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Abstract

Despite the indescribable adversity of COVID-19, which raised deaths in most regions, the pandemic came with a number of good lessons that affect certain value metrics (healthcare, education, productive capacity, and price control mechanisms). In this study, we examined the role played by COVID-19 pandemic cases/deaths in selected regions and the need for policy recommendations. Using a mixed research approach, reported laboratory-confirmed COVID-19 cases/deaths between 12 and 17 March 2020 were obtained across six regions – Western Pacific, Europe, South East Asia, Eastern Mediterranean, America and Africa. Qualitative results showed that the COVID-19 pandemic predominantly affected Western Pacific and European regions. Besides, an analysis of variance revealed an insignificant difference in reported laboratory-confirmed cases/deaths of COVID-19 across the regions during the studied period. These results are, in part, attributable to the homogeneity in the strategies adopted to tackle the COVID-19 pandemic in these regions. Thus, there is a need to strengthen certain valuable metrics, particularly in the healthcare sector by means of upgrading medical equipment (for nations in lack) and recruiting more qualified healthcare workers in view of future events of any pandemic.

Keywords: COVID-19 pandemic; Healthcare; Education; Global capital market; Economic recession; World Health Organization.

1. INTRODUCTION

The emergence of coronavirus (COVID-19) pandemic propelled most economies of the world into a state of disarray. According to Yang-Rong *et al*. (2020), the European Centre for Disease Prevention and Control (2020), and Chan *et al*. (2020), it emerged due to a cluster of pneumonia cases caused by a recently identified β-coronavirus. The WHO in January 2020 originally identified this virus as 2019-novel coronavirus (2019-nCoV). COVID-19 has inflicted indescribable misfortunes on people in both developed and developing countries of the world. The WHO officially affirmed COVID-19 pandemic as a public health emergency of international trepidation (ECDC, 2020).

More worrisome is the fact that there is no clear evidence to prove that the origin of SARS-CoV-2 was from the seafood market; however, to a certain extent, bats are considered the natural reservoir of a wide variety of CoVs, including SARS-CoV-like and MERS-CoV-like viruses (see Banerjee *et al*., 2019; Hampton, 2005; Li *et al*., 2005; Liu *et al*., 2020; Yin and Wunderink, 2018). The virus that is causing COVID-19 perhaps surfaced from an animal source, but is currently proliferating from person-to-person (CDC, 2020; Mizumoto *et al*., 2020; Zhu *et al*., 2020). The COVID-19 pandemic has affected over 199 nations and territories around the world (Chen *et al*., 2020; Luo and Gao, 2020), and only time will tell if the entire nation would be affected by this disastrous plague.

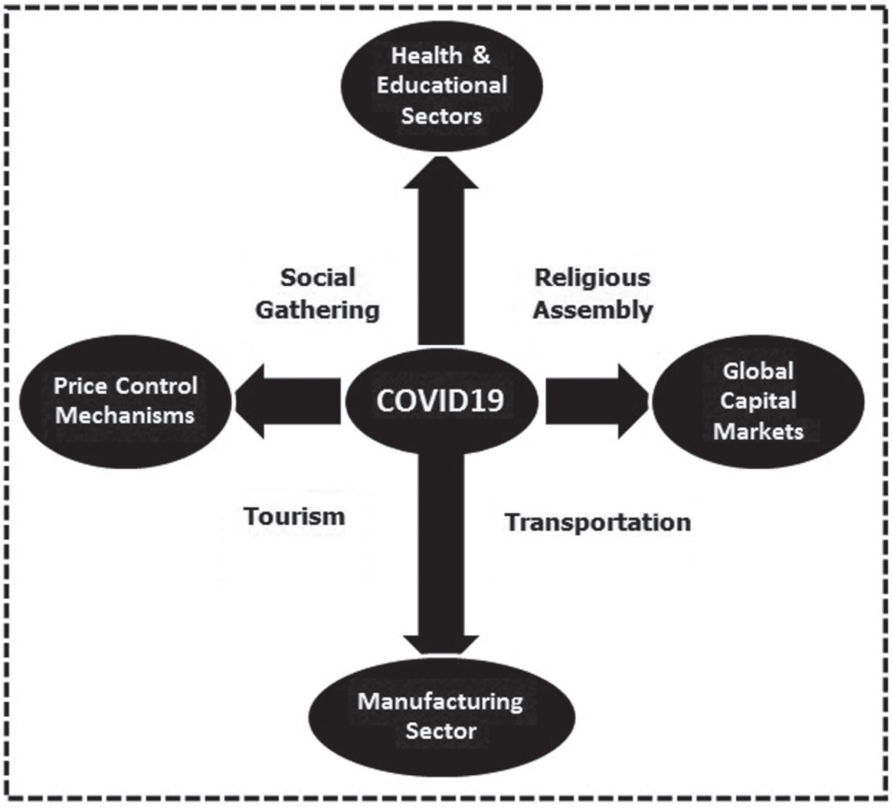
As the COVID-19 pandemic lingers and brutalizes the world, particularly the Western Pacific and European regions, national and global travels, tourism, and businesses were halted, public health emergency magnified, and food and commodity prices (e.g. Africa) skyrocketed, while educational institutions ceased to exist. More terrifying is the fact that both local and global capital markets, religious and social operations existed in miniature, while some were close to being cutoff. This has clearly plummeted economic activities, as the gross domestic product (GDP) of most nations declined by around 2 percent (International Labour Organization, 2020).

