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SARS-CoV-2 in The Arab World - conditions of spreading, prevention, and tackling the pandemic¹

The following work aims to describe the development of the pandemic, caused by SARS-COVID-2 virus, in the Arab World. A multifactoral comparative analysis with the use of basic methods of data analysis is aimed at showing the correlation between selected social and economic indicators of the countries included in the Arab World and the number of infections, mortality rate, and the rate of infection and recovery growth. The analysis carried out in this way will allow for a preliminary assessment of the effectiveness of the preventive and intervention measures taken in the selected geographic area. In May of 2020, the authors delivered a speech at the 1st International e-Conference "The world in the age of pandemic and post-pandemic period" organized at the Faculty of Political Science and Journalism of the Adam Mickiewicz University, in which they posed a hypothesis that the high number of infections recorded among the richest countries of the Arab World, is likely to be related to the wealth of these countries, which further translates into a high level of expenditure on health care, which translates into the number of tests being performed as higher than that in the other countries in the region. In May 2020, there was not yet enough data to confirm said hypothesis, although there were indications that it was accurate. However, in September this year, convincing data emerged that show that the initial assumptions were true. The data used for this analysis come from publicly available sources, such as the World Bank, the International Monetary Fund, specialized UN agencies, the CIA Factbook² and regional media reports publishing information in English.

 1 The research was financed from the project "Research on COVID-19" from the funds of the Adam Mickiewicz University, Poznan

² Appendix CIA FactBook in the bibliography.

The Arab World is a rather peculiar category within the field of political science research, mainly due to the fact, that the main criterion distinguishing this geographic and social entity, is the membership of states in the largest international organization within the region - the League of Arab States. The Arab World comprises the territory of the Middle East, North Africa (MENA), and part of East Africa. Currently, there are 22 member states of the Arab League: Algeria, Saudi Arabia, Bahrain, Djibouti, Egypt, Iraq, Yemen, Jordan, Qatar, Comoros, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Palestine, Somalia, Sudan, Syria, Tunisia and the United Arab Emirates (UAE). Membership of the Syrian Republic has been suspended since 2011. In 2017, the GDP of all the member states of the LAS (2,513 trillion USD) (Arab World GDP, World Bank 2020) was almost six times lower than the GDP of the European Union (14 736 trillion USD) (UE GDP, World Bank 2020) and almost equal to India's GDP (2,653 trillion USD) (India GDP, World Bank 2020) at the same time accounting for only 3% of the global GDP (81,229 trillion USD) (World GDP, World Bank 2020). Among the League countries, Saudi Arabia has the highest GDP (792,967 billion in 2019) while the lowest Comoros (1,186 billion in 2019) (Saudi Arabia, Comoros GDP, World Bank 2020). In 2019 the population of the Arab World amounted to 427,870 million, which accounts for only 5% of the global population (Population total, World Bank 2020), which shows that the economy of these states is much below the optimal level, accounting for only 3% of the global GDP.

Human Development Index and healthcare expenditure

Out of all the states of the Arab World, only 6 could boast in having scored over 0,8 on the HDI index and all of them were the rich monarchies of the Arabian Peninsula. UAE (0,866), Saudi Arabia (0,857), Qatar (0,848), Bahrain (0,838), Oman (0,834) and Kuwait (0,808) (*UNDP*, *HDI Report 2019*). The lowest scores were recorded in the peripheral poor republics with a high level of corruption or, as in the case of Yemen and Syria, countries affected by a humanitarian crisis resulting from an armed conflict. Somalia (0,285), Djibouti (0,495), Yemen (0,463), Sudan (0,507), Mauritania (0,527), Comoros (0,54) and Syria (0,549) had an HDI below 6 according to data for 2019 (*UNDP*, *HDI Report 2019*).

One of the components of the HDI index is life expectancy, which to a large extent depends on the quality of the health care system. Spending on healthcare closely corresponds to the HDI, however, only when the expenditure per capita is taken into account. When absolute values are considered, Egypt and Iraq spend much more than Bahrain or Kuwait, but when

taking into account the number of inhabitants of these countries, it turns out that the highest per capita spending can be observed among the five wealthy monarchies of the Arabian Peninsula, yet this time without the inclusion of Oman, which falls behind Lebanon. The below values denote the sum in USD per person in 2017: Qatar (1649), Kuwait (1509), UAE (1310), Bahrain (1127), Saudi Arabia (1093); countries with the lowest HDI index were ranked lowest, namely Yemen (70,3), Djibouti (70,3), Comoros (58,7), Mauritania (48,8) and Syria (68,8). The average for the Arab World in 2017 totaled 245,79 USD. (*Current Health Expenditure*, World Bank 2020).

