina and China. With the ban, the exports of the sanctioned countries were reduced to zero, so other countries used the opportunity to export. In 2016, large shares of the exports were covered by Serbia and China. In 2013, Argentina was still the third important exporting partner for Russia; it reduced the exports in 2016, but increased them again in 2020. China in its turn, the fourth largest partner in 2013, increased the exports in 2016, but totally decreased them in 2020.

Over the years, the share of, in particular, Moldova has increased, so the country has become the largest exporter of apples to Russia with the annual value of almost USD 128 million. Moldova is followed by Serbia, exporting for about USD 122 million in 2020. Argentina re-strengthened its position and completed Top-3 exporters. South Africa managed to almost triple the exports from 2016 until

2020. In 2020, Turkey exported more than 8 times the value of apples compared to the exported in 2013. Summarizing the above, we can note that even when the overall import to Russia was reduced significantly by 35% from 2013 until 2020, the previous leading exporters from the EU, such as Poland and Belgium, were substituted by Moldova, Serbia, Argentina, and Turkey.

Also, an extremely interesting change appeared under HS code 0406 – "Cheese and Curd", being in the sanctioned group of "Dairy produce, including milk, cream, butter and cheese". In Figure 4 the countries, selected by an export volume of more than USD 1 million in 2013 were analyzed based on the similar parameters as the other products before.

Figure 4. IMPORT OF CHEESE, USD tds



Source: Author's calculation, based on data from the Federal Customs Service

Again, it is visible that the EU had a very strong position in 2013. After the largest exporter - Belarus in 2013, Ukraine was the second, followed by the European countries, such as the Netherlands, Germany, Lithuania, and Poland. While the volumes of export of the EU, Ukraine, and most Western countries to Russia fully decreased, the only partner who dramatically increased its exports was Belarus.

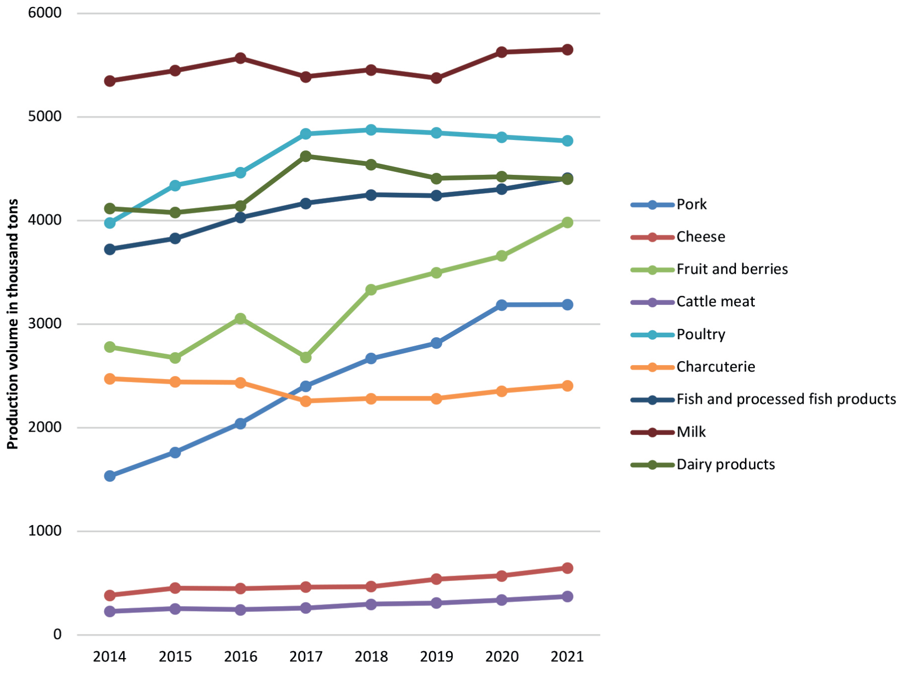
In 2020, more than 82% of the overall imports were made on the account of Belarus. The country has been strengthening its exports continuously over the years. On a larger scale, it can be argued that Argentina also increased its exports by more than 70%, but the total value of imports from Argentina for HS code 0406 is USD 34.6 million, which is still low.

Interestingly, Switzerland was able to increase its export value for cheese from 2013 to 2020 by more than 6 times, exporting for USD 32.6 million in 2020. The imports from the neighbouring countries in the Eurasian Economic Union are mostly insignificant.

PRODUCTION VOLUMES

The import substitution of the Russian Government should in turn not only compensate for the banned imported goods but in particular focus on the development of the local production. This target has been followed by Russian authorities and producers in general in a very dynamic way. Figure 5 shows, as the comparison to the data in the previous figures which focused on the import, the volume of the local production in Russia.

Figure 5. LOCAL PRODUCTION OF SELECTED PRODUCTS



Source: Author's calculation, based on data from the Federal Customs Service

The production of pork showed the strongest increase among the sectors influenced by import substitution policy during 2014-2021. The volume of pork produced in Russia increased from 1,535 thousand tons in 2014 to 3,190 thousand tons in 2021, which is more than a twofold increase (+108%). Pork production showed a very dynamic development pace during the entire period from 2014 to 2021.

The volume of locally produced cheese also showed a dynamic increase. Cheese production went from 384 thousand tons in 2014 to 648 thousand tons in 2021, reflecting an increase by 69%, at a stable pace during the whole period from 2014 to 2021.

The category of "Fruits and berries" also shows itself as one of the strongest sectors in terms of import substitution implementation. The volume of fruits and berries produced increased from 2,780 thousand tons in 2014 to 3,986 thousand tons in 2021, which accounts for the increase of 43%. The sector went through a downfall in 2017, but quickly recovered and continued its strong development through 2018-2021.

Cattle meat production has also been among the sectors, which have seen the most dynamic development, even though in terms of volume cattle meat production is very much lower than the production of other meat, such as pork and poultry. The volume of cattle meat produced in Russia increasedby 63% from 228thousand tons in 2014 to 372 thousand tons in 2021.

As for the local poultry production, it was already showing high volumes in 2014, with 3,979 thousand tons of meat produced. It has also gone through an increase, although, at a slightly more moderate pace, going up 20% to reach 4,772 thousand tons in 2021. Poultry production sector developed in the most dynamic way in 2014-2017, and afterwards remained quite stable, with a slight decrease in 2021.

Fish and fish products local output has gone up as part of the import substitution policy as well. It saw an 18% increase, going from 3,725 thousand tons in 2014 to 4,410 thousand tons in 2021. The development of the sector was stable over 2014-2021, with a minor production volume decrease in 2019, which was followed by growth, both in 2020 and 2021.

Both milk production and dairy products output already started in 2014, at a high production level in comparison with the other products. These sectors did not show such considerable growth rates as other import substitution sectors. Production volumes of milk and dairy products increased by 6% and 7% respectively. Milk production showed a shifting dynamic, with both increases and decreases in output during the period reflected in Figure 5. However, the overall sector development dynamic is positive. As for the dairy products sector, it showed a particularly sharp increase in 2017, followed by a moderate development dynamic. The only sector which went through a slight decrease over 2014-2021 is charcuterie production sector. However, the decrease in production was not very large - 2%.

As to Teichmann and Falker (2018), prices for consumers did not fall as the producers maximized their profits due to the absence of a regular market. The increase in the cost of living for the Russian people was estimated at about RUB 4,400 per year (Teichmann&Falker, 2020). The Rosstat shows that the food inflation in the country has been rising since the last years, from 2018 continuously, reaching 11.09% in January 2022 (TRADING ECONOMICS, 2022).

Especially considering the steadily rising food inflation in the last couple of years and the pressure on the Russian Rouble, due to the possible escalation of the situation at the Ukrainian boarder, it may lead to further increasing food inflation as the import prices will rise for Russian consumers. The long-term effect of the sanctions and counter-sanctions will have to be seen in the years to come.

IV. DISCUSSION

In different formats import substitution programs exist in various countries, including the developed ones. The focus of the Russian program may be a bit different, as the strong focus is put on the development of the agricultural sector. The start of the program is the result of external factors - the sanctions imposed on sectors of the Russian economy by the USA, the EU, and other countries. The import substitution program and bans on the import of many products resulted as a reply on them. The approach in Order No. 204 to focus on the development of small- and medium-sized agricultural companies seems very logical in view to increase the overall production and resource-efficient technologies.

Focusing on the figures, the ban on agricultural products has had a strong influence on the overall imported value, in fact, for all major types of the selected goods in the HS codes by category. None of the selected categories reached the same imported value before the bans, for example, in 2013. Only the category "Fruits and nuts" showed, after the fall in 2016, the increasing values of import. This looks like a steady development over the years. During the whole time of the analysis, this category also stands for the largest share of imports in money terms. Also the import of milk and dairy products showed a recovery after 2016. Nonetheless, pre-ban values weren't reached even closely.

Meat of swine, pork, for instance, showed unexpected development. On the one hand, the imports reduced close to zero (6.4 thousand tons in 2020); on the other hand, the local production strongly increased, reaching more than 3 million tons. At least for this category, it can be assumed that the focus on local production and import substitution has a strong positive effect. The meat of cattle also gradually reduced in imports, and also here the local production has increased continuously over the years, but the share of the local production did not increase as significantly strong as for pork, and the increase of local production does not cover the decline in imports.

Interestingly, the goods category, including fruits and nuts, show both a sharp increase in import values after 2016, but not yet reaching pre-ban values, and also a strong increase in local production. Here it would be also interesting to analyse whether goods (imported and produced locally in Russia) were used for export or production of other goods, or dietary habits may have changed.

The reduced imports are also certainly a major shock for exporting countries. The example of apples is most probably one of the most significant ones, having not only European countries as major exporter until 2013, but, in particular, Poland, as, by far, the strongest exporter with the value of USD 427 thousand in

2013, followed by the absolute ban in 2014. It must be a strong challenge for such countries to redistribute exports of such perishable products as apples. Moldova and Serbia show themselves as the new preferred exporters during the sanctions regime. How this will change within the new sanctions imposed in 2022, would be interesting to discover further.

The import of cheese shows the importance of the neighbouring country Belarus for supply. The local production of cheese has increased over the years, but also the import in money terms shows that by far the largest share of import is focused on Belarus, leaving a very minor share of the market fort he presumably high-priced cheese from Switzerland and Argentina.

All in all, the food production shows a relatively positive development, in particular, the production of grain and some types of meat products. While before the counter-sanctions the EU was the largest exporter to Russia for agricultural products, considering crops, meat, dairy products, vegetables, and food, this had certainly caused a strong pressure on the exporters and increased the pressure on Russia to focus on such new trading partners as Belarus, Georgia, Kazakhstan, and Turkey. It is often mentioned in literature that due to the sanctions, the financial crisis and significant devaluation of the rouble will have a long-term impact on the Russian economy. The nexus between the growth, based on the comparison between forecasts before sanctions, and factual growth would be another area of interest to be analyzed further.

Negative trends which followed the import substitution strategy might be that the consumers will face the increase in prices for goods or deterioration of their quality for some time after the introduction of trade barriers. Furthermore, the bans and high tariffs can result in an inefficient and expensive domestic production. It would be very interesting to examine the change of the quality of the local production or benchmarking the price levels internationally in a further research. Considering that the trend of the import substitution, in the line of a de-globalization of the economy, also had roots in the global financial crisis of 2008-2009, further governments introduced such programs. To compare their approach and effectiveness would be interesting as well, as the plans in Decree of the President of the Russian Federation of May 7, 2018 No. 204 "On national goals and strategic objectives of the Russian Federation through to 2024" are set. Undoubtedly, the further increase of the production of agricultural proceeds is of the highest strategic relevance for the country to be more independent from imports.

As a positive outcome, it can also be noted that the local producers have an advantage as the import substitution process is focused on, in general, by the government, and competitor products are not available, or in a lower volume and new exporters need to be found. Niches, therefore, can be filled with local suppliers whose prices also rose since sanctions were imposed (Teichmann & Falker, 2020).

In general, Russia should have a good position to proceed with the aim of the import substitution considering that a weakening currency, underutilized production capacities and the potential to export proceeds are favourable factors. It is needless to consider that a low level of investments in equipment and decrease in the purchasing power of the population will prevent a faster development. From the author's side, the potential for further research would also consider the new export bans from Western countries to Russia resulting from the conflict with Ukraine in 2022, and developments due to possible governmental subsidies or measures to improve the efficiency and effectively of the Russian agricultural production. For example, technological machines or other equipment for food production and processing fall under the new EU sanctions.

In particular, it should be of very big interest to follow the imposition of further sanctions from Russia on the West due to the new conflict. As the sanctions from 2014 are (from both sides) still in place and no movement is visible, this will certainly influence the future of the Russian economy. This also shifts the interest of the Russian imports and exports more to the trading partners in the East, in particular, China and India, what could be a further field of study to analyse the trade relations between these larger economic partners (Ogurtsov, 2018).