The inability of most regions of the world to tackle COVID-19 meritoriously is clear evidence of a lack of preparedness on the part of governments. Despite the unspeakable misfortunes of COVID-19, which raised death tolls in most nations, including Italy, China, the United States, the United Kingdom, Spain, and more recently India (ECDC, 2020; WHO, 2020), COVID-19 came with a number of good lessons even though they are from a bitter panorama. In fact, COVID-19 unmasked areas of flaws on the part of most governments, as if they seem inadvertently unnoticed. It is now clear that while most nations are battling to put an end to the pandemic, researchers are keen on unmasking the good lessons from COVID-19 pandemic in order to make informed policies. Consequently, this paper attempts to examine the variations in COVID-19 cases/deaths in six regions (Western Pacific, Europe, South East Asia, Eastern Mediterranean, America, and Africa) using a mixed research approach in order to inform policy recommendations. The remaining part of this paper presents the theoretical paradigm, materials and methods, results and discussion, and conclusions.

2. THEORETICAL PARADIGM

This paper is anchored on the system paradigm. The paradigm describes a structure or scheme of operations of an entity made up of diverse components that work simultaneously, which can be disassembled due to entropy (distortion, resulting in a malfunctioning of the system). Besides, the system paradigm depicts the

Figure 1. Some Fundamental Metrics Distorted by the COVID-19 Pandemic



Source: Conceptualized by the author, 2020.

idea behind components that build up a system, where all components integrate as a whole to guarantee effective functioning (Barbra, 2015); thus, no component of the system could operate in isolation. In the views of Schneider (2015) and Rhodes (2012), the system paradigm is one of the most influential paradigms since it portrays how diverse components (e.g. healthcare, education, manufacturing, global capital markets, price control mechanisms) harmoniously interact to ensure effective functioning of a nation.

The use of system paradigm buttresses how the emergence of COVID-19 distorted the efficient operations of certain valuable metrics such as healthcare, education, capital markets, manufacturing capacities, and price control mechanisms of national and regional economies. For instance, there are claims pointing out that COVID-19 disrupted productive capacities, global capital market operations, education, and price control mechanisms in the Western Pacific, Europe, South East Asia, Eastern Mediterranean, America and Africa.

Notwithstanding the above, healthcare, education, global capital market, manufacturing and price control mechanisms, tourism, social gatherings, religious assemblies, and transportation, amidst others, were affected by COVID-19. Most regional economies (Western Pacific, Europe, South East Asia, Eastern Mediterranean, America and Africa) underperformed, while the components struggled to work in isolation. In light of this, the theoretical paradigm shows that interruption usually affects national and regional economies.

3. METHOD(S)

This study adopted a mixed approach (quantitative and qualitative). Tashakkori and Teddlie (1998) noted that a mixed approach is highly appropriate to unravel a continuum of events. The use of non-numeric data could better illuminate a particular phenomenon (Creswell, 2002; Peersman, 2014; Saunders *et al*., 2009). The mixed approach was adopted to analyze quantitatively the variations in COVID-19 cases/deaths across regions and qualitatively describe the movements and global pandemic curves associated with COVID-19 by relying on extant literature.