Dates of the first detected cases

The SARS-COVID-2 virus has reached the Arab World from various locations. Despite the knowledge regarding the first detected case in each of the LAS countries and the knowledge of the place from which the virus was imported, it is almost certain that they were not the actual initial cases. The first country to report the presence of the virus was the United Arab Emirates, which happened on January 30, 2020, in a person arriving from the People's Republic of China. According to the obtained knowledge, the virus last arrived in the Comoros, where the first case was recorded on May 1, 2020. (*Comoros confirms*, 2020). The below table shows the sequence in which the first case of the virus was detected in different member states.

Healthcare expenditure per capita and order of first case detection

Countries with the highest expenditure on health care per capita, according to the previously presented data are Qatar, Kuwait, UAE, Bahrain, Saudi Arabia, followed by Lebanon, Oman, Iraq, and Egypt. In light of these figures and of the compiled order in which the first infections were detected among the LAS member states (Table 1), a correlation is visible. All the above-mentioned countries that spend the most on health services per capita are at the same time those countries where the infection occurred most quickly, or where there were an effective detection and a record of the first case.

Health Expenditure per capita in USD 2 030 2000 1 402 1500 1068 1000 636662667 500 257258265277 70 72 46 Oman Saudi Arabia Mauritania Iraq Bahrain Qatar Djibouti ebanon Kuweit Palestine Morocco

Table 1. Health expenditure per capita in USD.

Source: World Bank, Current health expenditure per capita (current US\$) - Saudi Arabia, Qatar, Syrian Arab Republic, Comoros, Yemen, Rep., Iraq, Libya, Djibouti, Somalia, Bahrain, Sudan, Mauritania, Jordan, Lebanon, Kuwait, Morocco, Tunisia, Oman, Egypt, Arab Rep., Algeria, United Arab Emirates, https://data.worldbank.org/indicator/SH.XPD.CHEX.PC.CD?locations=SA-QA-SY-KM-YE-IQ-LY-DJ-SO-BH-SD-MR-JO-LB-KW-MA-TN-OM-EG-DZ-AE, (Accessed: 17/05/2020).;

Source of the first detected case³

The virus was brought in from various locations. Based on the first detected cases, it can be concluded that the two sources of the outbreak of infection from which the virus was transferred to the LPA countries are Iran and the People's Republic of China. In the light of the information on the first detected case, it appears that the virus was imported from Iran to Iraq, Lebanon, Kuwait, Saudi Arabia, Qatar, Bahrain, and Oman and that it was spread from China to the United Arab Emirates, Somalia, and Egypt, and from Italy, it was passed on to Syria, Tunisia, and Morocco, from Spain to Djibouti, from Greece to Palestine and from France to Mauritania. To Sudan, it was transferred from the UAE.

It can be observed that despite the time intervals between the dates of the first detected case in the individual LPA states, the first transmission of the virus did not take place as a result of contact with another previously infected LPA country, but rather was imported from the countries outside of the region. The exception is the aforementioned Libya and Sudan, to which

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³ Appendix 1.

the virus came respectively from Saudi Arabia and the UAE. This suggests that in the initial stage of spreading the virus among LAS countries, geographical proximity was not the most important factor as no domino effect could be observed. It appears that air connectivity and the level of globalization of the specific country played a more important role than land connection. This explains the two exceptions already mentioned, in which Saudi Arabia and the UAE were sources of infection. It is, however, still surprising that there appears to have been so little virus exchange between LPA countries in terms of the first recorded case, in light of the fact that for 2014 data the United Arab Emirates, or more specifically Dubai, is the sixth largest airport in terms of traffic, and even the first when only international flights are considered (*Airport Traffic Ranking, Airports Council International*, 2014) and Saudi Arabia respectively also hosts Muslims from all over the world due to its religious sites.

Analysis of infection statistics in LAS countries

By May 1, 2020, the virus had reached all 22 states of the Arab League. As of May 17, the absolute number of infections was highest in Saudi Arabia with 54,752 detected cases and lowest in the Comoros, where 11 infections were recorded. By that date, as many as 5 out of 22 countries had recorded more than 10,000 cases. Those being: Saudi Arabia (54,752), Qatar (30,972), UAE (23,358), Kuwait (14,850) and Egypt (12,229)⁴. At the same time, those are also countries in which the virus was detected relatively early: UAE as the first, Egypt as the second, Kuwait as the sixth, Qatar as the seventh, and Saudi Arabia as the eighth country in the region. Despite the relative dependence, it is impossible to claim a direct correlation between the number of infections and the date of detection of the first case. Presented below is a table with the number of detected cases as of May 17, 2020.

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⁴ Appendix 1

Tab. 2. The total number of cases in the Arab World on 17th of May 2020.

Source: Worldometers info (https://www.worldometers.info/coronavirus/#countries, accessed 17/05/2020).

When it comes to the increase in infections, the number of infections increased the fastest where the number of detected infections is currently (as of May 17, 2020) the highest. The table below presents data on the rate of increase in infections, obtained by dividing the absolute number of infections by the number of days from the first detected infection to May 17, 2020.