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ANNEX 1: IMPORT BAN BASED ON HS CODES

CODE TN VED	NAME OF PRODUCT
Chapter 02	**Meat and edible meat offal**
0201	Meat of bovine animals, fresh or chilled
0202	Meat of bovine animals, frozen
0203	Meat of swine, fresh, chilled or frozen
0207	Meat and edible offal of fowls of poultry, chicken, ducks, geese, turkeys and guinea fowls
from 0210	Meat salted, in brine, dried or smoked
Chapter 03	**Fish and crustaceans, molluscs and other aquatic invertebrates**
0301	Live fish
0302	Fish, fresh or chilled (excl. fish fillets and other fish meat)
0303	Frozen fish (excl. fish fillets and other fish meat)
0304	Fish fillets and other fish meat, whether or not minced, fresh, chilled or frozen
0305	Fish, fit for human consumption, dried, salted or in brine; smoked fish
0306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine, even smoked
0307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, frozen, dried
0308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted or in brine
Chapter 04	**Dairy produce; birds' eggs; natural honey; edible products of animal origin**
0401	Milk and cream, not concentrated nor containing added sugar or other sweetening matter
0402	Milk and cream, concentrated or containing added sugar or other sweetening matter
0403	Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream
0404	Whey, whether or not concentrated or containing added sugar or other sweetening matter
0405	Butter, incl. dehydrated butter and ghee, and other fats and oils derived from milk; dairy spreads
0406	Cheese and curd

Chapter 07	**Dairy produce; birds' eggs; natural honey; edible products of animal origin**
0701	Potatoes, fresh or chilled
0702	Tomatoes, fresh or chilled
0703	Onions, shallots, garlic, leeks and other alliaceous vegetables, fresh or chilled
0704	Cabbages, cauliflowers, kohlrabi, kale and similar edible brassicas, fresh or chilled
0705	Lettuce "Lactucasativa" and chicory "Cichorium spp.", fresh or chilled
0706	Carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar edible roots, fresh or chilled
0707 00	Cucumbers and gherkins, fresh or chilled
0708	Leguminous vegetables, shelled or unshelled, fresh or chilled
0709	Other vegetables, fresh or chilled
0710	Vegetables, uncooked or cooked by steaming or boiling in water, frozen
0711	Vegetables provisionally preserved but unsuitable in that state for immediate consumption
0712	Dried vegetables, whole, cut, sliced, broken or in powder, but not further prepared
0713	Dried leguminous vegetables, shelled, whether or not skinned or split
0714	Roots and tubers of manioc, arrowroot, salep, Jerusalem artichokes, sweet potatoes and similar roots and tubers
Chapter 08	**Edible fruit and nuts; peel of citrus fruit or melons**
0801	Coconuts, Brazil nuts and cashew nuts, fresh or dried, whether or not shelled or peeled
0802	Other nuts, fresh or dried
0803	Bananas, incl. plantains, fresh or dried
0804	Dates, figs, pineapples, avocados, guavas, mangoes and mangosteens, fresh or dried
0805	Citrus fruit, fresh or dried
0806	Grapes, fresh or dried
0807	Melons, incl. watermelons, and papaws "papayas", fresh
0808	Apples, pears and quinces, fresh
0809	Apricots, cherries, peaches incl. nectarines, plums and sloes, fresh
0810	Fresh strawberries, raspberries, blackberries, back, white or red currants, gooseberries and other edible fruits
0811	Fruit and nuts, uncooked or cooked by steaming or boiling in water, frozen
0813	Dried apricots, prunes, apples, peaches, pears, papaws "papayas", tamarinds and other edible fruits

Chapter 16	**Preparations of meat, of fish, of crustaceans, molluscs or other aquatic invertebrates, or of insects**
160100	Sausages and similar products, of meat, meat offal, blood or insects; food preparations based on these products
Chapter 19	**Preparations of cereals, flour, starch or milk; pastrycooks' products**
1901901100	Malt extract with a dry extract content of >= 90%
1901909100	Food preparations of flour, groats, meal, starch or malt extract, containing no milkfats, sucrose, isoglucose
Chapter 21	**Miscellaneous edible preparations**
2106909200	Food preparations, compound alcoholic semi-finished products, other than products based on aromatic substances, of a kind used in the manufacture of beverages
2106909804	Food preparations of animal or vegetable fats or oils, or fractions thereof, containing more than 15% by weight milk fat
2106909805	Food preparations as cheese fondue
2106909809	Other food preparations
	Not included
0204	Meat of sheep or goats
0205	Meat of horses
0209	Pig and poultry fat
0407-0408	Birds' eggs
0409	Natural honey
0410	Insects, turtles' eggs, birds' nests and other edible products of animal origin
0812	Fruit and nuts, provisionally preserved, e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption

Source: Government of Russian Federation, 2014b

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THE SELLING ORIENTATION – CUSTOMER ORIENTATION – SALES PROCESS AS A SERVICE SCORE (SOSO-SPAS): VALIDATION IN BUSINESS-TO-BUSINESS SALES

Stefan Ledinger

ABSTRACT

The extant scoring systems for the self-assessment of customer orientation and sales orientation by salespeople have been developed decades in the past, and they have not been specifically designed for use in business-to-business (B2B) settings.

As typical sales processes in B2B are typically longer than in business-to-consumer (B2C) settings, it has been discussed in popular sales literature that the sales process itself needs to provide value to the potential customer in order to keep them engaged and eventually make the sale.

In order to provide a better measure of behaviours in the B2B sales process, the "Selling Orientation – Customer Orientation – Sales Process as a Service Score" (SOSO-SPAS) has been developed. This paper addresses the validation of the SOCO-SPAS score with business-to-business salespeople.

I. INTRODUCTION

Many seminal papers in the area of customer orientation (Saxe & Weitz, 1982), adaptive selling (Spiro & Weitz, 1990) and related topics have been published decades ago when market conditions and technologies have been quite different. The same is true for scoring systems such as the "Selling Orientation – Customer Orientation (SOCO)" score (Saxe & Weitz, 1982). In addition, a vast majority of publications on those topics is from business-to-consumer (B2C) settings, not reflecting the greater complexity of business-to-business (B2B) sales settings. The weaknesses of the established scoring systems, together with the gaps in the scientific literature, warrant further research on customer orientation, adaptive selling and related concepts, as well as an extension of the scoring systems to better reflect B2B sales settings. This publication aims to validate a suggested self-assessment scoring system for salespeople in B2B.

A. Key concepts and recent findings

A comprehensive review of the relevant concepts and frameworks for an extended scoring system in B2B sales has been performed in Ledinger (unpublished). This publication also presents a candidate 15-item scoring system that this publication builds upon. Besides 10 items that have been drawn from the short form of the SOCO score (Thomas, Soutar and Ryan, 2001), 5 items are suggested to represent the understanding of the sales process as a service (SPAS). Reviews regarding the underlying concepts of this publication have been provided for customer-orientation (Schwepker, 2003; Goad & Jaramillo, 2014), adaptive selling (Franke & Park, 2006) and value-based selling (Axelsson & Vilgon, 2018).

In brief, the publication by Thomas, Soutar and Ryan (2001) suggests that the short form of the SOCO score with 10 rather than 24 items is also suitable to test how sellers rate for selling orientation (i.e. focus on trying to make a sale regardless of customer needs) and customer orientation (i.e. focus on trying to fulfil customer needs), while reducing the risk of respondent fatigue compared to the original 24-item version.

SPAS on the other hand draws from a variety of sources.

- First, there has been a recent trend propelled by practitioners and sales trainers indicating that in order for customers to engage in the longer sales processes that are frequent in B2B, the process itself – and not just the solution that is being sold – needs to provide value to the (prospective) client.

- Second, the scientific literature also acknowledges the difference between B2C and B2B settings, for example by stressing the importance of relationship value (Hohenschwert and Geiger, 2015; Boles et al., 2000). The concept of relationship value itself includes multiple dimensions (Ulaga and Eggert, 2005) and the fact that effective business relationships can only develop over time has been acknowledged in the scientific literature dating back decades (Walter, Hölzle and Ritter, 2002; Biggeman and Buttle, 2005).
- Third, SPAS draws both on the sales literature in the fields of customer orientation, adaptive and value-based selling, as well as concepts from the scientific literature on service-related concepts (service-dominant logic, service orientation in other settings than sales). (Spiro & Weitz, 1990; Saxe & Weitz, 1982; Vargo and Lusch, 2004; Hogan et al., 1984)

Recent years have seen considerable amounts of research related to customer orientation in sales, which shall briefly be recapitulated here.

Various researchers have discussed how salespeople customer orientation and outcomes are mediated by sales organizations. Coimbra and Proença (2022) have shown that salespeople tend to be more successful if they are appropriately coached by their managers, both due to improved customer orientation an improved results orientation. The authors even find that the positive effects persist when there is pressure to provide results. Similarly, in various business-to-consumer (B2C) settings, sense of meaning and organization innovativeness have recently been associated with more adaptive service behaviour (Chou et al., 2022; Kim et al., 2022). Further, servant leadership has been described to contribute to customer-oriented behaviours in service industries (Yuan et al., 2020, Oren, n.d.). As Anaza et al. (2022) point out, the effect of selling orientation and customer orientation is also contingent on a company's go-to-market strategy. However, the effect that leadership exerts on sales results may be contingent of the current market environment. For example, Alavi et al. (2022) have shown that in times of crisis (i.e. the COVID-19 pandemic), transactional leadership might be better than transformational leadership, which typically seeks a longer term perspective. The effectiveness of customer orientation may also be reduced as competitive pressure rises, as shown for B2C sales by Yi and Amenuvor (2022).

Other factors contributing to the effect of selling and customer orientation have also been addressed in recent literature. For example, Mostafa and Kasamani (2022) have found that not only skills such as technical knowledge or active empathic listening are related to customer orientation. In fact, this association is increased with social media use. Kuo et al. (2022) have shown that resourcefulness increases sales performance of B2B salespeople in logistics.

B. Research gap

As mentioned in the introduction, the foundation for this research field has been laid decades ago, from the introduction of the low-pressure selling concept (Bursk 1947) to the concept of adaptive selling (Spiro & Weitz, 1990). In the era when those concepts have been developed, market conditions were very different and when neither salespeople nor customers had modern IT and communication devices available. Consequently, even if the concepts may remain in principle valid, reviewing and adapting them to the changed reality in sales is well warranted.

In addition, this research integrates service-related concepts from other research fields which are rarely integrated into the research in sales.

The quality management literature acknowledges that customer orientation can, but not necessarily has to influence customer satisfaction positively (Yeung et al., 2004). Consequently, although customer orientation and related concepts have been addressed in the scientific literature for decades (Bursk, 1947; Smith and Hunt, 1987; Humburg, Müller and Klarmann, 2011) a scoring system in B2B sales needs to go beyond measuring just customer orientation. In addition, the traditional concept of customer orientation itself has also been criticised as too reductionist. Singh and Koshi (2012), for example, have proposed customer orientation to include 6 components, one of which being the creation and delivery of value for the customer.

Customer orientation has been shown to improve factors that are typically associated with sales success including trust and intention to buy (Bateman and Valentine, 2014). However, this research falls short of providing insights into the mental state of salespeople as it pertains to the extended selling cycles typical in B2B. Similarly, while Luthia and Strid (2020) demonstrate that communication skills are an essential and trainable requirement for customer-oriented sales behaviors, their research does not inform about the attitudes required to have such communication patterns evolve and training efforts in this space succeed.

In addition, business acumen has been described as an essential component to communication skills in B2B sales (Koponen, Julkunena and Asaib, 2019). While sales acumen includes both understanding the customer's business and providing value in the sales process, as an exploratory study the paper leaves open how business acumen, or even the mental preparedness to try to understand and provide value to the customer could be measured. The current study provides, in part, a means to measure salespeople's inclination to see the sales process as something that should provide value (i.e. a service). It is also an open question whether this could help to retain the positive effects of customer orientation when there is additionally an orientation towards adding value throughout the sales process in B2B settings.

In general, there is a shortage of (B2B) sales literature (Lilien, 2016), while the difference in typical settings makes the translatability of findings from B2C difficult. The concept of the SOCO-SPAS scoring system intends to provide a means of assessing success criteria in more complex selling situations than other scoring systems have been developed for. In addition, the need for more comprehensive scoring to develop more comprehensive assessment systems for salesperson performance has also been addressed by Kerr and Marcos-Cuevas (2020). The value of developing such a scoring system is also highlighted by the recent findings by Itani et al. (2022) who have shown that in B2B sellers who value moral behaviors, are both more customer oriented and more inclined to engage in value co-creation (Itani et al., 2022). On an organizational level, a 5-item score for value co-creation in B2B has been developed by O'Cass and Ngo (2012), but to the author's knowledge, no validated such scoring system exists for a salesperson's personal attitude towards creating value in the sales process. The importance of service orientation has been addressed in the B2B sales literature (Axelsson & Vilgon, 2018), but the focus here was on the service logic behind physical product sales, rather than on the value that is provided in the actual sales process.

C. Definition of SPAS

Periatt, LeMay and Periatt (2004) have provided groundwork regarding SOCO in B2B selling, showing that – at least in principle – the SOCO score is also valuable tool in B2B sales. However, as described, the SOCO score does not fully represent the complexities of the B2B sales process. For this purpose, another component ther measures service orientation, or co-creation of value, needs to be added. This component is called "Sales process as a service" and shall be defined as

"Sales process as a service (SPAS) orientation in B2B sales is defined as an attitude that understands the B2B sales process as a form of service that should be of value for the customer in and of itself, not just in helping the customer make the right purchasing decision. SPAS thus considers the sales process as an offering for the prospective client that should be designed like other types of product or service offerings, rather than simply a means to an end [i.e. making a sale]."

II. MATERIALS AND METHODS

This paper discusses the validation in B2B sales of the extended short form of the selling orientation – customer orientation (SOCO) score (i.e. the SOCO-SPAS score). The original short SOCO score has 5 items each for selling orientation (SO) and 5 customer orientation (CO). In collaboration with sales scholars, this score had been extended by 5 items for "sales process as a service" orientation, out of 21 candidate items (Ledinger, unpublished).

