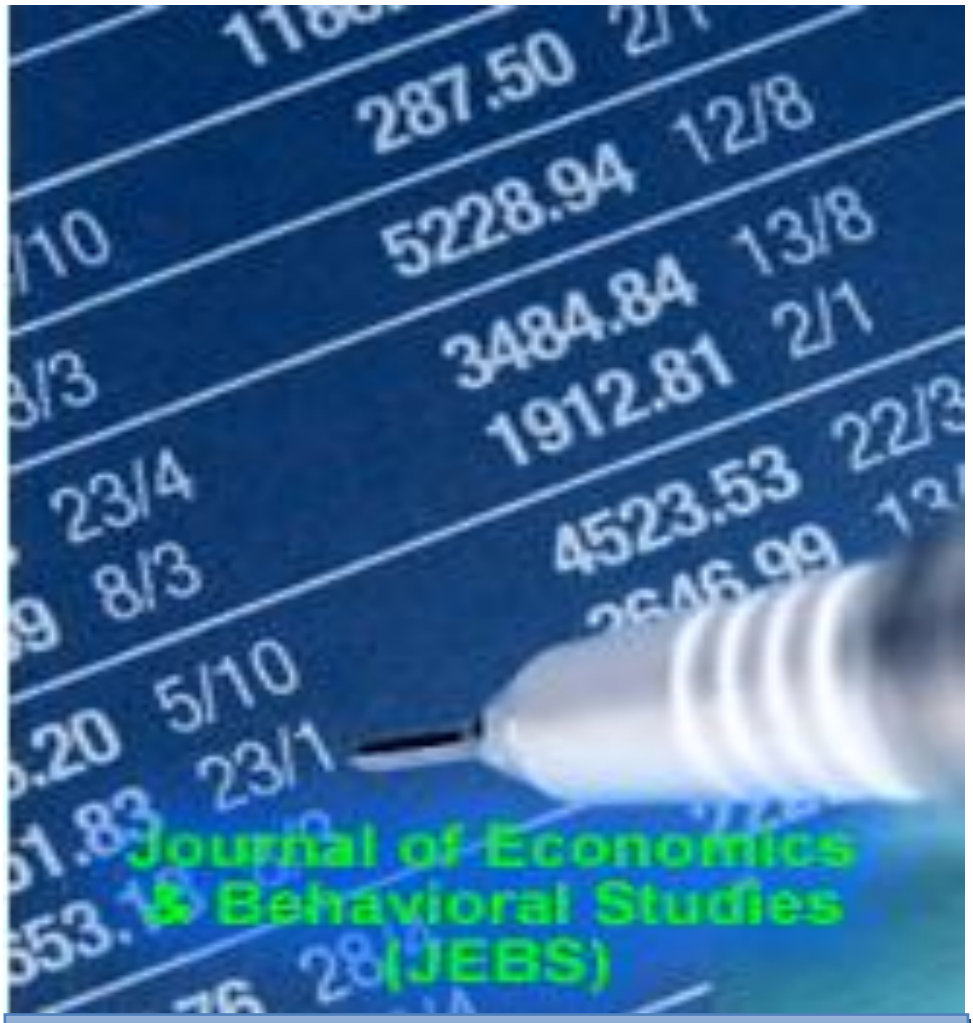

Vol. 13 No. 2 ISSN 2220-6140

Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises papers of scholars from Indonesia, Zimbabwe, Bangladesh, USA and South Africa. Effect of Tax Avoidance and Company Complexity on Firm Value, Effects of Covid-19 on the Financial Sector and the Role of Social Media as an Advertising Tool, Infodemic and Economic Fact Analysis at COVID-19 Crisis, Meta-Analysis of Seven Standard Experimental Paradigms and Integrating Approach to Build Customer Experiences were some of the major practices and concepts examined in these studies. The current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise and to acquire additional knowledge in other relevant fields.

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PAPERS

Journal of Economics and Behavioral Studies (JEBS)
Vol. 13, No. 2, April 2021 (ISSN 2220-6140)

Effect of Tax Avoidance and Company Complexity on Firm Value: The Role of Transparency as a Moderating Variable

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Abstract: This study aims to analyze the effect of tax avoidance and company complexity on firm value with information transparency as a moderating variable so that internal and external parties can evaluate management performance to increase firm value positively. In this study, panel data regression and Moderated Regression Analyst (MRA) were carried out on 78 public manufacturing companies on the IDX during the 2017-2019 period. Tax avoidance is measured by the BTD proxy, the level of complexity is measured by the number of business segments, firm value is measured by Tobin's q proxy, and information transparency is measured by the transparency index released by BAPEPAM. The results show that tax avoidance has a significant negative effect on firm value and firm complexity does not have a significant effect on firm value, while information transparency moderates the relationship between tax avoidance and firm value but is unable to moderate the effect of firm complexity on firm value.