There may be several reasons explaining why on average there were more infections detected in some places than in others. Initially, it was checked whether there is a possible relation between the increase in the number of infections and the population density in a given area. While it is difficult to talk about a direct correlation between population density and the average daily increase in infection for all countries, it is noticeable in the case of the UAE, Kuwait, and Qatar. However, no correlation was observed in the case of Saudi Arabia, therefore, the hypothesis could not be confirmed.

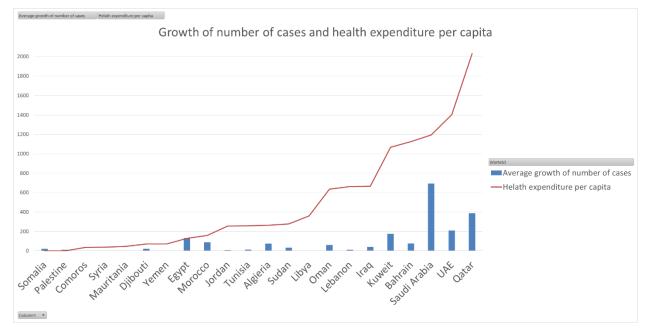
Further, it was checked whether the increase of detected cases was related to the speed of introducing the first restrictions aimed at preventing infections or slowing down their increase. For this purpose, the numbers of detected cases were arranged in the order in which the first restrictions were introduced in a given country. The results show that only in the case of some of the countries their delayed reaction could be linked to a bigger number of infections; that is mainly the case of Kuwait (9 days after the first case detected), Qatar (11 days after the first case detected), Egypt (31 days after the first case detected) and UAE (39 days from the first detected case). The relationship between the two indicators is, however, by no means

apparent. Saudi Arabia constitutes an interesting case, where despite the introduction of restrictions up to 25 days before the first infection was detected, the increase and the total number of infections remain the highest. In addition to preventive or remedial measures, several countries have implemented changes aimed at improving the economic situation. For example, the level of compulsory bank reserves was reduced to maintain financial liquidity, which was observed in the wealthy monarchies of the Persian Gulf (*Policy Responses to COVID-19*, 2020).

Despite the demonstrated lack of a clear relationship between the speed of the introduction of the first restrictions and the number of incoming cases, there is a clear correlation between the speed and the form of the first action taken. In eight countries, restrictions were implemented even before the first infection occurred. Those countries are Saudi Arabia, Iraq, Djibouti, Syria, Yemen, Libya, Comoros, Somalia, and among them, the majority introduced border restrictions as the first action, except for Iraq, where a curfew was introduced instead, and Somalia, which closed schools. It is important to highlight the peculiar and unstable political situation present in most of these countries, which could have influenced both the decision on the type of action taken as well as the accuracy of the available data. An interesting correlation appears when we divide the given countries according to their political system. Seven of the LAS countries have closed their borders as their first action and all of them, except for Saudi Arabia, are republics. All the monarchies (except for aforementioned Saudi Arabia) delayed their restrictions and in the first step did not attempt to close the borders but rather introduced restrictions in schools and/or places of worship. The reason for such a correlation may be that the LAS monarchies are also all those countries with the highest GDP in the region, i.e. UAE, Oman, Kuwait, Qatar, Bahrain, Saudi Arabia, except for Morocco and Jordan with a comparably average GDP level. This suggests that the economic interests, the degree of development, and globalization of a given country may have influenced the type of the first action that the said state decided on implementing.

A conclusion may be reached, that implementation of border restrictions was a measure enforced in states that acted in a preventive manner. On the other hand, after the first infection was already detected, the borders were closed only by the republics; monarchies (except Saudi Arabia) did not act preventively, thus they did not close the borders in the first place, but rather decided on other restrictions, such as the closure of schools and places of worship.

It is only after comparing cases of infection with health expenditure per capita that a certain relationship can be noticed. It appears that the countries that spend the most on the healthcare system per capita are also the countries with the highest number of cases.



Tab. 3. Average growth and health expenditure per capita.

Source: Worldometers info (https://www.worldometers.info/coronavirus/#countries, accessed: 17/05/2020)

When presenting this information in mid-May 2020, it was suspected that the number of detected infections depends primarily on expenditure on health care per capita and thus on potentially more tests being carried out. In the table above, countries such as Egypt and Algeria have relatively low spending with relatively high rates of infection. Therefore, there are two possible scenarios: either the number of cases detected in these countries is proportionately too low than in reality and it is due to not enough testing being done, or Egypt and Algeria have the best health services in the entire Arab World.

An attempt was made to test the second hypothesis by comparing the infant mortality rate to health expenditure per capita. Such comparison showed the probability of the health services in Egypt and Algeria not being as high as the number of detected cases would indicate. Table 7 shows that infant mortality is inversely proportional to health expenditure per capita in the Arab World. This suggests that there are potentially many more cases in Algeria and Egypt than the number reported right now, but there is simply not enough testing being done. Similarly, it is likely to apply also in the case of the wealthy monarchies in the Arabian Peninsula, whose numbers appear to be more compelling.