The validation among B2B salespeople was designed to achieve three goals:

1. Assess whether the self-assessment of salespeople is contingent on industry, age, gender, career stage or other factors
2. To validate that the formulation of questions is clear and universally understandable.
3. Identify correlations within the 5 selected items for the SPAS component as well as correlations with other items of the revised SOCO score (i.e. items included in the selling orientation or customer orientation scores, or the respective overall scores).
4. Based on the findings in this validation, exchanging items to build a SOCO-SPAS score that is universally applicable, clearly formulated and easily usable scoring system was considered.

For this purpose, an online questionnaire has been distributed to more than 300 salespeople from different geographies and different industries, asking them to fill in the questionnaire and to ask the whole sales organization to contribute. The questionnaire contained the following segments:

- The 10 original items of the revised SOCO score as well as the original 21 candidate items for the SPAS component, arranged in random order. Besides the 5 items chosen for the preliminary score after consultation with sales scholars, the other items have been kept in the questionnaire in order to be able to potentially replace items that appear to not fit or heavily correlate with SOCO with other candidate items – especially if sales scholars had considered those likewise relevant to measure SPAS.
- A self-assessment of salesperson relative to the other members of the sales team, based on a 15-point Likert scale (1 = much worse than the average salesperson; 15 = much better than the average salesperson).

- A variety of demographic questions:
  - Age, gender, region of residence, level of education, career stage
  - Industry, company size, types of customers, most important customer group

A questionnaire where the questions regarding the SOCO-SPAS components have been filled was considered suitable for evaluation, i.e. neither a full set of responses for demographic data nor a response regarding the self-assessment of sales performance was deemed necessary, as the main goal of the questionnaire was to validate the SOCO-SPAS score. As indicated in the results and discussion sections, available data from the other questions have been used to draw conclusions.

In order to avoid respondent fatigue, other than in the original SOCO score validation, it has not been tested whether respondents answered in a socially desirable manner. This is in line with the criticism by Crowne (1991) that social desirability is a personality trait and should not be a reason for data to be excluded from analysis. Also, the original SOCO score had tested whether a statement was associated with "closing a deal", "building relationships" or "ability to help" as a means to test nomological validity. This has not been tested in the present study, either.

III. RESULTS

The analysis of findings is based on 34 complete responses, after more than 300 questionnaires had been sent to sales professionals. This represents a response rate of around 12 per cent. While this could be considered a pilot study, which are valuable in establishing the relevance of a novel scientific concept or tool, the response rate was not sufficient to perform complex statistical analyses.

The goal in interpreting the responses was to find out whether the choice made after feedback from sales scholars is indeed the best (i.e. accurate, comprehensive, and independent from SOCO) representation or whether other candidate items might be better suitable to provide a comprehensive yet independent measure of SPAS, while also having been accepted by sales scholars as relevant.

Tables 1 and 2 show the items that have been selected for the preliminary SPAS score as well as those that ranked high in the ranking by sales scholars but have not been selected for the preliminary SPAS score. Those items from Table 2 have served as candidate items for the final SPAS score.

In order to assess whether there are any collinearity issues between the tested constructs, linearity between the individual questions and the overall scores for customer orientation, selling orientation, net SOCO score and SPAS orientation (the scores have been compiled by summarizing the scores obtained from the individual questions) has been performed. Although not the primary goal of this analysis, correlation analysis with self-assessed sales performance has also been performed.

TABLE 1. CORRELATION OF SPAS ORIENTATION WITH SSALES PERFORMANCE AND SOCO COMPONENTS

	Performance	**Customer orientation**	**Selling orientation**	**Net score SOCO**	**SPAS orientation**
Performance	1.00000				
Customer orientation	0.31313	1.00000			
Selling orientation	-0.32640	-0.23105	1.00000		
Net score SOCO	0.38925	0.54267	-0.94260	1.00000	
SPAS orientation	0.07249	0.28650	0.15223	-0.03310	1.00000

As Table 1 shows, the preliminary SPAS score does not correlate with the net SOCO score, which at first glance confirms that the objective of the SPAS orientation score to provide a measure that is independent of the original SOCO dimensions. However, SPAS appears to correlate correlates moderately with customer orientation. In the tested sample, SPAS orientation did not correlate with self-assessed performance.

Table 2. Correlation of preliminary SPAS components with sales performance, SOCO components and overall SPAS score

	Performance	**Customer orientation**	**Selling orientation**	**Net score SOCO**	**SPAS orientation**
I try to provide useful and new information to the customer with every contact.	0.45375	0.39885	-0.21285	0.32064	0.45929
I enjoy working with customers to develop new or creative solutions.	0.37932	0.35848	-0.29277	0.37578	0.25531
I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.	0.00451	-0.19202	0.54610	-0.53735	0.33596
I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.	-0.24667	0.26646	0.12404	-0.01564	0.62069
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	-0.16679	0.00419	-0.02524	0.02323	0.78122

The correlation analysis of preliminary SPAS components with sales performance, SOCO components and overall SPAS score is shown in Table 2. Items 3 ("I work diligently …") is initially considered as potential item to be replaced, due to the paradoxical strong correlation with selling orientation. The author thinks that the question might be misunderstandable, as it is not perceivable why an item that indicates the contrary of trying to achieve a fast sale would correlate fairly strongly with selling orientation.

As a next step, the items from sales scholar feedback that had not been chosen for the preliminary SPAS score have been considered as replacement for item 3. In addition, especially those items that had also scored as relevant but not been chosen for the initial SPAS score have been considered as potential replacement for the other items, if they

- Reduced the correlation with the net score of SOCO or its components and/ or

- Reduced correlation between items of the SPAS score and
- The respective item was not flagged as items potentially correlated with other SPAS items by sales scholars.
- Although not the primary goal of validating the score, whether a replacement would potentially improve the prediction of sales performance was also tested.

The top 4 items after evaluation by sales scholars, which have not been used for the initial SPAS score and its correlation to the overall scores, are shown in Table 3 and have been considered as primary choices for replacing items from the preliminary score. The correlation between individual candidate items for SPAS is shown in Table 4.

Table 3. Correlation of alternative SPAS components with sales performance, SOCO components and overall SPAS score

	Performance	**Customer orientation**	**Selling orientation**	**Net score SOCO**	**SPAS orientation**
I try to help the customers also in areas where my company's solutions can't.	0.30936	0.24082	-0.15504	0.21649	-0.07371
I want to be perceived as an industry expert and let customers draw from my broad expertise.	0.63876	0.36900	-0.08880	0.20330	0.10323
I try to provide a better customer experience than the customer will reasonably expect.	0.37094	0.12367	0.15583	-0.09208	0.58755
I discuss benefits of working with my company beyond the solutions that my company sells.	0.21585	-0.18926	0.16442	-0.20690	0.26729

Table 3: Correlation of alternative SPAS components with sales performance, SOCO components and overall SPAS score

Table 4. Correlation between items of the initial SPAS score (#1 to #5) and candidate items not initially chosen for the SPAS score (#6 to #9)

		#1	#2	#3	#4	#5	#6	#7	#8	#9
#1	I try to provide useful and new information to the customer with every contact.	1.00								
#2	I enjoy working with customers to develop new or creative solutions.	0.31	1.00							
#3	I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.	-0.05	-0.19	1.00						
#4	I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.	0.05	-0.09	-0.15	1.00					
#5	I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	0.26	0.11	0.34	0.25	1.00				
#6	I try to help the customers also in areas where my company's solutions can't.	0.40	0.20	-0.15	0.03	-0.33	1.00			
#7	I want to be perceived as an industry expert and let customers draw from my broad expertise.	0.63	0.14	-0.08	0.05	-0..15	0.38	1.00		
#8	I try to provide a better customer experience than the customer will reasonably expect.	0.39	0.37	0.20	0.10	0.54	-0.07	0.16	1.00	
#9	I discuss benefits of working with my company beyond the solutions that my company sells.	0.16	0.16	0.27	0.13	0.01	0.06	0.18	0.21	1.00

Item #6 has been excluded from consideration because it was deemed to address a similar scheme as item #9, with #9 not correlating >0.25 with any of the other items (except replaced item #3). Item #7 has also been excluded from consideration due to moderate correlation (>0.5) with item #1 as well as moderate correlation (> 0.25) with one CO item and overall CO. Item #7 had also been suggested to correlate with item #1 by sales scholars. Items #8 and #9 did not correlate (>0.25) with SO, CO, SOCO score.

The authors thus considered item #8 a suitable replacement for item #3, as fulfilling commitments including such that are not directly related to the business opportunity might represent a similar concept as item #8's creating a better experience than expected.

As items #4 and #9 had also been suggested by scholars to correlate (but not with other items), and item #9 showed lower overall correlation with SOCO components, lower correlation with the draft SPAS score (i.e. the other items of the SPAS score) and appeared to correlate somewhat with self-assessed performance, the author decided to replace those items. Consequently, the final SPAS score was considered to ideally consist of items #1, #2, #5, #8 and #9.

Table 5. Correlation scores after replacing 1 item (#3 replaced by #8) or replacing 2 items (#4 by #9)

	Performance	**Customer orientation**	**Selling orientation**	**Net score SOCO**	**SPAS orientation**
After exchange of 1 item (#8 for #3)					
SPAS orientation	0.16561	0.35171	-0.03672	0.15241	1.00000
After exchange of 2 items (#8 for #3; #9 for #4)					
SPAS orientation	0.37481	0.17557	-0.03152	0.08746	1.00000

As Table 5 shows, the final SPAS score does not correlate significantly with either of the SOCO components or the overall SOCO score. At the same time, correlation with self-assessed performance rises from 0.38871 to 0.39639 (when replacing one item) to 0.5005 (when replacing two items).

This creates the final SPAS component of the questionnaire as follows (crossed out items have been replaced by the item below the respective items):

Sales Process as a Service (SPAS) Orientation	Never Always
I try to provide useful and new information to the customer with every contact.	1 2 3 4 5 6 7 8 9
I enjoy working with customers to develop new or creative solutions.	1 2 3 4 5 6 7 8 9
~~I work diligently to fulfil any commitments made during the sales Process, including those not directly related to business opportunities.~~	~~1 2 3 4 5 6 7 8 9~~
I try to provide a better customer experience than the customer will reasonably expect.	1 2 3 4 5 6 7 8 9
~~I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.~~	~~1 2 3 4 5 6 7 8 9~~
I discuss benefits of working with my company beyond the solutions that my company sells.	1 2 3 4 5 6 7 8 9
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	1 2 3 4 5 6 7 8 9

The full SOCO-SPAS questionnaire is shown in Appendix VII.A.

IV. DISCUSSION

This paper suggests a validated self-assessment scoring system for selling orientation (SO), customer orientation (CO) and "sales process as a service" (SPAS) orientation (SOCO-SPAS) score. The new scoring system draws on an established scoring system for SOCO and a set of SPAS-related items pre-selected set after feedback by sales scholars. In the current paper, validation of the scoring system by B2B salespeople is performed. Further, a modification of the SOCO-SPAS questionnaire is suggested by exchanging several items by other candidate items that have been suggested suitable by sales scholars, test for similar concepts, may be easier to understand for respondents and lead to lower rates of correlation within the SPAS items as well as items of the selling orientation (SO) and customer orientation (CO) items. This scoring system is designed to better represent the long and complicated selling cycles in B2B sales, while retaining the simple self-assessment format of the original SOCO score. This should enable sales organizations in B2B to better assess which behaviours associate with sales performance in the company's specific setting.

The current study has several strengths and weaknesses:

A. Strengths

With this paper, a scoring tool that is more reflective of the requirements of today's complex B2B sales situations has been created. Given that the sales process is longer and typically involves more people than business-to-consumer (B2C) sales situations, the factors that drive success in B2C are not the same or at least not the only drivers of sales performance in B2B. Most importantly, the extended scoring system allows to answer the question which extent in specific settings the sales process needs to provide value in order for the customer to be willing to engage in the process until the business opportunity is ready to be closed. It may be assumed that service orientation grows in importance with longer selling cycles, increased complexity, and increased competition.

In addition, the fact that the SOCO-SPAS score consists of just 15 total questions and only 3 categories that are tested by self-assessment, the new scoring system is still as simple as possible. This creates practical utility.

Finally, this publication adds to the extant sales literature and literature on customer orientation by adding a measure for a novel component that has garnered interest by sales practitioners, but in spite of four decades of research in the field, there is hardly any research from B2B applications.

B. Weaknesses

There are three main weakness of this study:

- The study was hampered by low response rates. The goal was to personally reach out to salespeople from multiple geographies and industries and asking them not only for their own participation but also for making the questionnaire available to their respective organizations. Although more than 300 such invitations have been sent across geographies and industries, only 34 completed questionnaires have been received, which could be considered a low response rate. Consequently, a useful analysis according to geographies, industries and other demographic factors could not be performed.
- Although efforts have been made to avoid respondent fatigue, it must be assumed that the relatively large number of demographic questions that preceded the SOCO-SPAS related questions have caused respondent fatigue, clearly contributing to the result of 34 overall full responses with 74 questionnaires started.

- Due to the poor response rate, there is a lack of representative participant numbers with regard to geography, industry, and other demographic parameters. Consequently, no sub-group analysis of the results has been possible.
- Generalizability is generally a problem in B2B sales research, given the large variety of markets, product types, etc. Thus, while the questionnaire is designed for use regardless of industry, any findings about the optimum amount of SPAS being ideal may be limited to specific settings. Also, depending on the exact setting, other items considered as potential components of the SOCO-SPAS score might be more relevant in the specific settings than the 5 items chosen for die final SOCO-SPAS score.