Keywords: *Tax Avoidance, Company Complexity, Diversification, Firm Value, Transparency.*

1. Introduction

Before the 1980s, oil and natural gas played an important role in state financial revenues, however, the times and the rate of world inflation which inevitably resulted in the sluggish price of oil and natural gas, led to a decline in state financial revenues. Realizing this, the government is looking for a substitute for state revenue and the choice falls on taxes. Tax is one of the three sources of state income that has the largest portion when compared to other state revenues, namely non-tax state revenue and domestic and foreign grant. Reporting from the State Revenue and Expenditure Budget report for the 2019 budget issued, by the Ministry of Finance, tax revenue is IDR 2,164.7 B or contributes more than 80% of state revenue and this figure continues to increase every year, especially with the increase in population.

This tax revenue is used to finance national development and to make the community prosperous. However, the government's efforts in demanding tax obligations from the public are still not optimal as seen by not achieving the state revenue target in the 2017-2019 period. The unrealized revenue target has an impact on the low tax ratio. This ratio is inversely proportional to the tax ratio in Indonesia in 2016 which was 10.8%, in 2017 it was 10.7%, in 2018 it was 11.5% and in 2019 it was 11.9% (presented in Table 1). The tax ratio describes the level of tax compliance and tax compliance culture, including the law enforcement system. In other words, the tax ratio must match economic growth. This fact shows that there is a research gap, that is, an increasing tax ratio does not reflect an increase in economic growth. This phenomenon shows the high tax avoidance in Indonesia.

Table 1: Tax Ratio in Indonesia

	2017	2018	2019
Tax Ratio	10.8	10.7	11.5

The phenomenon of tax avoidance practices has recently been carried out by a coal mining company, namely PT Adaro Energy. Adaro was proven to have committed tax avoidance of US $ 125 million or equivalent to Rp1.82 trillion during 2009-2017. Adaro uses its subsidiary as a tool to make a big profit from the coal trade and mining in Singapore, namely Coal trade Services International, by selling mining products to the subsidiary and the subsidiary will sell at a higher price. Singapore is Adaro's choice of place for the transfer pricing scheme due to the low-income tax rate of 10% in Singapore, compared to the income tax rate of 28% in Indonesia. Adaro's scheme does not violate the rules, but it is not ethical to do so. This is due to the Adaro benefits from existing resources in Indonesia, but the tax revenue that Indonesia receives is not optimal. Companies that succeed in saving tax burdens will increase company profits (Nugraha & Setiawan, 2019).

However, in implementing the costs incurred are not small, there are implementation costs, costs of losing the company's reputation and potential fines that may occur (Chen et al., 2014; Santana & Rezende, 2016). Apart from tax avoidance factors, another component that affects firm value is firm complexity.

A company that is successful in its activities will enlarge its business with the hope of earning a profit or increasing the company's reputation by expanding or expanding its business. This has an impact on increasing profits received from many business segments and subsidiaries so that it will attract investors to invest (Jia, 2010; Khan et al., 2020). Even so, the increasing number of subsidiaries or business segments will not only increase the profit of the parent company and dominate market share, but will also cause significant costs of establishment, acquisition costs and operational supervision costs that can become a burden to the company (Queen, & Fasipe, 2015). Therefore, the company's decision to expand or not depends on how the company applies it, whether it can benefit or even harm the company.

Based on the phenomenon and differences in the results of previous studies regarding the effect of tax avoidance and company complexity on firm value, it is a reason to add company transparency as a moderating variable. Transparency can be calculated from the amount of information presented by management in an annual report. Low transparency indicates poor corporate governance and causes large differences in information resulting in weak relationships with investors, and vice versa (Khan et al., 2020; Noviari & Suaryana, 2019). The purpose of this research is to analyze the effect of tax avoidance and company complexity on the value of the manufacturing sector companies listed on the Indonesia Stock Exchange and the effect of information transparency in moderating these two variables.