It wasn't until September 2020 that it was possible to find evidence that potentially confirmed the previously posed hypothesis about the number of tests performed. On September 9, the Oxford University statistics portal Our World in Data published an estimate of the number of tests performed per 1,000 inhabitants and correlated them with GDP per capita in countries around the world. It showed that the countries performing the most tests in the Arab World are UAE, Bahrain, Qatar, Saudi Arabia, and Kuwait. Although, in a different order, the same countries had the highest number of detected infections in the Arab World as of May 17, when the hypothesis was posed.

Tab 4. The number of tests per thousand and GDP per capita.

Country	↓ ^A	Total tests per thousand	GDP per capita international-\$
United Arab Emirates		Sep 8 ① 778.97	\$67,293
Bahrain		Sep 8 1 702.24	\$43,291
Luxembourg		Sep 7 0 636.42	\$94,278
Denmark		Sep 7 1 466.07	\$46,683
Malta		Sep 6 1 461.48	\$36,513
United States		Sep 6 1 281.87	\$54,225
Iceland		Sep 7 1 274.57	\$46,483
Russia		Sep 8 0 269.23	\$24,766
Australia		Sep 8 1 263.94	\$44,649
United States, units unclear (incl. non-PCR)		Sep 8 ① 251.84	
Lithuania		248.54	\$29,524
Qatar		Sep 8 ① 231.84	\$116,936
Maldives		Sep 7 ① 225.97	\$15,184
Belgium		Sep 7 ① 212.74	\$42,659
Portugal		Sep 6 ① 211.21	\$27,937
Ireland		Sep 8 184.93	\$67,335
New Zealand		Sep 8 172.43	\$36,086
Belarus		Sep 7 168.40	\$17,168
Saudi Arabia		Sep 8 157.95	\$49,045
Canada		156.09	\$44,018
Italy, tests performed		Sep 8 154.88	
Kuwait		Sep 7 151.75	\$65,531

Source: Our World in Data, Oxford University (Number of Test per country, Our World in Data, Oxford 2020, accessed 10/09/2020)

Analysis of recovery and death statistics

As of May 17, when most of the data regarding recoveries and deaths was collected, different countries appeared at the top of the table than when it comes to the number of infections detected. To obtain an average recovery rate, the number of infected people that went through recovery was divided by the overall number of infections. It turned out that Tunisia performed best (77.82% of recoveries), followed by Djibouti (73.03%), then Syria (70.59%), then Iraq (67.86%), Jordan (67.37%), Morocco (55.75%), Libya (53.85%), Algeria (49.98%) and only Saudi Arabia, Bahrain, UAE, Oman, Kuwait, Lebanon, Comoros, Egypt, Qatar, Mauritania, Somalia, Sudan, Palestine, and Yemen. However, the presented data are not

reliable. The first three countries (Tunisia, Djibouti, and Syria) had the number of detected infections below 1500 (Syria only 51 sic!), In Jordan only 613, and in Libya 65. It is clear, that this is too small a sample for the data to be compared with the tens of thousands of infections that appear in the countries with the highest levels of infection.

Therefore, if we exclude from the overview the countries with a relatively low number of infections, it appears that the best ratio of recoveries to infections is in Iraq (67.86% with 3,404 infections), Morocco (55.75% with 6,741 infections), Algeria (49.98% with 6,821 infections), Saudi Arabia (47.07% with 54,752 infections), Bahrain (40.80% with 6,747 infections), UAE (36.44% with 23,358 infections), Oman (29.75% with 5,029 infections), Kuwait (29.22% with 14,850 infections), Egypt (25.94% with 12,229 infections) and Qatar (15.82% with 30,972 infections). At the very bottom of the list are Mauritania, Somalia, Sudan, Palestine, and Yemen, however, they are not taken into account because of their absolute number of cases being relatively low (which, *nota bene*, should be even more alarming given the political situation in these countries).

When it comes to the number of deaths, as of May 17, 2020, the number is not particularly high, although it can be expected to increase. After placing the countries in order in terms of the number of deaths, it turns out that the following countries are in the lead: Egypt (630), Algeria (542), Saudi Arabia (312), UAE (220), Morocco (192), Iraq (127) and Kuwait (118). States, where the number of deaths was below 20, are also those countries with the lowest number of detected cases, although there are exceptions here as well: Yemen, despite only 124 cases, recorded as many as 19 deaths (mortality 15%).