Given this framework, a comprehensive search on WHO, ILO, and other official websites was performed between 12 March and 17 March 2020 (ILO, 2020; WHO, 2020). Data of the distribution of laboratory-confirmed COVID-19 cases/deaths across six regions of the Western Pacific, Europea, South East Asia, Eastern Mediterranean, America and Africa were obtained. Data obtained thus were recorded into Microsoft Excel and analyzed using descriptive statistics (simple percentages and graphs) and inferential statistics (analysis of variance: two-factor ANOVA), while the qualitative aspects were analyzed thematically.

The choice of ANOVA was informed based on the suggestion of Kros and Rosenthal (2016), indicating that ANOVA is useful to assess the independence of two or more variables. The reported laboratory-confirmed COVID-19 cases/death tolls up to 17 March 2020 were presented using simple percentages, while variations in reported laboratory-confirmed COVID-19 cases/death tolls in the studied regions were analyzed using ANOVA. Statistical analysis was carried out using STATA 13.0.

4. RESULTS AND DISCUSSION

The WHO (2020) reports that as on March 17, there were 1,78,399 confirmed cases (7,419 deaths) globally; based on Table 1, the most hit region was the Western Pacific, while Africa was the least hit. In view of

Table 1. Reported Laboratory-Confirmed COVID-19 Cases/Deaths as on 17 March 2020.

	Western Pacific	Europe	South East Asia	Eastern Mediterranean	America	Africa
Confirmed	91,779	64,188	508	16,786	4,910	228
Death	3,357	3,108	9	873	68	4

Source: Data reported by the WHO at 10 a.m. CET

Figure 2. Movement of COVID-19: Death/Confirmed Cases.

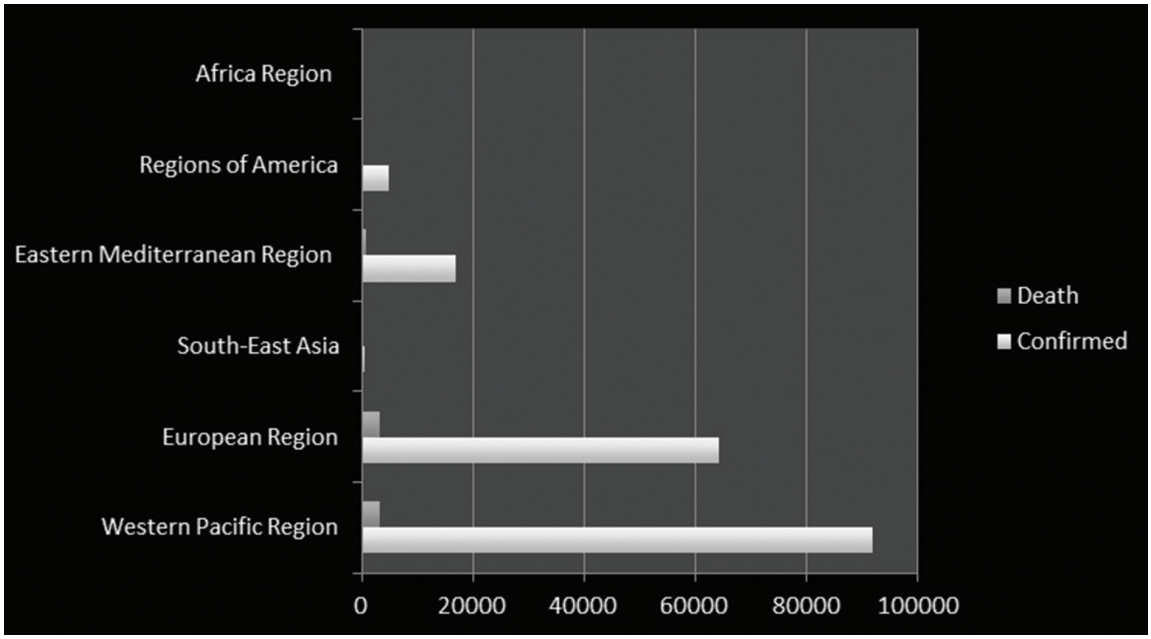
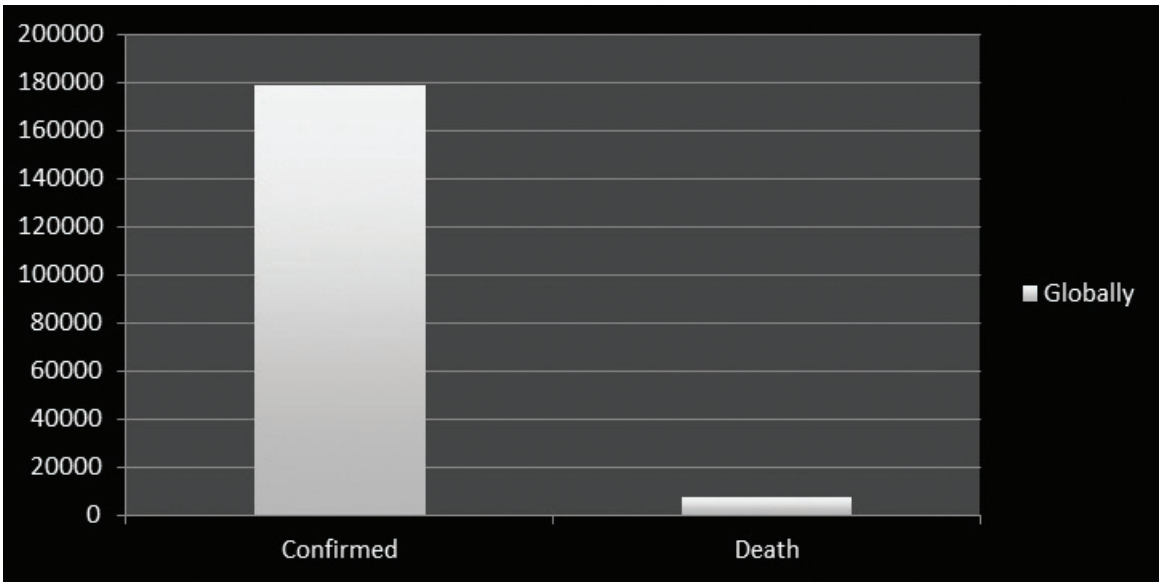