It is not entirely clear whether customer orientation is actually the right measure to assess in relationship to defining sales performance. In a review, Franke and Park have concluded that experience, as well as adaptive sales behaviours, are more important parameters than customer orientation. However, established scales for the measurement of adaptive selling styles (e.g. Spiro and Weitz, 1990) suffer from the same issues that have been described for the original SOCO score and were thus not considered suitable as a basis for developing a scale to determine success factors in B2B sales. In addition, the SPAS component might require a large extent of adaptivity. However, this has not been specifically tested in the present study.

As a self-assessment tool, the new tool does not directly inform salespeople and sales managers about the actions needed to successfully implement SOCO-SPAS into sales conversations. Whether SOCO-SPAS relates with actual sales performance, and through which specific behaviours, will have to be investigated by future studies. Also, the issue that is typical to B2B sales, i.e. high complexity, long selling cycles and a larger number of people involved on both the buyer and seller side may make it difficult to pinpoint the specific behaviours of individual sellers that drive sales performance.

C. Managerial Implications

Without validation in a specific B2B sales setting, managerial implications around the SOCO-SPAS score remain preliminary. Most importantly, the new SPAS dimension should give managers better information about attitudes that might be important to succeed in B2B sales. Obvious potential applications include benchmarking, training, alignment with marketing (e.g. content marketing), or designing pre- and post sales customer service strategies. Finally, the SOCO-SPAS questionnaire may have a role in selecting sales talent during hiring processes.

V. CONCLUSIONS

This paper describes the validation of the SOCO-SPAS questionnaire, including the replacement of two items from the draft version of the questionnaire, based on responses from B2B sellers. The SOCO-SPAS questionnaire is designed to provide a means to better analyze determinants of sales performance in B2B, as compared to the original SOCO questionnaire. SOCO-SPAS does so by adding a component that measures whether a salesperson has an attitude towards adding value in the sales process, in addition to any value that the solution they sell provides to the customer.

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APPENDIX:

A. Dimensions of the final SOCO-SPAS Questionnaire

The statements below describe ways a salesperson might act with customers (for convenience, the word "customer" is used to refer to both customers and prospects). For each statement, please indicate the proportion of your customers with whom you act as described in the statement. The meanings of the numbers are:
1-True for NONE of your customers-NEVER
2-True for ALMOST NONE . . .
3-True for A FEW . . .
4-True for SOMEWHAT LESS THAN HALF . . .
5-True for ABOUT HALF . . .
6-True for SOMEWHAT MORE THAN HALF . . .
7-True for a LARGE MAJORITY ...
8-True for ALMOST ALL ...
9-True for ALL of your customers-ALWAYS

For example, if you choose 6 below, you indicate that you enjoy developing solutions with your customers in somewhat more than half of the time.

	Never Always
I enjoy working with customers to develop new or creative solutions.	1 2 3 4 5 6 7 8 9

Customer Orientation	***Never Always***
I try to figure out what customer needs are.	1 2 3 4 5 6 7 8 9
A good employee has to have the customer's best interest in mind.	1 2 3 4 5 6 7 8 9
I try to bring a customer with a problem together with a product/service that helps solve that problem.	1 2 3 4 5 6 7 8 9
I offer the product/service that is best suited to the customer's problem.	1 2 3 4 5 6 7 8 9
I try to find out what kind of products/services will be most helpful to a customer.	1 2 3 4 5 6 7 8 9

Selling Orientation	***Never Always***
I try to sell as much as I can rather than to satisfy a customer.	1 2 3 4 5 6 7 8 9
It is necessary to stretch the truth in describing a product to a customer.	1 2 3 4 5 6 7 8 9
I try to sell a customer all I can convince them to buy, even if I think it is more than a wise customer would buy.	1 2 3 4 5 6 7 8 9

I paint too rosy a picture of my product/service to make them sound as good as possible.	1 2 3 4 5 6 7 8 9
I decide what product/service to offer on the basis of what I can convince customers to accept, not on the basis of what will satisfy them in the long run.	1 2 3 4 5 6 7 8 9
Sales Process as a Service (SPAS) Orientation	***Never Always***
I try to provide useful and new information to the customer with every contact.	1 2 3 4 5 6 7 8 9
I enjoy working with customers to develop new or creative solutions.	1 2 3 4 5 6 7 8 9
I try to provide a better customer experience than the customer will reasonably expect.	1 2 3 4 5 6 7 8 9
I discuss benefits of working with my company beyond the solutions that my company sells.	1 2 3 4 5 6 7 8 9
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	1 2 3 4 5 6 7 8 9

B. Candidate dimensions for SPAS orientation

- I try to figure out what customer needs are.
- I try to sell as much as I can rather than to satisfy a customer.
- I try to help the customers also in areas where my company's solutions can't.
- I try to provide useful and new information to the customer with every contact.
- I want to be perceived as an industry expert and let customers draw from my broad expertise.
- During the sales process, I always think of how to reach my goals and company sales goals.
- It is necessary to stretch the truth in describing a product to a customer.
- A good employee has to have the customer's best interest in mind.
- I try to bring a customer with a problem together with a product/service that helps solve that problem.
- I will do my customer a favor only if I am confident that it will pay off in the short term.
- The primary goal in my interaction with the customer is to uncover needs.
- I try to engage with the customer only as long as it takes to find information required to make the sale.
- I enjoy working with customers to develop new or creative solutions.
- I try to sell a customer all I can convince them to buy, even if I think it is more than a wise customer would buy.
- I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.
- I take more enjoyment from deals I have actively contributed to than from those that happen easily.
- I feel like the sales process has a greater influence on the customer decision than the objective fit of the solution.
- I paint too rosy a picture of my product/service to make them sound as good as possible.
- I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.
- I try to provide a better customer experience than the customer will reasonably expect.
- I try to understand the customer's situation as thoroughly as possible.
- I offer the product/service that is best suited to the customer's problem.

- I discuss benefits of working with my company beyond the solutions that my company sells.
- I try to create an atmosphere where customers can be trustful enough to talk about any topic on their mind.
- I try to find out what kind of products/services will be most helpful to a customer.
- I show my customers that I care for them even when I am busy.
- I try to make interactions as convenient for the client as possible.
- I actively seek feedback from customers, colleagues and superiors about how I could serve them better.
- I decide what product/service to offer on the basis of what I can convince customers to accept, not on the basis of what will satisfy them in the long run.
- I acknowledge and appreciate that the customer needs to contribute to a fruitful sales process.
- I am keen on learning and applying new competencies in the sales process.

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A CREATION OF CAPITAL - THE INCREASINGLY DATA-DRIVEN EU FINANCIAL MARKET REGULATION

Carsten Haderer

ABSTRACT

Data and its accumulation have become a central and fundamental element of the capitalist economy in the 21st century. The future development of financial markets in the EU, and more broadly spoken, the whole economy, relies upon a universe constructed out of data. Nevertheless, financial literature commonly presents data merely as a factor that has the potential to improve the accumulation process for economic capital. With that in mind, this paper takes a critical stand on this economistic concept of data. By combining interdisciplinary literature from law, finance, sociology, and technology studies, this paper aims to develop a comprehensive concept of capital. In light of this objective, it is specifically attempted to bring together the perspectives of Pierre Bourdieu and Katharina Pistor. Although, or probably because, Bourdieu and Pistor use quite distinctive routes when formulating their concept of capital, various valuable complementarities can be found within their propositions. Building on Bourdieu's conceptual foundations of capital and Pistor's theory of legally coded capital, this paper attempts to examine the role of the European Union's digitalization process in generating capital for the financial sector. This holistic perspective that this paper takes on opens up new questions on what types of capital exist and argues that the EU's current regulatory reforms result in capital creation for the European financial sector.

I. INTRODUCTION

Digital data flows affect nearly every aspect of our life – and with it, the way how corporations generate value (UNCTAD, 2021). Terms like the gig economy, the sharing economy, digitalization, or the fourth industrial revolution are omnipresent. What unites these catchwords is their emphasis on the increasing role of data (Deller, 2021).

As corporations operating within the capitalist system seek to expand and open up new sources of revenue, data is prophesied to allow for just that. Similar to financial flows, data flows have been identified as an engine of growth for today's globalized economy.

Data's crucial role in the world economy is well reflected in the ever-increasing volume of global data flows. In 2016 research published by Mankyika et al. (2016) outlines that over the period 2005 to 2015, the volume of data flows has multiplied by a factor of 45, while flows of traditional goods and services have merely managed to grow at the same pace as global GDP.

More recent estimates indicate that digital data flows will more than triple between 2017 and 2022 (UNCTAD 2021).

Possible explanations for these high growth rates in data flows can be found in the literature. Sadowski (2019) argues that data allows corporations to access non-monetarized parts of our world and extract value from them.

Zuboff (2020) outlines that industrial capitalist corporations traditionally generated their profit through the use of means of production such as wealth or labor. However, by transforming humans' private experiences into financial gains, today's increasingly data-driven corporations found a new way to generate profit (Andrew et al. 2021).

As the data-driven digital economy evolves, new imbalances arise. This is particularly reflected by the fact that the world's largest digital platforms profit disproportionally from datafication. A remarkable feature of that development lies in the circumstance that these platforms are primarily based in the United States and China. Therefore, a strong geographical compression of data value becomes evident. Together the United States and China make up almost 90 percent of the market capitalization of the world's largest digital platforms (UNCTAD, 2021).

Consequently, as China takes on such an important role in the structure of the digital economy, the datafication process also brings along new implications to the concept of the global economic North-South divide.

However, it is noteworthy that the traditional North-South divide between developed and developing countries is still strongly evident when it comes to the availability of digital infrastructure. In that regard, only 20 percent of people in the least developed countries (LDCs) use the internet. Beyond that, people in these countries are subjected to low internet speed and relatively high costs for internet access (UNCTAD 2021).

Research has also pointed toward a relationship between socioeconomic and digital exclusion. In that regard, countries/regions in which people tend to have lower levels of education and income are less likely to make use of digital technology (Helsper & Galacz, 2009).

Against that background, the evolving digital economy is characterized by substantial divisions that manifest themselves in the readiness of countries and people to harness the value of data (UNCTAD 2021).

II. METHODOLOGY

This paper uses an integrated literature review to develop a new theoretical perspective regarding the crucial role data plays within our society and the financial industry in particular.

According to Torraco (2005), an integrated literature review is particularly helpful when existing research is dispersed and lacks systematic analysis.

Snyder (2019) outlines that an integrative literature review can create a new conceptual framework or theory. Therefore, the integrated literature review entails creative data collection methods. The objective is not typically to cover all literature published on the topic but to merge viewpoints and knowledge from diverse research fields.

By reviewing, analyzing, and synthesizing the literature on capital from diverse research fields such as law, finance, sociology, and technology studies, this paper attempts to develop an interdisciplinary concept of data capital.

In particular paper aims to provide new insights into the characteristics of "data as a form of capital" that can contribute to future research and, thus, go beyond merely mapping or describing the current discourse.

To achieve this objective, this paper takes a close look at the following capital-related theories:

- Pierre Bourdieu's Types of Capital

Pierre Bourdieu is considered to be one of the most influential social theorists of the 20th century. His contributions to the concept of capital continue to have a lasting impact on the academic discourse. For this paper, the literature on his concept of capital is reviewed to examine the factors underlying the transformation of capital into other forms of capital.

- John Commons' Legal Foundations of Capitalism

The economist John Commons became well known for his notion of transactions, which he defines as the basic units of economic activities (Nicita & Vatiero, 2007). For this paper, his concept of transactions and, in particular, the factors shaping them are analyzed.

- Katerina Pistor's concept of legally coded capital

Building on John Commons, the jurist Katharina Pistor outlines how legal institutions shape the creation of capital. For the purpose of this paper, in particular, the process of transforming an asset into capital is analyzed.

A synthesis method was employed, combining the perspectives of these three researchers to develop a basis for a new perspective on how data can be understood as a crucial source of power in society. Ultimately, by examining current EU regulatory initiatives on the exchange of financial data, this paper looks at an unexpected source of such power.

The databases employed included the following: Elsevier, Emerald Insight, Jstor, Proquest, SAGE Journals, ScienceDirect, and Springer Nature. Additionally, Google Scholar used as a data collection source. Based on the above reasoning, 9 keywords were selected and used independently or combined: *Digital Capital, Legal Capital, Digital Finance, Katherina Pistor, ESAP, Data Capital, Pierre Bourdieu, Network Society, and Surveillance Capitalism.* This literature review targeted solely English and German language publications.

Inspired by Torraco (2005), a staged review consisting of an initial assessment of abstracts was conducted. Following that, an in-depth examination was conducted to determine the relevance of the literature. A total of 41 publications were retained for this integrated review.

III. CHARACTERISTICS OF DATA

People, as well as companies, constantly collect data and then act in accordance with the processed data. They do so because data is generally considered a description/reflection of the environment (Pistor, 2020).

The resulting quantification of the human environment through data also became known as "datafication". In its essence, datafication consists of two processes. First, it transforms (abstracts) humans' surroundings (and even human life itself) into data. Second, this newly created data creates different kinds of value. Ultimately, this data is then, at some point, monetized either by using the data to improve the capitalization (e.g., monetarization) of products and services or by directly monetarizing the data itself (Mejias & Couldry, 2019).