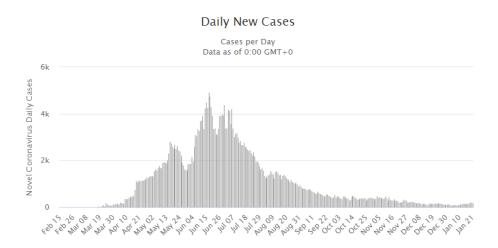
Case Study: Saudi Arabia

Kingdom of Saudi Arabia despite not being the largest population-wise within the Arab World had recorded the highest number of COVID-19 among all members of the Arab League reaching 364 929 cases as of 3rd of January 2021 (*COVID-19 in Saudi Arabia*, 2020). Fortunately though thanks to the countries well-funded healthcare system, it enjoyed one of the highest rates of recovery as well, with well over 357 000 recoveries (*Saudi Arabia Ministry of Helath*, 2020). Saudi Arabia remains a leader of the Arab World in terms of the number of tests performed daily, as well as in the number of recoveries from COVID-19. In terms of testing, as of January 2021, the Kingdom's rate of positive tests among all the tests performed is 0,4%, which is one of the best rates in the world (*Saudi Arabia COVID-19 testing*, 2020). During 2020 number of tests per 1000 was sharply increasing up to the mid-August and then steadily declined (on the 15 of August it was 1,93 tests per 1000, on January 19th it was 1,38). As of

January 20th, the Kingdom did not see the second wave of infections observable in countries like Egypt or UAE.

Table 5. Daily New Cases in Saudi Arabia,

Daily New Cases in Saudi Arabia



Source: Worldometer https://www.worldometers.info/coronavirus/country/saudi-arabia/ (Accessed: 22/01/2021.

KSA was one of the earliest responders to the threat of pandemic spread in the Arab World, introducing the first domestic precautionary restrictions 24 days before the first case was identified on the 3rd of March 2020 (*Saudi Arabia Identifies*, 2020). Despite WHO's numerous calls not to restrict any commercial, political, or civil relations with China, authorities of KSA banned flights to and from China on the 6th of February 2020. Just as for most neighboring countries (Iraq, Syria, Kuwait, Bahrain, Qatar, and Oman) first reported case in Saudi Arabia was a person traveling from Iran. In comparison to the rest of the Arab World, especially the republics, KSA handled the pandemic exceptionally well, as the number of new cases peaked in mid-June 2020 and started to steadily decline until it reached under 200 new cases a day at the beginning of December 2020.

Decisive actions taken at the beginning of February did not stop the spread of the virus, but it may have contributed to curbing it later on. On the 5th of February, authorities banned Umrah pilgrimage and introduced the first restrictions in terms of worship (*Saudi Arabia closes Grand Mosque*, 2020). That ban will be periodically lifted and reintroduced, according to the number of cases throughout 2020. The same month Saudi Arabia suspended entry to the holy

cities of Mecca and Medina to the GCC citizens in hope of insulating itself from the pandemic (*Saudi Arabia temporarily suspends*, 2020).

When the first case was finally identified at the beginning of March, authorities introduced new restrictions: the Ministry of Sport suspended attendance at the sports events on the 6th of March (Saudi Ministry of Sport suspends, 2020), issued travel ban to European Union and 12 African and Asian countries (Saudi Arabia expands, 2020), introduced a lockdown, closing mosques and suspending public and private transportation on 20th of March (Saudi Arabia bans, 2020) and launching a periodic curfew in the entire realm on the 24th of March (Saudi Gazette 2020). WHO called to take immediate action to curb the spread of the novel coronavirus as numbers soar to 100 000 cases globally on the 7th of March, nevertheless it is not clear whether authorities of KSA acted in response to that call to action (Critical preparedness, 2020). It is unlikely, as the first major lockdown was introduced two days before WHO published guidelines for maintaining essential health services (Operational guidance, 2020). Nevertheless, the king's decree may be an effect of WHO's recommendations: on 30th of March King Salman issued a decree granting access to state-funded healthcare to all people currently living in the Kingdom, including the ex-pats and people who overstayed their visas (Coronavirus: Saudi Arabia records, 2020). It is worth noting that Saudi authorities were following WHO recommendations to curb the spread of fake news about the novel coronavirus (Speech of the Director-General, 2020), stating that attempts of spreading false information will be punished severely (Coronavirus: Saudi Arabia reports, 2020). On the 20th of March 18,7 billion USD, support package was announced to aid the private sector. On the 26th of March, the extraordinary G20 summit on COVID-19 took place, where global leaders were called to action to "find joint solutions and work together" (WHO Director Generall calls, 2020). The conference itself did not translate to immediate action on the Saudi part, nevertheless, some financial contributions were made at the end of the year.

April and May saw similar actions on the part of the government, mostly introducing periodic, local lockdowns (*Coronavirus: Saudi Arabia reimposes*, 2020) and curfews (Saudi Press Agency 2020; *Coronavirus: Saudi Arabia imposes*, 2020). Despite joint WHO and IMF April calls for lifting any restrictions in international trade of food and medicine, there was no immediate action on part of the Kingdom in that direction (*Press Release NO.20/187*, 2020). On the 15th of April G20 announced the adoption of a five-point Action Plan, one of which was launching the G20 Debt Service Suspension Initiative, a move highly praised by IMF Managing Director (*Press Release NO. 20/304*, 2020). Initially, 72 countries qualified for debt suspension. Originally it was to last only six months, nevertheless later this year it got extended.