2. Literature Review and Hypothesis Development

Agency Theory: According to Bendickson (2016), agency theory is an understanding based on one party, namely the shareholder as the principal, who assigns certain tasks and decisions to other parties, namely the manager as an agent. The company system that separates agents and principals can cause problems, including the possibility of agents carrying out activities that are not in line with the wishes or interests of the principal. Sukandar and Rahardja (2014) describe the inequality of interests between agents and principals as agency problems. Agents tend to prioritize their interests to get maximum compensation or incentives. One of the opportunistic actions taken by agents is implementing tax avoidance practices such as manipulating income that can harm the principal and creditors. Contrary to the agent's behavior, the principal wants an increase in firm value so that it will have an impact on a large and consistent rate of return on the capital they provide (Priyadi, 2017). In addition, agents also tend to diversify their business without focusing on major investments to increase profits but do not see long-term impacts on the company (El-Mehdi, 2011; Choe et al., 2014).

Signal Theory: According to Godfrey et al. (2010), the signal theory explains the reasons for the behavior of managers as agents to provide signals about the company's prospects. This behavior aims to reduce the level of information asymmetry between the company's internal and external parties. Signals are relevant and material information about everything that the company has done to achieve the desires of its owners. In practice, management strives to disclose more information that can highlight the integrity and success of the company so that it will be considered both by investors and shareholders even though the information is not required (Astuti & Pamudji, 2015). Stiglitz (2002) in Connelly (2014) explains that the occurrence of information asymmetry is when different parties understand different things. This is because some information is personal, so that information asymmetry arises between those who have the information and those who can make better decisions if they have the information. When the level of company diversification is greater, it will increase the complexity of the company which can increase the risk of information asymmetry. Therefore, the company is expected to consistently provide positive signals to investors and the public to increase trust and guarantee the security of investments that have been deposited in the company.

Firm Value: Company value is an understanding from the investor's side of the company's performance, and the value of its shares (Simetris & Darmawan, 2019). So, the higher the share price will be directly proportional to the value of the company, meaning that maximizing company value also means maximizing the interests of shareholders, which is one of the company's missions. As the main barometer of a company's

success, the company's value is required to always increase in the hope of building investor confidence not only in the company's current performance but also in the company's future projections (Nawaiseh, 2017). A good level of transparency is expected to minimize the opportunistic behavior of managers and detect risks. One way for companies to increase complexity is by developing a business or diversification (Wibowo, 2020). In addition, related to company liquidity, the company is considered capable of repaying loans provided by creditors, thereby facilitating the process of obtaining additional capital (Susanti & Restiana, 2018).

Tax Avoidance: Tax avoidance is a situation when a company implements a certain taxation policy that allows taxation actions taken by the company to not be questioned from a legal point of view, but these actions are considered risky if proven to have violated applicable laws (Tandean & Winnie, 2016). By law, the practice of tax avoidance is permissible because it is done by taking advantage of the tax loophole by reducing information about the tax burden that should be paid. Previous research conducted by Chen et al. (2014) and Santana & Rezende (2016) proved that tax avoidance has a negative effect on firm value because it will cause various problems that can be costly. This result is inversely proportional to the study of Nugraha & Setiawan (2019) which concluded that the existence of tax avoidance directly increases firm value.
H1. Tax Avoidance has a positive effect on company value.

Company Complexity: Company complexity is related to the complexity of company transactions (Rukmana et al., 2017). The complexity of the company is based on the number of operating units, diversification of product lines and markets, and the formation of departments and work departments that focus on the number of different units. One way for companies to increase complexity is by developing a business or diversification (Wibowo, 2020). With business expansion, if one company bears a loss, the other company will still get the profit it should, so that the overall profit obtained is more stable and the risk is smaller (Sudana, 2019). A previous study conducted by El-Mehdi (2011) and Cheo et al. (2014) proved that there was a positive impact on company value if the business was verified, namely companies could reduce their debt ratio and control the available market share and allow them to allocate resources between companies. Thus reducing internal financing. However, in the results of research by Chen et al. (2014), it is concluded that the high level of complexity of companies that have complex management makes it easy for them to carry out earnings management so that it can reduce firm value.
H2. Firm complexity has a positive effect on firm value.