Therefore, an important characteristic of data is that it can be either a commodity used for the production process or the product itself. (Sadowski, 2019) This ambivalent character of data becomes particularly noticeable in some products we buy, like a smart fridge. On the one side, this smart fridge is a consumer good. On the other side, the smart fridge produces productive capital in the form of data as it generates data from our everyday activities that are then traded and used to predict future outcomes (Andrew, Baker, & Huang, 2021).

Mejias & Couldry conclude that a fundamental characteristic of datafication is the abstraction capacity of data. This capacity allows one to transform various aspects of human life into an abstract "object" that has value (Mejias & Couldry, 2019).

While pretty much any aspect of our life can be described by data, it is crucial to point out that data does not merely constitute knowledge about the world perse. Instead, data is a kind of artificially created information about various aspects of human life that is generated and, by processing it, gives value to institutions (e.g., financial data providers) (Sadowski, 2019).

As outlined in the next section, processed data allows one to predict future outcomes and, therefore, to exercise control. This is probably the most important function of data capital, as it is this function that differentiates data from all other classical tradable goods. In that respect, Pistor argues that the processed data and algorithms, contrary to raw data, are rival goods (Pistor, 2020).

Similar to Pistor, Zuboff (2020) refers to data's power to predict future outcomes and shape human behavior as a new source of power that she frames as "instrumentarian power." The instrumentalization of human life characterizes this new power source, as it aims to modify, predict, and/or control life (Andrew et al., 2021).

More general characteristics of data are that it is processable, transportable, and recordable by computer systems (Sadowski, 2019). Beyond that, raw data is non-rivalrous in nature as it is available in "infinite" amounts, and using this data does not affect the ability of others to use it again (Pistor, 2020). Furthermore, data is intangible, and access to it can be limited by technical or legal means. That means that data can be either a public good (no limitation), a club good (access is given to a group of people), or a private good (UNCTAD, 2021).

IV. THE VALUE OF DATA

Financial institutions rely upon the accumulation of data to increase their efficiency in various operations such as portfolio and risk management, return forecasts, market valuations, asset pricing, and algorithmic trading. (Hasan et al., 2020).

However, it is essential to point out that this reliance on data stems not from raw data per se. Instead, it arises from the possibilities of processed data and the related algorithms, as these factors enable companies to extract predictive values for future outcomes, which will allow them to conduct efficient operations decisions. In particular, these predictions result from processes such as the aggregation and scaling of data. Nevertheless, in that context, it is crucial to point out that the capacity to analyse data depends mainly on the sheer volume of available raw data (Pistor, 2020).

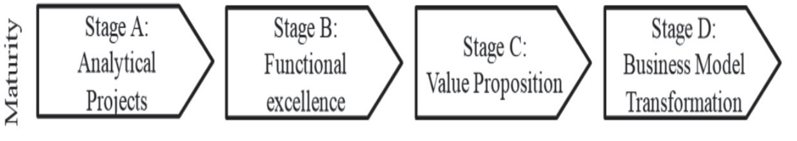
On the other side, small pieces of data in their unprocessed raw form do not have (much) exchange value, and typically data buyers rely on sellers' explanations when it comes to evaluating the value of this kind of data. Generally, the value of data capital arises from both volume and the possibilities to process data, as, ultimately, these factors allow one to increase one's predictive capacities (Pistor, 2020).

That said, it can be argued that effective implementation of data processing into one's business operations can erase much of the risk associated with profit-seeking activities. This is because data processing enables a company to look into various aspects of human life and ultimately try to shape future behaviour. (Andrew, Baker, & Huang, 2021).

In line with these arguments, this paper, therefore, looks at (processed) data as a means to control future (economic) uncertainty.

Due to this function, data has to be considered a vital factor in a corporation's business model. Altering this factor allows corporations to transform their business models. However, as is shown, for example, by Tiefenbacher and Olbrich 2015 in their 4-stage data maturity model, such a transformation usually doesn't happen immediately (Günther et al. 2017).

Figure 1. The data maturity model



Source: Tiefenbacher and Olbrich (2015)

Instead, the transformation process outlined by Tiefenbacher and Olbrich (2015) consists of different stages of data maturity. Corporations reach these before they ultimately are able to achieve a "business model transformation." For each of the various stages, Tiefenbacher and Olbrich indicate examples. E.g., In "Stage A," corporations typically have use cases like financial reporting or performance measurement. Finally, in the last stage, "Stage D," corporations tend to move towards a fully integrated data-centered business model.

The degree and pace at which corporations move towards the various data maturity stages and, therefore, their ability to capitalize on data depends on the corporation's economic sector and resources. In this regard, it is essential to point out that resources (e.g., available data volume) are generally more obtainable for larger organizations (Günther et al., 2017).

V. DEFINING CAPITAL

A. John Commons' Legal Foundations of Capitalism

Commons argues that the economic logic of capitalism is fundamentally different from that of feudalism. This applies in particular against the backdrop that in feudalism, there were fewer transactions and use-value dominated economic life. Beyond that, neither concepts like property nor liberty were clearly defined in feudalism (Mitchell, 1924).

In capitalism, the fundamental logic can be defined as "production for the use of others and acquisition for the use of self." Therefore, Commons argues that modern economic theory should focus primarily focus on the transaction process and reduce its focus on factors such as commodities or an individual's use-value. According to Commons, analyzing the two key aspects influencing transaction processes is particularly important. First, humans/enterprises that conduct transactions are conscious of alternative deals. Second, they are also aware that they can take legal steps to ensure their transactions' full and correct implementation. (Mitchell, 1924) Therefore it can also be concluded that law enhances the reliability of others' expected behaviour in transactions (Pistor, 2020).

To sum up, a person's ability to deal with people is highly dependent on the respective legal conditions, as they shape people's behavior in all transactions (Mitchell, 1924). The legal conditions that transactions in today's capitalist system become evident in the changing definitions of concepts such as property or access to markets (Sharfman, 1925).

Commons argues that capital results from the expected beneficial transactions of humans (Commons, J., R., 1924). For that reason, capital depends on the current legal conditions as they enhance the reliability of others' transactions (Pistor, 2020).

B. Katerina Pistor's concept of legally coded capital

Building on Common's legal theory, Pistor (2019) argues that law creates capital. In particular, she asserts that capital arises from a legal quality that helps one create and protect wealth. Pistor (2019) attempts to unravel the legal characteristics of capital and discovers that capital is constructed out of two factors: an asset and the respective legal code of that asset. In this regard, she explains that an asset without a legal code is, for example, "just" a building. However, with the proper legal coding, an asset can become capital as it thereby receives the ability to create wealth for its holders (for example, the building can now become a firm/property). Against that background, Pistor (2019) argues that capital owes its wealth-creating capacity to its legal coding.

The analysis conducted by Pistor (2019) indicates that the assets that have been coded as capital changed over time. However, the legal coding modules used to code capital were relatively stable. The modules Pistor (2019) outlined are property rights, collateral-, trust-, corporate-, contract- and bankruptcy law.

It is also important to point out that an asset needs specific characteristics so that the law can create capital out of it. These characteristics are priority, universality, convertibility, and durability.

- Priority: Somebody has more substantial rights to an asset the everybody else. So you can decide what to do with an asset.
- Durability: To create wealth over time.
- Universality: To be able to enforce priority rights and durability against others.
- Convertibility: To be able to exchange an asset with another.

Pistor (2019) argues that an asset needs to have at least three out of four characteristics to be eligible for becoming capital.

C. Pierre Bourdieu's Types of Capital

Pierre Bourdieu criticizes that economic theory generally reduces the term capital to the production of goods that are subsequently exchanged on economic markets. Against that background, he claims that looking at capital merely as economic capital would veil other types of capital. In particular, such a reductionist view of capital marginalizes sociological aspects of economic activities. This happens as, under the economistic concept of capital, other forms of social exchange appear as altruistic relationships that do not obey any economy. In that regard, the traditional (economic) capital term only considers social exchange relations that are aimed at maximizing profit and guided by economic self-interest. Bourdieu, however, calls for a broader concept of capital. For him, capital is a social exchange that is always based on rational optimization and accumulation. (Jurt, 2012).

For Bourdieu, on the other side, economic capital is just one of the possible types of capital. Instead of the economistic concept of capital Bourdieu encourages a multidimensional approach and defines capital as "accumulated labor." Therefore, when a person appropriates capital, he acquires accumulated labor either in a materialized (e.g., a car) or in an embodied (e.g., language knowledge) form. Furthermore, Bourdieu outlines that capital distribution represents a society's structure. Therefore, the specific kinds of capital available to a person determine the person's place and means of action in society. Simply put, capital, as defined by Bourdieu, can be understood as a kind of power that enables a person to enforce his intentions in life. Against this background, capital appropriation can also be understood as an appropriation of power (Bourdieu, 1986).

Bourdieu's concept of capital can be narrowed down to three fundamental types of capital that, within certain limits, can be transformed into one another:

Economic capital corresponds to the narrow economistic capital concept pursued by classical economic theory. A vital characteristic of this type of capital is that it is immediately and directly convertible into money and often institutionalized in property rights (Jurt, 2012).

Cultural capital can exist as incorporated, objectified, and institutionalized capital.

- In its incorporated – state, it is closely tied to the person. Therefore, this kind of cultural capital cannot be transformed into money instantaneously. The "investor" must invest his time personally to accumulate this kind of cultural capital. An example would be knowledge or abilities.
- Cultural capital in its objectified state is transmissible in its materiality. However, objectified cultural capital cannot be reduced to its material value as it also has symbolical value. A typical example would be an art collection. To understand the symbolical value of objectified cultural capital, one must have the respective incorporated cultural capital at one's disposal (e.g., knowledge about art) (Jurt, 2012).

- By institutionalizing cultural capital, it is possible to materialize incorporated- cultural capital. A typical example of that kind of culture would be a university degree. The degree confers an actor's embodied knowledge an institutional recognition. Against that background, by striving for a degree, one aims to increase one's chances to trade better one's accumulated incorporated cultural capital for economic capital/social capital (Bourdieu, 1986).

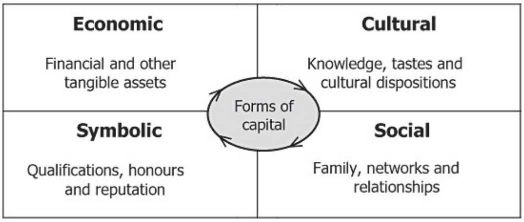
For Bourdieu, social capital is the potential resources/chances one receives from one's social relations. Hence one derives social capital on the condition that one is a member of a specific network. The amount of social capital that one member can derive depends on the relationships he can mobilize and the total (economic, cultural, or symbolic) capital his network possesses. Therefore, to (re)produce one's social capital, one must foster one's network of social relationships and be able to use them. Like cultural capital, social capital is generally not instantaneously convertible into money. An example of social capital in its institutionalized state would be membership in a specific group (Bourdieu, 1986).

Symbolic capital arises from a person's social recognition or prestige in a specific field (Jurt, 2012). This is the case when unequal power relations that depend on a person's (cultural, economic, or social) capital are not perceived as such (Mead, 2021). Therefore, symbolic capital can be understood as a mechanism that legitimates and conceals underlying power relations (Øyvind, 2018). In short, symbolic capital is a misrecognized power source that allows for unequal capital distribution (Feldman & Strier & Schmid, 2014).

The interdependencies between Bourdieu's fundamental forms of cultural-, economic- or social capital and symbolic capital can be well visualized by a prestigious educational diploma (cultural capital). Generally, such a diploma leads to increased recognition in a specific field. Thereby it also entails a (seemingly legitimate) accumulation of symbolic capital as (Jurt, 2012). Likewise, if one is a member of an exclusive club (social capital), one's reputation tends to increase. This increase in reputation would also constitute an increase in symbolic capital (Øyvind, 2018).

With regard to symbolic capital, the state takes on a special role, as it holds a vast amount of symbolic capital. Therefore, Bourdieu considers the state the central bank for symbolic capital, legitimizing it to shape people's lives. The state is able to shape people's lives as it is in the position to transfer symbolic capital to different people. In turn, these people have the power to shape other people's lives. Therefore, it can be argued that people depend to a large degree on their relationship with the state apparatus in case they want to increase their symbolic capital (Feldman & Strier & Schmid, 2014).

Figure 2. Bourdieu's FORMS OF CAPITAL



Source: Adapted from Maclean et al., (2006)

An important characteristic of capital is that it exists in relation to a field (Emirbayer & Johnson, 2008) A field is a social sphere governed by particular norms (e.g., academic or business field). Our social world consists of many different fields. Different fields value different kinds of capital more. E.g., the business field will value economic capital more than cultural capital (Øyvind, 2018)

Therefore, actors inside a field have different levels of power. The level of power of the actors within a field depends on the volume and composition of capital a player possesses. Therefore, a field is also a place of power struggles as actors strive to accumulate capital to change or secure their position in a field (Edgerton & Roberts 2014).

D. Comparison Common 's/Pistor 's vs Bourdieu's concept of capial

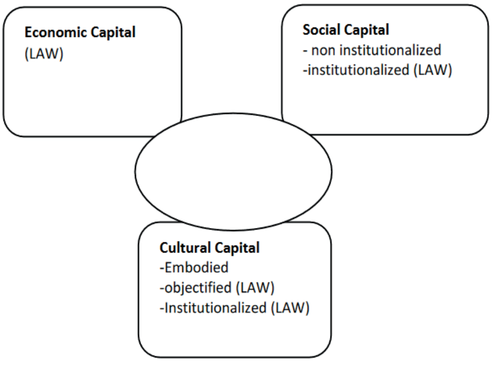
Looking at both Bourdieu's and Pistor's definitions of capital, it becomes clear that a common characteristic of capital lies in its "ability to create wealth for the holder." However, while Pistor defines capital primarily as economic capital (in the Bourdieuan sense), Bourdieu takes on a much broader perspective on capital.