Kingdom announced a three-phase re-opening plan on the 26th of May with actual re-opening happening in the middle of June (*Prophet Mosque to open*, 2020). During the holy month of Ramadan, restrictions were not lifted, as the authorities acted under WHO Safe Ramadan guidelines (*Safe Ramadan*, 2020). On the 10th of May government announced cuts in government employees' allowances to cover costs of living and tripled VAT from 5 to 15%, due to the fall in oil prices (*COVID-19 policy tracer*, *Saudi Arabia*, 2020).

June was also a month when the kingdom recorded the 100,000th case (*Coronavirus: Saudi Arabia now*, 2020). On the 21st of June major restrictions were lifted, with mosques being re-opened again and sports games restarted, without a live audience though (*Coronavirus: Mosques in Saudi Arabia's Mecca*, 2020). The same month WHO called for help from the international community to bring relief to the humanitarian crisis in Yemen (*Statement...*, WHO 2020). Saudi Arabia had taken steps that initially looked like the conflict that was ongoing since 2015 might come to an end (*As coronavirus spreads*, 2020): on the 9th of April the first ceasefire was announced, but it only lasted for two weeks (*Yemen War*, 2020). Fighting resumed in July (*Saudi-led coalition*, 2020). Saudi humanitarian conduct in Yemen announced before the 2020 G20 summit in Riyadh seems instrumental, nevertheless, it amounts to tangible help. July saw the launching of the G20 Debt Service Suspension Initiative, where G20 states (including KSA) decided to suspend debt repayments from 72 most vulnerable states, initiative was a part of the G20 Action plan announced on 15/04/2020 (*Press Release NO. 20/304*, 2020).

In July Saudi government opener land borders with GCC countries, 2nd of August 1000 pilgrims were allowed to perform the Hajj, and two days later commodity movement within GCC was re-started. By the end of August employees of the public sector, all came back to work (*COVID-19 policy tracer, Saudi Arabia*, 2020).

In September Saudi authorities were visibly trying to underline its global cooperation with other leaders in hopes of getting the vaccine, as King Salman had numerous conversations over the phone with Vladimir Putin, Angela Merkel, Francois Macron, Narendra Modi, and Xi Jin Ping. The same month's flights ban was also partially lifted, as the number of new cases started to decline significantly. As the G20 summit date was approaching Saudi Arabia announced its donation of 100 million USD to WHO (*Saudi Arabia backs*, 2020), and 46 million USD for 7 UNICEF projects in Yemen on behalf of King Salman Humanitarian Aid and Relief Centre (*Saudi Arabia KS Relief*, 2020). On the 29th of September, authorities announced allowing Umrah pilgrimage from the 4th of October (*Saudi Arabia to gradually resume*, 2020), under certain sanitary conditions.

5th of October was the first day on which the daily number of infections was lower than 400. The trend continued, and as a result on 10 of November authorities declared that the situation is stable, recommending wide-spread flu vaccination (*Saudi Arabia COVID-19 daily cases drop*, 2020) as a precautionary measure.

During the G20 Summit, held virtually in Riyadh, MBS underlined Saudi devotion to building a stronger and more sustainable world economy, at the same time pledging 500 million USD to fight COVID-19, it was Saudi share of 21 billion USD raised by G20 members (*Crown Prince*, 2020), consistently with IMF's call for solidarity with most vulnerable countries.

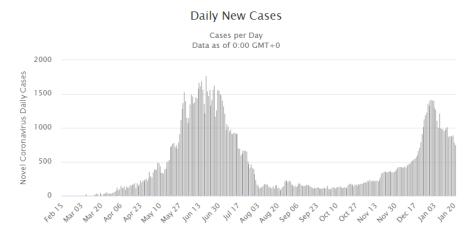
On the 17th of December, the COVID-19 vaccine campaign was launched in the kingdom (*Coronavirus: more than*, 2020). Within the first 24 hours government received over 300 000 applications (*Kingdom reports*, 2020). To promote the campaign on December 25th Crown Prince Mohammed ibn Salman received his vaccination live on national TV (*Saudi crown prince...*, 2020), two days later the number of vaccine registrations soared more than two-fold. By the end of December Ministry of Health announced that by February they plan to vaccine 1 million people (*Saudi Arabia to get 1m*, 2021).

Saudi Arabia seems to be one of the few countries in the Arab World which managed the pandemic exceptionally well comparing to the rest of the region. Despite the fact that it had the highest number of infections for a very long time, it maintained very high recovery rates, mainly to its well-funded healthcare system and adhering to the WHO and IMF recommendations. Saudi Arabia is a leader in the region in terms of the number of tests performed daily and is likely to remain stable politically and economically in foreseeable future. IMF predicted that the Saudi economy will start showing signs of recovery in the fourth quarter of 2020 (*COVID-19 policy tracer*, *Saudi Arabia*, 2020).