Transparency: Information transparency, namely disclosure of company facts in disclosing material and relevant information. The disclosure as referred to in the Regulation of the Financial Services Authority of the Republic of Indonesia Number 37 / POJK.03 / 2019 includes important and relevant material information or facts regarding events, incidents or facts that may influence the decisions of the parties concerned regarding information or facts. Investors will study these financial reports to understand the strategic risks and company performance to determine the decisions to be taken. Chen et al. (2014) and Nugraha & Setiawan (2019) concluded that information transparency can moderate the negative relationship between tax avoidance and firm value because the existence of information transparency can increase investor confidence so that they continue to invest even in a company doing tax avoidance practices. Furthermore, research by Jia (2010) concluded that the existence of information transparency cannot moderate the relationship between firm complexity and firm value, because logically the size of the company value is not always seen from the level of complexity of the company but rather the ability or management creativity in managing assets so that the business able to grow.
H3. Information transparency moderates the relationship between tax avoidance and firm value and the relationship between firm complexity and firm value.

3. Research Method

In this study, manufacturing companies listed on the Indonesia Stock Exchange in 2017-2019 were used as objects of study. Manufacturing companies are the industrial sector that processes raw materials into finished or semi-finished goods and is considered one of the backbones of the country's economy. Using a purposive sampling method, 78 companies were selected from a total of 192 manufacturing companies that obtained the desired sample criteria as follows:

Table 2: Research Sample Criteria

No	Criteria	Total
1	Manufacturing sector companies listed on the IDX during 2017-2019	192
2	Companies did not publish annual financial statements in Rupiah for 2017-2019	(30)
3	Companies did not publish annual financial reports that have been audited by independent auditors in full and consecutively during 2017-2019	(47)
4	Companies with positive profits during the 2017-2019 period	(27)
5	Companies that include information on at least one or more business segments	(4)
The number of companies selected to be the sample		**78**

4. Results

Descriptive Statistics: Table 3 shows that the number of samples (N) used in this study was 234 samples, the smallest firm value was 0.329 the largest was 23.28 with an average of 2.08 and a standard deviation of 2.76. The tax avoidance calculated using the BTD ratio has a minimum value of -0.23 and a maximum value of 0.87 and an average of -0.011 with a standard deviation of 0.083. Furthermore, the complexity of the company shows an average of 2.88 with a minimum value of 1 and a maximum of 7 and a standard deviation of 1.54 which is below the average, so it can be concluded that the data varies. The moderating variable, namely transparency of information, has an average of 0.71 with the smallest value of 0.48 and the largest of 0.94, indicating that sample companies have submitted their financial report results in accordance with government regulations.

Table 3: Descriptive Statistics

Variable	Total	Mean	Std. Dev	Min	Max
FP	234	2.080313	2.761118	.3293315	23.28575
TA	234	-.0115315	.0837536	-.2309555	.8794016
CC	234	2.888889	1.540736	1	7
T	234	.7170085	.0943445	.48	.94

Furthermore, before performing a regression test, it is necessary to test classical assumptions to meet the requirements and conditions of panel data regression. The first test is a normality test using the skewness kurtosis technique, with a threshold of ± 3 for skewness and ± 10 for kurtosis. However, the data in this study proved to be abnormal, so minorize must be done to eliminate the possibility of outliers in all variables to maintain the original data features. Furthermore, the multicollinearity test was carried out by looking at the VIF value, where the VIF value that is good or reflects the absence of multicollinearity symptoms is when the VIF value is <10 or tolerance> 0.1. The results show that the data in this study are declared free of multicollinearity symptoms. The final step is the heteroscedasticity test with the Breusch Pagan Godfrey method where there is a significant requirement of 5% (0.05), but the test results are below the threshold so that robustness treatment must be carried out.

Panel Data Regression Analysis

Table 4: Panel Data Regression Analysis Test Results

FV-w	Coef.	Robust Std. Err.	t	P> I t I	[95% Conf.	Interval]
TA_w	-11.04627	3.106397	-3.56	0.000	-17.16676	-4.925773
CC	.0387897	.0504075	0.77	0.442	-.0605275	.1381069
_cons	1.497177	.01812036	8.26	0.000	1.140153	1.8542

Based on Table 4 above, tax avoidance it is known that the t value is -3.56, where the probability level or p-value is 0.000. Based on the test results, the tax avoidance partially affects the firm value because the p-value

(0.000) is below the significance level (0.05). The conclusion from the t-test results is that tax avoidance has a significant relationship in the opposite direction to changes in firm value. So, it can be concluded that the first hypothesis is rejected because tax avoidance has a negative effect on firm value. The test results are in line with the research of Chen et al. (2014) and Santana & Rezende (2016). On the other hand, it is contrary to the results by Nugraha and Setiawan (2019) which state that there is a positive influence on the firm value if management decides to implement tax avoidance practices.