For Pistor (2019), assets have to be institutionalized in the legal system in order to become capital. She argues that capital consists of two components: an asset and a legal code.

Bourdieu also attaches great importance to institutionalization. In particular, he outlines that one can improve the monetarization of one's social and cultural capital by institutionalization (e.g., by completing a degree) (Bourdieu, 1986).

Against this background, this paper takes over Bourdieu's forms of capital and assesses which require legal institutionalization. The following graph illustrates the fundamental forms of capital as conceptualized by Pierre Bourdieu. Forms of capital for which legal institutionalization is a necessary condition are marked with the term "(LAW)".

Figure 3. The LEGAL Institutionalisation of CAPITAL



Source: authors depiction

As visible in the graph above, it is shown that that legal institutionalisation is not, in all cases an indispensable part of capital. Nevertheless, it's obvious that institutionalisation is generally a way to improve the convertibility of capital between each other.

VI. DATA CAPITAL

A. Characteristics of data capital

Looking at data as a form of capital allows one to understand why today's (financial) institutions endeavour to collect as much data as possible.

On some occasions, data has been considered a form of economic capital. In these cases, data is usually considered an economic resource (that is used in the production process, like oil). However, Sadowski (2019) argues that data is not merely a form of economic capital. This is partly because the value extracted from data does not necessarily take on a monetary form. Instead, the extracted value data can take a wide range of shapes. Key examples of such non-monetary value of data are the ability to optimize systems (e.g., algorithmic trading), to profile and target people (e.g., personalized adds), to model probabilities (e.g., forecasting fund flows), and to build digital services (e.g., AI technologies) (Sadowski, 2019).

In literature, data is sometimes considered a form of digital capital. Thereby digital capital itself is treated as its own form of capital. As its own form of capital, digital capital is said to include objectified (digital) capital like a computer or embodied (digital) capital like IT knowledge. (Calderón Gómez, 2021). However, this paper argues that by invoking such a diverse definition of digital capital, it becomes impossible to make a clear distinction between the classical cultural capital in the Bourdieuan sense (e.g., knowledge) and embodied (digital) capital (e.g., IT-knowledge) or economic capital (e.g., assets) and objectified (digital) capital (e.g., a computer). Beyond that, the unique characteristics of data neither correspond to the concept of embodied (digital) capital nor to objectified (digital) capital.

Sadowski (2019), building on Bourdieu's four forms of capital, argues that data can stand alone as a form of capital that originates in economic capital. Building Sadowski, this paper outlines four important arguments for why data should be considered a fundamental form of capital on its own.

- First, data capital other than economic capital' can't be monetarized in all situations. (Sadowski, 2019).
- Second, data other than typical economic resources (e.g., oil) or objectified cultural capital can be harvested, amassed, and turned into monetary assets without allocating property rights at the outset (Pistor, 2020).
- Third, data capital's ability to reduce uncertainty (Andrew et al., 2021).
- Fourth, economic capital (e.g., property rights) depends on the state's coercive power, as this power makes this type of capital enforceable. However, data capital can be harnessed without the state's coercive powers (e.g., without allocating property rights to a dataset). This is possible because companies usually have their own ways of restricting access to the data they have amassed, even without claiming full ownership of the data itself (Pistor, 2020).

Against this background, data capital does not fulfill the criteria that Pierre Bourdieu outlines for being characterized as social, cultural, or symbolic capital.

Therefore, this paper argues that data should be considered its own form of capital. This is important as considering data as economic- or as digital capital blurs the unique characteristics of this kind of capital.

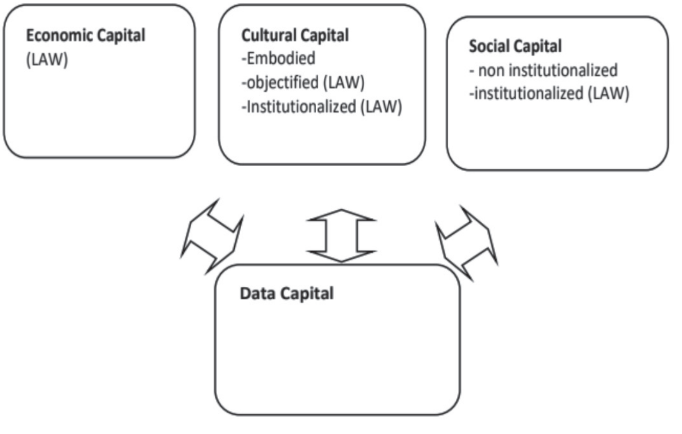
When looking at the characteristics of data capital, it is also important to note that data in its form of processed data shares an essential function with law.

As outlined in Chapter 6.2, Pistor (2020) argues that a necessary feature of the law is its ability to reduce uncertainty. Now also, data processing can ensure such a reduction in (economic) uncertainty (Andrew et al., 2021).
Considering these characteristics, this paper makes two core arguments.

First, it argues that data capital, like law, is ultimately used to reduce (economic) uncertainty by shaping economic relations. However, this reductionist capability of data capital is even broader than the reductionist capability of law. While law uncertainty-reductionist quality can grasp can only grasp institutionalized and objective kinds of cultural and social capital. Data capital uncertainty-reductionist quality can grasp all forms of capital. For example, social capital, such as one's network, which is generally not directly captured by legal code, can be abstracted into data capital in the form of data relations.

Second, this paper argues that data capital is used to improve cultural, economic, and social capital convertibility. At this point, it becomes clear that data capital holds a transformative capability similar to the transformative capacity of law. For example, one can legally institutionalize ones embodied cultural capital with an accredited university degree (which is still cultural capital). Doing so improves one's chances of transforming one's cultural capital into economic capital. However other, one can also transform one's capital into data capital (which is then effectively an independent type of capital). Therefore, while law increases the transformability of capital within the respective type of capital (e.g., cultural capital), data capital increases the transformability of the respective capital by generating a new independent type of capital.

Figure 4. The TranSformation of Data CAPITAL



Source: authors depiction

Bourdieu (1986) argues that e.g. institutionalized (cultural) capital is more easily transformable into money than, e.g., purely embodied (cultural) capital by itself.

According to Pistor (2019), law creates economic value by making aspects of human life (and therefore also the generation of capital) predictable.

Combining these arguments of Bourdieu and Pistor, this paper argues that law is attached to institutionalized, objectified, and economic capital. Through this attachment of law, a simplified monetarization is enabled.

B. DATA CAPITAL, LAW, AND SYMBOLIC POWER

As outlined above, a crucial characteristic of data capital is its ability to shape outcomes. This characteristic data capital shares with law.

The law shapes human relations by imposing common norms and principles on others. However, as these norms are (generally) socially legitimized, they are misrecognized as power. For that reason, the power of law is symbolic in nature (Debska, 2016).

Data capital's function, like law, is to shape different aspects of human life. And same as symbolic power, data capital is a largely hidden form of power.

However, while the state monopolizes legitimate symbolic power (Bourdieu, 1992), that is not the case with data capital.

VII. DATA EXCHANGE

As our economy is becoming more and more centered around data capital, effective data exchange is needed so that corporations can benefit from data capital. (Günther et al., 2017) This circumstance led to the rise of the platforms, which are the data infrastructures that intermediate between different data users (Deller, 2021).

Srnicek (2017) outlines four essential characteristics of platforms. First, platforms are reliant upon the usage of their service - the more users a platform has, the more data it can accumulate. Second, platforms allow different user groups to interact. Third, platforms generally have multiple arms of business. Finally, platforms deploy the strategy of constant user engagement to accumulate more data (Koh, 2017).

Also, as data is the primary resource for these platforms, they have low marginal costs and generally barely limits to their growth prospects. These circumstances encourage them to accumulate more and more data (Deller, 2021).

VIII. DATA CONTROL

Due to factors such as information asymmetries, economic might, and access to law, free and efficient markets are already more or less of an illusion. Generally, the datafication process could reduce uncertainty and lead to beneficial results for all financial market participants. (Pistor, 2020).

However, market participants tend to restrict access to their data rigorously. They do so mainly due to economic and security aspects, as data could increase competition and endanger a company's market position. (Günther et al., 2017).

Therefore, only a few market participants can use large amounts of data. (West, 2019). In this regard, Fisher & Streinz (2021) coin the term "data inequality." Data inequality refers to the unequal control over data both in distributional characteristics (e.g., the availability of data to a market participant) as well as the market participants' power to decide what becomes data. The authors outline that, in particular, the market participants that control essential infrastructures (e.g., platforms) that generate, transfer, process, or store data are in a better position to profit from the datafication process.

The circumstance that a small group of market participants is able to predict and manipulate the behaviour of others market participants can be attributed primarily to the unequal control over data. Against this background, Pistor (2020) argues that this unequal control over the predictive and manipulative data power could lead to even larger distributional inequalities as it tends to reduce the scope of "unknowable unknowns" only for a small number of market participants.

Beyond that, it is problematic that data capital claims human experience and modifies and shapes it to generate profit. However, this modification and shaping of human experience are not achieved through traditional governmental forms of power such as police power. Instead, it is attempted to shape human experience according to specific designs (Zuboff, 2020).

Last, while currently, economic relations are shaped by law, data could increasingly take over or substitute the role of law to the advantage of powerful institutions. This is because data allows actors to largely transform economic relations without dependence on legislative instruments. Against this background, Pistor argues that datafication could ultimately undermine governments' power to govern economic relations. (Pistor, 2020).

Also, Castells argues that the state has lost part of its traditional (coercive) power in our society. The reason for this lies in the fact that in a globalized Network

Society,[1] there is less option for the nation-state to impose "outcomes". However, in this regard, it is crucial to point out that, across the board, nation-states did not lose their influence. In many cases, they still hold a considerable ability to shape outcomes (people's minds) (Stalder, 2006).

In that regard, Castells outlines that the weak legal protection of data also benefits the power of governments when it comes to shaping outcomes. Therefore, nation-states that are able to adapt to the Network Society, are now stronger than ever (Castells, 2022).

IX. THE EU'S QUEST FOR DATA

As part of its European data strategy and Capital markets union 2020 action plan, the EU Commission wants to provide more data for business and society and strengthen its digital sovereignty. In particular, the strategies outline the EU Commissions to promote a data-driven EU financial market. In that regard, developing a common data space is critical (European Commission, 2018). The European single access point – (ESAP) represents a concrete measure by which the common dataspace will be implemented. (Accounting Standards Committee of Germany, 2021).

X. CONCLUSION

This paper makes several theoretical contributions. In particular, its focus on data reveals an often-overlooked form of capital.

This paper outlines that law makes the exchange of some forms of capital (in particular economic) more controllable/predictable. For example, one can be more or less assured that someone else will not just take one's property away as he would have to fear consequences. However, not every type of capital can be directly made more predictable/controllable by the power of legal institutions. For example, a human's social network cannot be directly captured/defined by law.

Data, on the other side, can capture (or abstract) virtually any kind of capital (e.g., my social network) and make it more predictable/controllable. However, while the law is attached to some types of capital, Data capital, on the other hand, can exist independently of capital. For this reason, data capital can capture aspects of human life that the law cannot cover.

1 For Castells (2022) the network society is a new type of social structure that is constituted by various social transformations that were enabled by the rapid spread and development of new digital technologies over the last two decades.

Therefore, through the abstractive quality of data, one can quantify (and thus capture) one (e.g., social) capital. The abstractive quality of data helps institutions to assess their forms of capital and ultimately allows them to improve their transformability into economic capital. That said, it also is clear that data can capture and therefore enhance the transformability of capital that is already defined by law. In view of these arguments, this paper points out that financial institutions' generation and accumulation of data harbors a strong potential for opening up new sources of value and economic efficiency. By defining data as its own form of capital, this paper sheds new light on the meaning, practices, and implications of datafication for the financial sector.

Also, it is outlined that socioeconomically marginalized market participants (e.g., low-income groups) are less likely to engage with technologies. Therefore, it is assumed that they are less likely to be able to profit from the power of data capital. Against this background, this paper suggests that the rise of data capital could lead to an increase in asymmetries of economic power. However, in that regard, further research is crucial to assess the value of data capital and better anticipate the consequences on the economy as a whole.

Furthermore, combining the concept of data capital with Manuel Castell's theory of the Network Society shows an ever-increasing need for data capital to shape outcomes. Acknowledging the transformative power of data capital has the potential to illuminate systemic challenges that impede both the efficiency of financial firms and the quality of financial regulation.

Against this backdrop, the EU Commissions' quest for data can be understood as an initiative to redistribute data control, particularly by creating a data platform. However, on the other side, it can also be understood as an initiative to generate new data, which then over-proportionally benefits financial market participants who already enjoy high capital levels.

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SALES PROCESS AS A SERVICE (SPAS): DEVELOPMENT AND VALIDATION OF AN EXTENSION TO THE SHORTENED SELLING ORIENTATION – CUSTOMER ORIENTATION (SOCO) SCORE (SOCO-SPAS)

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ABSTRACT

The association between selling orientation and customer orientation and sales success has been a matter of intensive research since the publication of the selling orientation-customer orientation (SOCO) score in the early 1980's. In spite of this intensive research, which attitudes predispose salespeople for high performance remains elusive. The association between customer orientation is also contingent on the situation in which sales interactions occur and is probably curvilinear. , with relatively little research having been devoted to business-to-business (B2B) sales.