Figure 3. Global Movement of COVID-19 Pandemic: Death/Confirmed Cases.



the current environment, there is a stay-at-home mandate depriving governments, enterprises, small and medium enterprises, and citizens from performing their day-to-day operations.

COVID-19 proves to be a bitter panorama as it took the entire world by surprise, keeping the world in shambles, with fear that death is closer than before. The COVID-19 pandemic has currently transmuted into an economic and labour market shock, affecting not only the production of goods and services but also the consumption and investments (ILO, 2020). Notwithstanding, there are commotions in aviation, tourism, and hospitality industries, threatening a sizeable deterioration in revenues and insolvency in specific sectors. The movement of COVID-19 in the studied regions with respect to confirmed cases/deaths is captured in Figure 2.

Figure 4. Distribution of Confirmed COVID-19 Cases.

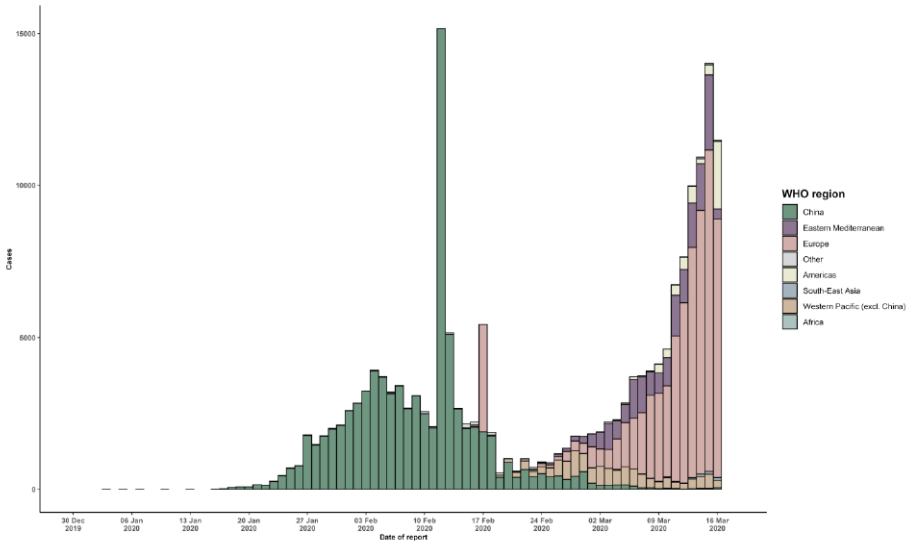


Table 2. Two-Factor ANOVA of Reported Laboratory-Confirmed COVID-19 Cases/Deaths in Six Regions of the World.