Furthermore, for the company complexity, it is known that the t value is 0.77, where the probability level or p-value is 0.442. Based on the test, it can be concluded that the company complexity partially does not affect firm value because the p-value (0.442) is above the significance level (0.05). Thus, it can be concluded that the first hypothesis is rejected because the size of the company complexity does not affect firm value. The test results are consistent with Khan et al. (2020) and Queen and Fasipe (2015) who state that there is no significant relationship between firm complexity and firm value. On the other hand, the results of the study contradict the results suggested by Jia (2010) that the complexity of companies in China can increase firm value.

Moderated Regression Analyst

Table 5: MRA Test Model 1

```
. regress NP_w TA_w TI TA_TI_w

      Source |       SS           df       MS      Number of obs   =       234
-------------+----------------------------------   F(3, 230)       =     18.57
       Model |  83.7117189         3  27.9039063   Prob > F        =    0.0000
    Residual |  345.515367       230  1.50224073   R-squared       =    0.1950
-------------+----------------------------------   Adj R-squared   =    0.1845
       Total |  429.227086       233  1.84217633   Root MSE        =    1.2257

------------------------------------------------------------------------------
        NP_w |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        TA_w |   40.99838   24.22028     1.69   0.092    -6.723608    88.72037
          TI |   4.322311   .9228459     4.68   0.000     2.503998    6.140624
     TA_TI_w |  -71.23207   34.11017    -2.09   0.038    -138.4404   -4.023717
       _cons |  -1.495464   .6588174    -2.27   0.024    -2.793552   -.1973748
------------------------------------------------------------------------------
```

Based on Table 5, tax avoidance which is the result of the multiplication interaction between the tax avoidance and information transparency, the t value is -2.09 with a probability value of 0.038. This probability value is below the level of significance, so it can be concluded that transparency is significant and moderates the relationship between tax avoidance and firm value. The negative value of the probability of tax avoidance shows that the existence of information transparency will weaken the relationship between tax avoidance and firm value. In the company complexity which is the result of the multiplication interaction between company complexity and information transparency, the probability is 0.112. This value is far above the level of significance (0.05), so it is stated that transparency is not significant and is not a moderating the relationship between company complexity and firm value.

5. Conclusion

Based on the objectives of this study, it can be concluded that tax avoidance has a significant effect on firm value but in a negative direction. The majority of manufacturing companies in Indonesia view tax avoidance as having more of a downside than seeing it as an acceptable benefit in the future. In addition, there is no influence between the level of company complexity and firm value. This occurs because logically the size of the company value is not always seen from the level of company complexity, but rather the ability or creativity of management in managing assets so that the business is able to develop. On the other hand, it is

concluded that information transparency able to moderate the relationship between tax avoidance and firm value in a negative direction and transparency is unable to moderate the relationship between company complexity and firm value. This study has several limitations, namely the minimum number of samples and there are unbalanced measurement results, where there are data with very high values and data with very low values, causing deviations and making testing difficult. Based on these limitations, it is recommended for further research to expand the object and year of observation so that the results obtained are more universal and replace or add proxy and index measurement variables with others and adjusted to the current situation.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 13, No. 2, April 2021 (ISSN 2220-6140)

The Effects of Covid-19 on the Financial Sector and the Role of Social Media as an Advertising Tool in these Trying Times in Zimbabwe