Here, the development and validation of an extension of the revised 10-item SOCO score is discussed. The extended score adds a dimension that tests the attitude of professional salespeople towards considering the sales process as a service (SPAS) that should provide value beyond the identification of the best offering. Drawing from publications in sales research as well as service orientation research in other settings, 21 potential items for the new score dimension have been developed. After consultation with sales scholars, a preliminary choice of items has been made to create the SOCO-SPAS score.

The SOCO-SPAS score will further be validated in a questionnaire among B2B salespeople and will enable researchers as well as practitioners to assess how SOCO, together with SPAS, mediate sales performance.

I. INTRODUCTION

Sales and business development are a key function in organizations, as a reliable stream of income is essential to their long-term existence. As sellers are often the most important contact ad primary source of communication between a company and its customers (Sharma et al. 1999, Sharma 1999), there is an important role for B2B salespeople to play.

Surprisingly, compared to B2C, there is relatively little research in B2B (Lilien, 2016), and compared to B2B marketing, research in B2B sales is underrepresented, with about twice as many publications on B2B marketing compared to B2B sales (Google Scholar, 2022a; Google Scholar, 2022b).

Customer orientation is among the more intensively researched topics in sales and B2B sales, including scoring systems in this setting. In this publication, a new concept that is related to but distinct from the classical definition of customer orientation is introduced: “Sales process as a service” (SPAS). In addition, a well-established scoring system will be extended by an SPAS component. Before discussing the development and validation of the extended scoring system, the theoretical foundations leading to the concept of SPAS shall be discussed.

A. SOCO: theoretical foundations and key findings

One of the seminal papers on customer orientation in sales has been published by Saxe and Weitz (1982), who have introduced the “selling orientation, customer orientation (SOCO) score”, a self-assessment tool for salespeople across 24 items which help find out whether a salesperson’s attitudes are rather towards finding the ideal solution for a customer, or towards seeking the sale under all circumstances, even if it is to the disadvantage of the customer.

Customer orientation, however, has been a topic in scientific inquiry for much longer, tracing back to Bursk (1947), who has discussed low-pressure selling. Since the introduction of the SOCO score, many researchers have discussed factors that mediate the association between customer orientation. For example, Smith and Hunt (1987) reported that honestly discussing the disadvantages of an offering as well as the advantages, is associated with improved sales performance. Homburg et al. (2011) reported that the association between customer orientation and sales performance is not linear but that there is an optimum level of customer orientation that depends on the respective sales situation – with situations where individualized or premium products are being sold having a higher level of optimum customer orientation. Bateman and Valentine (2014) have shown that customer orientation improves multiple dimensions of customer evaluation of the salesperson (trust, assumed ethicality, and intention to purchase). The proposed shorter 10-item form of the SOCO score (Thomas et al., 2001) will serve as a basis for the development of an extended version for B2B sales. Luthia and Strid (2020) have identified communication skills as a vital training element as antecedent of customer orientation. In an era in which many companies put a lot of emphasis on customer experience (Peñalba-Aguirrezabalaga et al., 2021) and social selling (Barney-McNamara et al., 2020), customer orientation has remained relevant

Fully discussing the historic developments and changes in this field and related fields of research is beyond the scope of this article and are discussed more comprehensively in Ledinger and Attila (2022, in print). Further comprehensive reviews on published research on the relationship between customer orientation and sales success have been published by Ohiomah et al. (2020) as well as by Goad and Jaramillo (2014). A meta-analysis by Jaramillo et al. (2007) has confirmed SOCO as a significant predictor of sales performance.

B. Weaknesses of SOCO in B2B; Definition of SPAS

As stated above, compared to B2C settings, sales literature in the B2B setting is scarce. However, the revised SOCO score has been shown to be, at least in principle, applicable to B2B selling (Periatt et al., 2004). As the authors point out, the SOCO score as well as the revised version have originally been developed with a focus on B2C selling. Although with conflicting results between studies, the original SOCO score has also been used in selected B2B studies (Jaramillo et al., 2007, pp. 302-303).

Due to the inherent differences between most B2C selling situations and most B2B selling situations, this leaves the original or revised SOCO scores sub-optimal to investigate the association between salesperson attitudes and sales performance.

Most importantly, the structure of B2B sales discussions is characterized by a much higher complexity, typically involving multiple participants and evolving over a long period of time. Consequently, relationship value is a topic of intense interest in B2B sales research (Hohenschwert and Geiger, 2015; Boles et al., 2000;

Salespeople are often tasked with also providing service, thus the concept of sales being not just a business development function but also a service function is not foreign to sales scientists. However, as de Ruyter et al. (2019) point out in their comprehensive review on sales-service ambidexterity, the focus point is typically the performance of sales tasks by service employees or the performance of service tasks by salespeople, but always in the provision of the key organizational activity and in association with the direct pursuit of new business opportunities (i.e. the provision of a service might help uncover new sales opportunities). However, as Günes et al. (2010) have shown, using service as a means to find new sales opportunities can annoy customers and thus backfire.

This is where the concept of "sales process as a service" (SPAS) comes in. While the concept of sales-service ambidexterity assumes that the service interaction helps to uncover new business opportunities, the idea behind SPAS is that the sales process itself is a service that should provide value to the customer, as this might make the potential customer more inclined to take part in the sales process and reduce customer and prospect resistance. SPAS shall thus be defined as *"Sales process as a service (SPAS) orientation in B2B sales is defined as an attitude that understands the B2B sales process as a form of service that should be of value for the customer in and of itself, and not just in helping the customer make the right purchasing decision. SPAS thus considers the sales process as an offering for the prospective client that should be designed like other types of product or service offerings, rather than simply a means to an end [i.e. making a sale]."*

The concept of companies having a lead generation process that generates value to prospective clients is not entirely new and a cornerstone of content marketing. As Jutkowitz (2014) states, "… corporations today can and should participate in the dynamic exchange of innovative ideas, unique knowledge, and expertise.". This implies that in order to attract customers, companies do not blatantly promote their offerings but create something that is of value for the user of the contect, irrespectively of whether they end up purchasing from the company that creates the content or not. The concept is largely based on the documentation of competence (Zerbini et al., 2007). Perceived competence is also of great importance in B2B sales (Belonax et al., 2007; Kaski et al., 2017), shaping a customer's reaction to sales efforts. The need for salespeople in B2B solution sales to possess sales acumen as a vital component of communication competence has been discussed by Koponen et al. (2019). Sales acumen in this setting has been described as a complex construct consisting of a thorough understanding of B2B sales processes as well as leadership skills, with the ability to add and generate value having been mentioned as important by sales educators as well as practitioners interviewed in the study. Knowledge sharing has also been described as a process that involves knowledge sharing and can provide improved outcomes through emotional factors such as inspiration, shared experience or alignment and reflection (Johnson et al., 2021). Besides these scientific studies, the demonstration of expertise is intuitive to sellers who are used to working with references or case studies, and to marketers who run corporate blogs, podcasts and alike at an increasing rate.

In this respect, drawing more attention to the value that is created in the sales process by sales people might help reduce the disconnect between sales and marketing. The need for better alignment between sales and marketing in B2B has been described extensively in the literature, e.g. in Wang et al. (2019) or Malshe et al. (2017).

The understanding of the sales process as a service is also in line with the Unified Service Theory (UST), which defines a service not as much through its intangibility but through the need for the customer to contribute significantly to the performance of the service (Froehle 2006, p 334). This requirement is certainly met in complex B2B sales processes.

C. Differentiation of SPAS and related concepts

Several other concepts that have drawn scientific attention need to be mentioned as related to the concept of SPAS. While a comprehensive review of these concepts is beyond the scope of this paper, these shall briefly be discussed:

Table 1. Theoretical framework: concepts related to SPAS, and their differentiation from SPAS

Concept	Key findings	Differentiation SPAS
Adaptive selling Spiro and Weitz (1990)Guenzi, De Luca and Weitz (2016) Walter and Ritter (2003)	Adaptive selling acknowledges that different customers and customers' situations require different sales approaches, as well as the competencies to engage in adaptive behaviors. Development of Development of a self-assessment questionnaire to measure adaptive selling behaviors. Adaptive selling together with selling orientation are negatively associated with customer trust. Adaptive supplier behavior can lead to direct value creation (e.g. profit, sales volume) and/or direct value creation (e.g. innovation).	Adaptive selling addresses which selling style can be successful based on personal factors. SPAS may require adaptation to the customer's situation.SPAS may conceptually overlap with the wider concept of adaptiveness in providing value beyond the core transaction.
(Customer) service orientation Hogan, Hogan and Busch (1984) Henning-Thurau (2004)Homburg, Müller and Klarmann (2002)Wright, Pearce and Busbin (2015)Lytle, Hom and Mokwa (1997)	Application of a personality trait assessment (Hogan score) to adjustment, sociability, and agreeableness as major dimensions related to service orientation. Customer orientation of service employees as a key determinant of customer satisfaction in service businesses(Value-added) services as a strategic differentiator in retail business strategy. Customer service orientation as an implementation of the marketing concept is associated with operational performance. Development of a ten-item score of service orientation, understanding service orientation as a strategic organizational goal for service excellence	Service orientation may be defined differently depending on context, but generally considers positive interactions between companies (and/or its employees) and its customers, eventually leading to customer value or as a personality trait. SPAS is clearly considered as an attitude of salespeople rather than an organisational value. SPAS may be related to personality, but may as well be trained and/or shaped by experience.
	Key concept	Differentiation SPAS
Service-dominant logic Vargo and Lusch (2004)Le Meunier-FitzHugh et al. (2011)	Service-dominant logic as a new paradigm in marketing, from a goods-centric perspective to a view focused on the value created by a product (or service). Need for salespeople to consider value in an extended context and extended timeframe, from co-creation until the end of the usage period.	Service-dominant logic primarily considers the service aspect of a company's core offering. SPAS acknowledges that buying organizations might benefit from a business relationship in multiple ways, i.e. the service provided by SPAS may be disconnected from the core offering.
Value-based selling (VBS)Töytäri et al., 2011Liu and Zhao (2021)Terho et al. (2012)	Sellers need to provide proof of financial advantage provided with an offering. VBS demands a customer-centric sales process, focusing on the creation, quantification and demonstration of value. This involves the use of reference cases and demonstrating the price of an offering in relationship with the achievable monetary benefit. Development of a conceptual framework for successful VBS, including organizational and individual requirements (personality traits such as proactivity, motivation, ability to explore and implement new or improved solutions)VBS as an extension of the customer value concept in marketing. VBS = crafting and communication of customer value based on the knowledge of the buyer's business model	VBS calls for the co-creation of value for the customer, but primarily focusses on the creation value with the core offering. SPAS has similar goals (e.g. reducing resistance) and may also benefit from quantifying the benefit, but the SPAS-related benefit may be difficult to quantify. The importance of personality traits discussed for VBS may be more important for SPAS. While VBS focusses on future value provided with a solution and may require elements of SPAS to be successful, SPAS focusses on a benefit achieved already in the process.

II. MATERIALS AND METHODS

This paper discusses the development and validation of an extended version of the selling orientation – customer orientation (SOCO) score. While the original SOCO score consisted of 24 items, the revised SOCO score consisted of 10 items to test for selling- and customer orientation. With this paper, the revised score is extended with 5 items that test for service orientation in the B2B sales process. The development and validation of the score has consisted of three phases:

1. Development of the candidate score items. For this purpose, the author has drawn from publications from sales research, but also from literature about service orientation in other settings (drawing from and extending concepts as discussed in Chapter 1). Potential SPAS score items have also drawn from extant literature about customer orientation of service workers (especially the personality trait assessment used in Brown et al., 2002). Score items have been adapted as necessary to be potentially suitable to the professional sales situation, where needed. In order to have a balance between items that may be associated with a high service orientation, and items associated with low service orientation and thus avoid a potential social desirability bias, negatively-stated items have been included that would be negatively scored. This is similar to the strategy chosen by Saxe and Weitz (1982). The 21 items selected as potential measures for SPAS are shown in Table 2.
2. A questionnaire has been developed to test which items are most suitable to comprehensively test for the concept of understanding the sales process as a service, with as little correlation between the items on this dimension of the score, and the other dimensions of the scoring system. The questionnaire has been sent to more than 500 scholars, which consisted of authors of the papers about the original and revised SOCO scores, as well as researchers who have cited the respective publications (n= 430). Finally, leading sales researchers globally have been asked for their feedback (n=95). The main intention was to validate the potential score items in a similar way to how the original SOCO score has been validated. Respondents were first asked to rate whether the potential items were "clearly", "somewhat", or "not" related to SPAS. In addition, they were asked which items they would or would definitely not choose among the 5 items to represent SPAS in the final score. In addition, respondents were asked to state whether any items were considered to strongly correlate, and to give any additional feedback.

This approach was chosen in order to ensure nomological validity and to obtain responses von scholars who could be assumed to have a clear understanding of the intention behind the SOCO score.

3. Preliminary choice of the items for the final extended SOCO score.

Note:

Another questionnaire has been developed to obtain information about how salespeople from different geographies, different career stages and different industries score on the items of the SPAS dimension of the SOCO score from, from always being used in the sales process to never being used. Items for all three dimensions have been asked in a random sequence, rather than all items per dimension. Further, respondents were asked to assess for the SPAS-related items whether they are related to "closing the sale", "ability to help", or "building relationships". For this purpose, around 100 organizations have been asked to participate by asking their salespeople to respond to the questionnaire. In addition, these organizations were welcomed to forward the questionnaire to their respective networks, in order to generate a larger convenience sample. The methodology was also drawn from the validation of the original SOCO score. Unlike in the original paper, social desirability index of respondents has not been tested, following the criticism of Crowne that social desirability should be a considered a personality trait, not a reason to purge results from results provided by individuals that score highly in social desirability (Crowne, 1991).