Case Study: Egypt

Egypt was the second state among the Arab League countries (after the United Arab Emirates) to have recorded a case of the coronavirus disease (Appendix 1), officially confirming it on the 14th of February. As recorded by WHO (*Egypt: WHO Coronavirus*, 2020), the state's biggest increase of new daily cases during the so-called first wave of the virus, fell on the period between the second half of May and the beginning of July with the highest number of new daily confirmed cases on June 20th reaching the number of 1,774 infections. After June 20th the numbers have reportedly started to decrease reaching a relatively steady pace of between a hundred and two hundred new cases a day. The situation began to escalate again in November, reaching another high in December with the highest record of the so-called second wave at 1,411 new cases noted on December 31st.

Table 6. Daily New Cases in Egypt.



Daily New Cases in Egypt

Source: Worldometer, https://www.worldometers.info/coronavirus/country/egypt, (Accessed: 22/01/2020.

When analyzing the state's response to SARS-COVID-2, it can be observed that Egypt falls into the group of 11 Arab League states (UAE, Tunisia, Oman, Mauretania, Morocco, Lebanon, Kuwait, Qatar, Jordan, Bahrain, Algeria) that did not decide on any preventive measures before the virus reached their borders (Attachment 3), despite many issued warnings and recommendations for preventive action and readiness (*Novel Coronavirus – Japan*, 2020) expressed by both WHO and IMF. The first case of infection in Egypt was recorded in mid-February, yet the first concrete measure imposed by the state in response to the virus occurred over a month later with the decision to close schools on March 15th (*Egypt: Country To Close Schools*, 2020) four days after WHO officially announced a global pandemic on March 11th.

The time of the implementation of the prolonged response may have been coincidental, yet it was likely a direct effect of the situation being termed as a pandemic, which officially confirmed the danger and urgency of the situation at the same time making it more difficult for the government to stay silent and inactive due to a possible international and domestic pressure and accusation of negligence. However, before that, throughout February, the state did not remain completely silent but rather its response differed from what would be regarded as a common preventive measure imposed by states. In the early months of the discovery of the novel coronavirus, the global recommended action for countries evolved around supervising cases of influenza and respiratory infections, not restricting trade with China, sharing travel history (Listings of WHO's responses, 2020) with an additional focus on hand and respiratory hygiene, food safety, and avoidance of mass gatherings (Mission summary, 2020). In contrast, in the primary period of the pandemic, Egypt decided on a tactic of the containment of the spread of misinformation about the virus instead of the containment of the virus itself; as its first response (even before the closure of schools) it set up a hotline aimed at addressing misinformation (Egypt's Health Ministry Receives, 2020), a decision that does not find a clear correlation with the official global recommendations. WHO indeed did call for states to take action towards countering misinformation as early as February 3rd (Listings of WHO's responses, 2020), however, it seems unlikely that Egypt was acting in response to those recommendations, as they were primarily stressing the need to stop the spread of negative and false information about China as well as the conspiracies about the possible ways of transmission. Whereas in Egypt what the government perceived as misinformation was the broadcasted number of cases within the state, which the government claimed was smaller than advocated by the public. On March 1st, after already officially recording the first case of the disease, Prime Minister Mostafa Madbouly stated that there was "not a single coronavirus case on Egypt's soil" (Saudi Arabia Closes Grand Mosque, 2020). It may be inferred that instead of responding to WHO's postings and global recommendations, we can observe Egypt disregarding them by dismissing other calls like that of the call to not conceal the truth and to keep the population informed, aware, and actively involved in containment measures.

Other measures began to be imposed by Egypt in the second half of March and respectively included the suspension of international flights, partial closure of public places, and suspension of prayers. It may be observed that the time of the increase in measures after mid-March corresponded to the beginning of the second wave of infection within the country, therefore, may have been a response and an attempt of the government to limit the spread of cases. Similarly, the state activity increased - either new measures being imposed or their level

of rigidity rising, for the duration of national and religious holidays as a temporary preventive measure. An example of which was witnessed during the Eid al-Adha holiday, for which Egypt increased its restrictions and for which similarly safe practice guidelines were also provided by WHO on July 25th (*Safe Eid al Adha*, 2020). However, WHO's recommendations remained to be rather general only suggesting that the cancellation of social and religious gatherings should be considered and that "any decision to restrict, modify, postpone, cancel, or proceed with holding a mass gathering should be based on a standardized risk assessment exercise, taking into account current epidemiological trends" (*Safe Eid al Adha*, 2020). Such a statement leaves a lot of room for the government's interpretation and it is therefore difficult to judge whether or not the preventive measures imposed in Egypt for the Eid al-Adha holiday were in any way guided and prompted by WHO's call.