Summary	Count	Sum	Average	Variance		
Confirmed	6	178399	29733.16667	1509060986		
Death	6	7419	1236.5	2504473.9		
Western Pacific	2	95136	47568	3909225042		
European Region	2	67296	33648	1865383200		
South East Asia	2	517	258.5	124500.5		
Eastern Mediterranean	2	17659	8829.5	126611784.5		
America	2	4978	2489	11722482		
Africa	2	232	116	25088		
ANOVA						
Source of variation	**SS**	**Df**	**MS**	**F**	**P-value**	**F-crit**
Between groups	2436180033	1	2436180033	3.50336734	0.120146	6.607891
Within groups	4080915235	5	816183046.9	1.173718276	0.43238	5.050329
Total	9994007332	11				

Source: Author's computation, 2020.

Reports from the WHO (2020) suggest that the Western Pacific and European regions are the hardest hit with multiple types of transmission; however, in other regions like Africa, all cases have been acquired from outside the region (imported cases only). More specifically, as of 27 March 2020, the United States recorded more COVID-19 cases (85,228) than China (82,078) (The Pan American Health Organization, 2020).

Given the rampant global distribution of the pandemic (Figures 3 and 4), there is a likelihood that employment levels will incessantly deteriorate if the virus is not contained, particularly for the Western Pacific and European regions. This portends a negative impact on the economies of these regions with a worrisome symptom of a global economic recession in the second half of 2020.

More specifically, the bitter panorama of the COVID-19 pandemic has especially constrained people's movement, impacting both manufacturing and service sectors (Lee and Cho, 2016; National Bureau of Statistics of China, 2020). This foretells some policy implications and recommendations for all countries of the world, including those not drastically affected by the COVID-19 pandemic.

Results presented in Table 2 reveal that the variables have a degree of freedom (df) between groups of 1 and within groups of 5. *F-crit* is 6.607891 (between groups) and 5.050329 (within groups). Moreover, *F* is 3.50336734 (between groups) and 1.173718276 (within groups), which are lower than the values of *F-crit*, suggesting that the difference in the mean reported laboratory-confirmed cases/deaths is insignificant. Besides, the *P*-values are also in support of this inference. Put together, our results indicate that there is no significant difference in the reported laboratory-confirmed COVID-19 cases/deaths in the six studied regions.

5. CONCLUSION

This paper examined the COVID-19 pandemic cases/deaths in selected regions (Western Pacific, Europe, South East Asia, Eastern Mediterranean, America and Africa) to inform policy recommendations. Using a mixed research approach, the analysis revealed some insightful findings. Our descriptive results indicated that the COVID-19 pandemic predominantly affected the Western Pacific and European regions with multiple transmission types (as of 17 March 2020); however, the analysis did not show any significant difference in the reported laboratory-confirmed cases/deaths due to COVID-19 across the studied regions. This finding could be attributed, in part, to the homogeneity of strategies adopted by the governments to tackle the COVID-19 pandemic in these regions. Regardless of the insignificant variation in reported laboratory-confirmed cases/deaths in these regions, there are good lessons from the COVID-19 pandemic.

First, during the initial phase of COVID-19 outbreak, several nations had implemented pivotal measures aimed at containing the spread of the virus. Second, as the COVID-19 pandemic reached a new high, governments of most nations began to perceive the surmounting pressures on public health workers, shortages of healthcare equipment(s), uncoordinated policy responses, and the lack of deeper social protection systems. Notwithstanding the above, certain valuable metrics, namely healthcare, education, capital markets, manufacturing capacities, among others, equally bore the brunt (Barbra, 2015; Rhodes, 2012; Schneider, 2015). The COVID-19 pandemic unmasked to the world the absence of price control mechanisms for food and other commodities, the imminence of a shrunk global capital market, and a possible economic recession in the regions under study.

Given the above, there is a need to further strengthen these valuable metrics, particularly the healthcare sector by upgrading healthcare equipment (for nations in lack) and recruiting qualified healthcare workers in view of future events of any pandemic. Moreover, governments should, on its part, increase provisions for healthcare, ensure the sustainability of livelihood and employment of people, as well as devise price control mechanisms for food and other commodities as part of a nation's preparedness to fight any kind of health pandemic.

Conflict of Interest

There is no conflict of interest.

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