The results from this study will be published in a separate paper and potentially enable researchers to adapt for relevant items in their industry and/or to re-assess the ideal choice of items to represent SPAS.

III. RESULTS

In total, 22 out of >500 scholars have filled at least question 1 (rating items as "cleary", "somewhat" or "not" related to SPAS) completely, for a response rate of 4.2 % at the time of writing. In addition, several researchers, from all respondent categories described, have provided verbal feedback via email. Due to the low response rate, complex statistical analyses have not been possible to perform [Spearman's Correlation]? For the choice of items in the preliminary score, three types of ranking have been created:

1. A ranking of the percentage of respondents to score an item as "clearly" related to SPAS (with the percentage of respondents considering it as "somewhat" related as secondary criteria). With this score, the items

that most researchers considered as clearly related with SPAS should be selected.

2. A points score in which an assessment as "clearly" associated accounted two points and an assessment as "somewhat" related with SPAS accounted one point. With this measure, the total assessment of suitability is considered while strength of suitability remains considered.
3. A ranking of items based on simple addition of respondents considering the item as one of the five most suitable items, after substraction of respondents considering the item not suitable, in order to create a net score.

In addition, the author considered feedback about which items respondents considered to correlate with other items. Given the low number of responses regarding correlation of items, the feedback must be considered anecdotal, but was considered relevant, nonetheless.

The five selected items scored among the top 8 in either of the ratings and are described in Table 3 (the sorting of the items is in the order of the score items in the questionnaire sent to sales scholars).

The whole 15-item score that shall be rated by salespeople in the SOCO-SPAS score are described in the Appendix. It is recommendable that the questions will be mixed between the score dimensions, or provided in random order, respectively.

Table 4 shows the draft score items that have eventually not been used in the SOCO-SPAS score. As the data shows, these items might have been similarly suited to represent SPAS, but have been excluded because of their overall performance (i.e. respondents have rated the items as slightly less relevant than those eventually chosen), or because respondents have considered the item as closely related to an item chosen for the eventual score.

Table 2. The 21 candidate items for the SPAS dimension of SOCO-PAS. Items with (-) are reverse scaled items

Potential item for the SOCO-SPAS dimension	
I try to help the customers also in areas where my company's solutions can't.	I enjoy working with customers to develop new or creative solutions.
I want to be perceived as an industry expert and let customers draw from my broad expertise.	During the sales process, I always think of how to reach my goals and company sales goals. (-)
I will do my customer a favor only if I am confident that it will pay off in the short term. (-)	The primary goal in my interaction with the customer is to uncover needs. (-)
I try to engage with the customer only as long as it takes to find information required to make the sale. (-)	I try to provide useful and new information to the customer with every contact.
I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.	I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.
I feel like the sales process has a greater influence on the customer decision than the objective fit of the solution.	I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.
I try to provide a better customer experience than the customer will reasonably expect.	I try to understand the customer's situation as thoroughly as possible.
I discuss benefits of working with my company beyond the solutions that my company sells.	I try to create an atmosphere where customers can be trustful enough to talk about any topic on their mind.
I show my customers that I care for them even when I am busy.	I try to make interactions as convenient for the client as possible.
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	I acknowledge and appreciate that the customer needs to contribute to a fruitful sales process.
I am keen on learning and applying new competencies in the sales process.	

Table 3. Selected items for the SPAS dimension of SOCO-SPAS

	% "clearly" related	Ranking - % "clearly"	Points score	Ranking – points score	Net score top five	Rank - top five
I try to provide useful and new information to the customer with every contact.	77,27%	1	39	1	5	8
I enjoy working with customers to develop new or creative solutions.	63,64%	7	34	7	8	1
I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.	72,73%	2	38	2	6	5
I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.	63,64%	6	35	4	6	5
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	68,18%	4	34	6	6	4

Table 4. Items to score in top 10 in either ranking, not chosen for final score

	% "clearly" related	Ranking - % "clearly"	Points score	Ranking – points score	Net score top five	Rank - top five	Reason to not pick
I try to help the customers also in areas where my company's solutions can't.	59,09%	12	33	12	7	3	Overall performance
I want to be perceived as an industry expert and let customers draw from my broad expertise.	63,64%	7	34	7	4	11	Overall performance
I try to provide a better customer experience than the customer will reasonably expect.	59,09%	13	32	13	8	2	Overall performance
I show my customers that I care for them even when I am busy.	68,18%	3	35	4	2	16	Correlation with item 12
I acknowledge and appreciate that the customer needs to contribute to a fruitful sales process.	63,64%	5	36	3	5	9	Correlation with item 3
I discuss benefits of working with my company beyond the solutions that my company sells.	63,64%	9	33	10	5	9	Overall performance

I try to make interactions as convenient for the client as possible.	59,09%	11	34	9	3	14	Overall performance
I am keen on learning and applying new competencies in the sales process.	63,64%	9	33	10	6	5	Overall performance

IV. DISCUSSION

With this paper, an extension of the (revised) SOCO score for complex B2B sales situations is suggested. Although the criticism uttered by Schwepker (2003) that SOCO does not provide insights into what is needed to perform activities successfully will not be solved by this new scoring system. However, future research might show that this scoring system will be more informative about the antecedents of selling success in the sale of complex solutions, primarily in business-to-business sales encounters. The new dimension in the SOCO-SPAS score addresses factors that are relevant in B2B that are not sufficiently covered in existing scoring systems, such as long sales cycles with multiple touch points; the need to co-create value rather than only helping the customer choose the best solution, or the motivation to learn and improve the ability to serve clients.

The concept of SPAS draws from several concepts that have received considerable attention in sales research as well as related areas such as service orientation. It hypothesizes that (prospective) customers are more likely to engage in a company's sales process, and eventually make a purchase, if they perceive an added value in doing so, even if eventually no sale comes to fruition. The concept further lends from content marketing where it is a key concept to attract new customers by providing content that is valuable, frequently with content that is not or only loosely related to the product or service offering of the company.

Several strengths and weaknesses of the present paper need to be discussed:

A. Strengths

This paper improves the applicability of the SOCO scoring system for B2B sales. It can be assumed that such an extended scoring system is especially pertinent to complex sales situations and especially for markets where there is a polypoly on the supplier side (i.e. many companies offering a solution) as well as on the demand side. In such a situation, there might be a long selling cycle and, due to the high number of potential customers, a sales organization might have difficulty maintaining close relationships with prospects while there is only a latent demand for an offering. In such a situation, it might be of benefit for a supplier if the sales process provides value to the potential buyers, irrespective of the value of the core offering itself. In such a situation, it might be more likely for a buying organization to draw from the supplier's expertise and have a relationship with the supplier (or even just a mere memory) when the need for a solution becomes current. In providing a scoring system with a total of 15 items, in spite of the complexity of B2B the questionnaire is simple for salespeople to fill, and simple for sales leaders as well as sales researchers to work with and interpret.

This paper adds to the extant sales literature by providing a new perspective on customer orientation 40 years after the original publication of the SOCO score and 20 years after the publication of the revised score. This is well overdue, given how strongly the sales profession has changed in the years since, from technology (internet, mobile phones, videoconferencing), to market structures and buyer-seller dynamics (a wealth of information is now readily available for buyers, which eliminates the need for salespeople to provide the most basic information to customers, profoundly changing the role of the salesperson as intermediary between the customer and the company. Although the association between the SPAS score and sales performance is yet to be established, conceptionally the newly introduced concept of SPAS may reflect attitudes required to succeed in modern-day industrial sales, and to integrate sales and marketing activities for superior organizational performance.

B. Limitations and Future Research

The response rate of sales scholars to the questionnaire has been low with about 40 responses having been received, many filled incompletely. The fact that all candidate items have scored >60 % as at least somewhat related to SPAS makes statistical analysis difficult to perform. It is thus unclear whether all candidate items have been similar in their capability to represent SPAS, or whether a larger sample set would have provided clearer insights.

As separate questionnaire links have been sent to scholars with different backgrounds (to citing authors, authors of key publication, and other sales scholars, respectively), there is reason to believe that the results are balanced and thus valid. However, there are methodological weaknesses: First, there has been overlap between the groups of researchers who have received the questionnaire (i.e. a sales scholar may also be author of key publications in his/her field, and/or have cited such publications). Second, the sample may be biased by the intentional selection of questionnaire recipients. Third, participation links were not fully personalized nor have demographic questions been asked, limiting information about who has responded. Fourth, many respondents may not have correctly understood the negatively-stated items as such, and thus considered them "not" related to SPAS when they would have considered the concept relevant had it been formulated positively. Consequently, none of these items have been included in SOCO-SPAS. However, several researchers have provided feedback that those statements are related to Selling Orientation, rather than SPAS. Fourth, the SOCO-SPAS score does not take into account that different stages in a sales cycle might be governed by different factors or that the ideal value of SPAS may be situation- and customer dependent. Finally, several verbal responses suggested that there was sub-optimal clarity about the definition of the scoring dimension that will be tested. As the original questions of the revised SOCO score have been included in the instruction of the questionnaire, as well as a verbal explanation of how service orientation in the B2B sales process shall be defined, the author believes that this apparent lack of clarity is, at least in part, due to the novelty of the concept.

Although this paper confirms validity of the SPAS concept through feedback from sales scholars, validity needs to be further validated through research in actual sales settings. Also, the SOCO-SPAS score does not explain how attitudes that predispose salespeople for higher performance translate into trainable behaviours and/or a repeatable sales process.

C. Managerial Implications

As the SOCO-SPAS score or the SPAS concept have not been tested in real-life settings, the managerial implications remain speculative. Possible benefits for sales management are benchmarking of a company's sales team, identification of training needs, or use for the implementation of content marketing and customer service strategies. In addition, the scoring system might be used in salespeople hiring, in order to make sure that a new hire is naturally inclined to work in a way that jibes with the company's sales, marketing, and customer service strategies.

V. CONCLUSIONS

This paper describes the development of an extended version of the SOCO-SPAS Score, improving the relevance of the SOCO scoring system for complex B2B selling situations. The extended version adds a component that tests whether salespeople consider the sales process as a service that needs to add value (SPAS). The 5 items to represent the new SPAS dimension has been chosen following feedback from sales scholars on 21 candidate items. The novel score with 15 items across three dimension will enable researchers and practitioners to test which attitudes are associated with high sales performance. Further research is needed to prove the relevance of SOCO-SPAS in different settings of professional sales.

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APPENDIX: DIMENSIONS OF THE SOCO-SPAS QUESTIONNAIRE

The statements below describe ways a salesperson might act with customers (for convenience, the word "customer" is used to refer to both customers and prospects). For each statement, please indicate the proportion of your customers with whom you act as described in the statement. The meanings of the numbers are:

1-True for NONE of your customers-NEVER
2-True for ALMOST NONE . . .
3-True for A FEW . . .
4-True for SOMEWHAT LESS THAN HALF . . .
5-True for ABOUT HALF . . .
6-True for SOMEWHAT MORE THAN HALF . . .
7-True for a LARGE MAJORITY ...
8-True for ALMOST ALL ...
9-True for ALL of your customers-ALWAYS

For example, if you choose 6 below, you indicate that you enjoy developing solutions with your customers in somewhat more than half of the time.

	Never Always
I enjoy working with customers to develop new or creative solutions.	1 2 3 4 5 6 7 8 9
Customer Orientation	***Never Always***
I try to figure out what customer needs are.	1 2 3 4 5 6 7 8 9
A good employee has to have the customer's best interest in mind.	1 2 3 4 5 6 7 8 9
I try to bring a customer with a problem together with a product/service that helps solve that problem.	1 2 3 4 5 6 7 8 9
I offer the product/service that is best suited to the customer's problem.	1 2 3 4 5 6 7 8 9
I try to find out what kind of products/services will be most helpful to a customer.	1 2 3 4 5 6 7 8 9
Selling Orientation	***Never Always***
I try to sell as much as I can rather than to satisfy a customer.	1 2 3 4 5 6 7 8 9
It is necessary to stretch the truth in describing a product to a customer.	1 2 3 4 5 6 7 8 9

I try to sell a customer all I can convince them to buy, even if I think it is more than a wise customer would buy.	1 2 3 4 5 6 7 8 9
I paint too rosy a picture of my product/service to make them sound as good as possible.	1 2 3 4 5 6 7 8 9
I decide what product/service to offer on the basis of what I can convince customers to accept, not on the basis of what will satisfy them in the long run.	1 2 3 4 5 6 7 8 9
Sales Process as a Service (SPAS) Orientation)	***Never Always***
I try to provide useful and new information to the customer with every contact.	1 2 3 4 5 6 7 8 9
I enjoy working with customers to develop new or creative solutions.	1 2 3 4 5 6 7 8 9
I work diligently to fulfil any commitments made during the sales process, including those not directly related to business opportunities.	1 2 3 4 5 6 7 8 9
I discuss the sales process as part of our offering and why it is of interest for the potential customer to participate in it.	1 2 3 4 5 6 7 8 9
I actively seek feedback from customers, colleagues and superiors about how I could serve them better.	1 2 3 4 5 6 7 8 9