In July the country went through a gradual lifting of restrictions, the main being the resumption of international flights after a three-month suspension and the reopening of the most strategic tourist attractions (*Egypt Reopens*, 2020). Respectively, every day throughout July Egypt noted a negative increase rate until August 6th. Therefore, a conclusion may be reached that the lifting of restrictions was a response to the internal circumstances of the country and respectively was also followed by a decline in new daily cases. There is no correlation found between Egypt's ease of restrictions and global recommendations as on July 31st WHO stated that "the Committee unanimously agreed that the pandemic still constitutes a public health emergency of international concern" (Statement on the fourth meeting, 2020) and called upon continuous engagement in combatting the virus. There have however also been calls for states to adhere to their internal circumstances, WHO underlined the responsibility of governments to "implement responses to the COVID-19 pandemic that are specific to their national context" (Seventy Third World, 2020). Therefore, there remains the question of the Egyptian government's adherence to national circumstances. The before mentioned correlation between easing the restrictions and the lower infection rate may be put to question as the infection rate ought to decrease earlier before the restrictions were already lifted for it to, could have truly been rooted in the situational context; a hypothesis that is supported by the issuing of the Government Reopening Plan, that was announced as early as in mid-May, in which the government was already beforehand planning the ease of restrictions that were to take place in June.

We are therefore driven to the conclusion that there is no clear and constant correlation between the responses of the state, be it the level of activity or the kind of measures being implemented, and the external recommendations coming from WHO or the IMF. The measures implemented by the government were more in line with the internal circumstances of the state than world events yet here it is necessary to stress that the apparent correlation may also be questionable due to Egypt's unconventional and self-contradicting tactics like that of running a disinformation campaign while supporting a conspiratorial discourse. Other unconventional measures included imprisonments for alleged misinformation, a 1% corona tax, and severe fines. It may therefore be speculated as to what extent the form of the government's response to internal circumstances was indeed prioritizing ending the spread of the virus over aiming at persevering and strengthening the ruling regime as well as its economic gains, especially in the tourism industry.

Conclusions

Based on the gathered data it can be stated that the virus was identified earliest in UAE and latest in Comoros, which does not mean that virus was brought in those places in that particular sequence. The most common places that virus was transmitted to the Arab World from are Iran, China, and Italy, which is hardly surprising due to the economic (China) and geographic (Iran and Italy) proximity of those countries. The highest overall number of infections was initially noted in KSA, Qatar, UAE, Kuwait, Egypt, Algeria, Bahrein, and Morocco. The number of identified infections seem to be growing along with the number of tests performed and because of that countries performing most test tend to have the highest number of cases as well. Just like in the other parts of the globe, the virus is most devastating for countries with low healthcare spendings and relatively high international air traffic (due to tourism or business). At first, the timing of taking preventive measures did not seem to matter, nevertheless with the current dynamic it looks like it may play a major role in combating the pandemic, for instance, KSA was one of the earliest responders, introducing restrictions way before the first case and seems to manage pandemic exceptionally well.

As of 31st of December 2021, Saudi Arabia is in third place in terms of the total number of cases, with Iraq being the first and Morocco the second, which again is highly correlated with the number of tests performed. The abrupt rise in the number of cases in the second half of 2020 across the region proves this point even further.

Number of cases in the Arab World on 31/12/2020).

700000

600000

500000

400000

200000

100000

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Tab. 7. The total number of cases on 31st of December 2020.

Source: based on https://www.worldometers.info/coronavirus/#countries.

Data from most countries is incomplete at best, usually due to a lack of trustworthy information available in English. It should also be noted, that the situation is the most worrying in countries where the number of cases is suspiciously low looking at the sizes of their populations, namely in Syria, Yemen, Sudan, and Somalia. Healthcare systems in those countries are on the verge of complete collapse, which in turn threatens overall well-being and in some cases even the survival of its populations in a long run.

International cooperation plays a crucial role in fighting the pandemic, as demonstrated with Gulf countries, governments of which adhered to the recommendations of WHO and contributed to the efforts aimed at providing relief by IMF. Saudi Arabia played a crucial role in that particular effort, being a host of two G20 summits that took place in 2020 and championing economic assistance to the countries in need. However, growing ambitions, as well as the more assertive approach to the regional security presented by the current Saudi government, contribute greatly to the economic and security hardship of the Yemeni population. Despite the danger that the pandemic poses to the entire Arab World, on-going conflicts there are far from being over. War in Yemen is a prime example of lack of ability to put the differences aside in the time of dire circumstances. That point is even more striking considering that GCC states managed to re-open their borders with Qatar at the same time. Much the same can be stated about the lack of decisive actions on the part of the Arab League, which is being continuously seen as an obscure and ineffective organization, that contributed very little to address the pandemic.

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Appendix 1

The sequence of identifying the first case in the Arab World.

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Type of restrictions introduced

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