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Abstract: This study identifies the effects of COVID-19 on the financial sector, and explores the part played by social media as an advertising instrument in Zimbabwe. The objectives of the study are - (i) to identify the effects of COVID-19 on the financial sector in Zimbabwe. ii) To appraise the function of social media as advertising vehicle in these trying times, in Zimbabwe**.** Drawing respondents from ten (10) leading financial institutions in Zimbabwe, the study uses a self-administered interview schedule and adopts the qualitative research design. Challenges identified range from managing the legal tender and interchangeability to methodizing working routine (dropping profits and staff well-being). There are also pressures on financial institutions notably, the rise of fintech within the sector to serve customer needs. Even though the pandemic has a terrible negative impact, thanks to social media for becoming primary sources of information. This paper agrees with some scholarly views on what ought to be the additional and new role of social media as an advertising tool- and that is relating social media benefactions to the concurrent milieu. For financial institutions, it is not business as usual. The substance of the matter is that duration of the plight and its impact are still undetermined in Zimbabwe and elsewhere. This phase presents a singular chance for the financial institutions in Zimbabwe to use social media advertising to its best, to tether with clients in significant ways. This includes adjusting advertising campaigns, evaluating the language used in advertisements and becoming aware of consumers' increased anxiety during these trying times. The study recommends that financial institutions have to think through creative advertising strategies and practices that may navigate the business through this "new normal." They should use social media more for communal rather than for commercial purposes now and after.

Keywords: *Homebound, liquidity, media consumption, "new normal", pressures.*

1. Introduction and Background

The coronavirus disease 2019 (COVID-19) upsurge has **dispensed outright suffering to** livelihoods across the nation. The financial sector in Zimbabwe equally finds itself relentlessly afflicted by this crisis. This paper has a twofold purpose**: -** to identify the effects of COVID-19 on the financial sector and to appraise the function of social media as an advertising instrument in Zimbabwe**.** In an attempt to understand the repercussions of the rampant scourge on the financial sector in Zimbabwe, and the role of social media as an advertising tool, it is illuminating to note that although COVID-19 has other distresses; it nonetheless has far-reaching economic aftermaths on the financial sector. The study takes interest in the aforementioned issues, primarily because financial services are fundamental to prosperity (Bonga, 2010)**.** Given that, the banking industry is the heart of the economic development of a country, the researcher finds a compelling reason to undertake such a study**.** The fiscal system in many of the developing countries (such as Zimbabwe) faces various pervasive problems (Portes, (2020)**.** These problems took a toll with the advent of the COVID-19 pandemic.

In both normal and harsh times**,** banks play crucial roles (Portes, 2020)**.** They create money in the economy by making loans to different economic sectors. Thus, banks are in the epicenter of capital formation. Banks receive money and pass it on to productive and needy sectors. They provide short, medium and long-term finance to priority sectors**.** They mobilize people and economic agents who are reluctant to deposit their money to deposit through offering deposit rates (RBZ Monetary Policy, 2017). Banks also have a function of accepting deposits**,** ensuring the safe return with the agreed additives, after utilizing those deposits for its lending activities (Saha**,** 2010)**.** For the underprivileged, such services humble the have-nots and assist them to handle the benefits at hand to deal with impoverishment. The above scenario invites some understanding of the role of social media as an advertising tool during the COVID-19 pandemic**.** The researcher's interest in the role of social media as an advertising tool comes from the fact that today**,** social media such as Twitter, Facebook, Instagram, and so on have become the predominant threshold of information**.**

Given that social media may also carry distorted information, the growing question therefore in this era revolves around the use of social media reliably. Safko (2010) argues that access to reliable information is one of the enablers that will see companies survive. In the prevailing scenario, where people are homebound with little or nothing to do, COVID-19 has led to a spike in online media consumption. Subsequently, this spike provides a very fertile ground to explore the role of social media as an advertising tool. It is against this background that the overall aim of this paper is to ascertain the effects of COVID-19 on the financial sector and the role of social media as an advertising tool in these trying times in Zimbabwe. The first objective of the study is to identify the effects of COVID-19 on the financial sector in Zimbabwe. The second is to appraise the part played by social media as an advertising instrument in these trying times in Zimbabwe. The last objective is to propose some policy recommendations that may affect the financial sector and social media advertising.

2. Literature Review

The unpredictability of the COVID-19 pandemic lands financial institutions in hardships such as speculations. (Drechsel and Kalemli-Ozcan, 2020). Perceivably, due to COVID-19, the spike in bankruptcy in Africa threatens the firmness of the financial institutions (World Economic Forum, 2020). Risk-management teams in the financial institutions are doing everything possible to move with waves of credit risk among other challenges (Hansen, Shneiderman, and Smith, 2010). It might make sense, that to survive this crisis; businesses need to maintain their customer bases. This section reviews the literature on the effects of COVID-19 on the financial sector in Zimbabwe and the part played by social media as an advertising instrument in these trying times. Table 1 below shows the leading financial institutions in Zimbabwe.

Table 1: Operating Financial Institutions in Zimbabwe

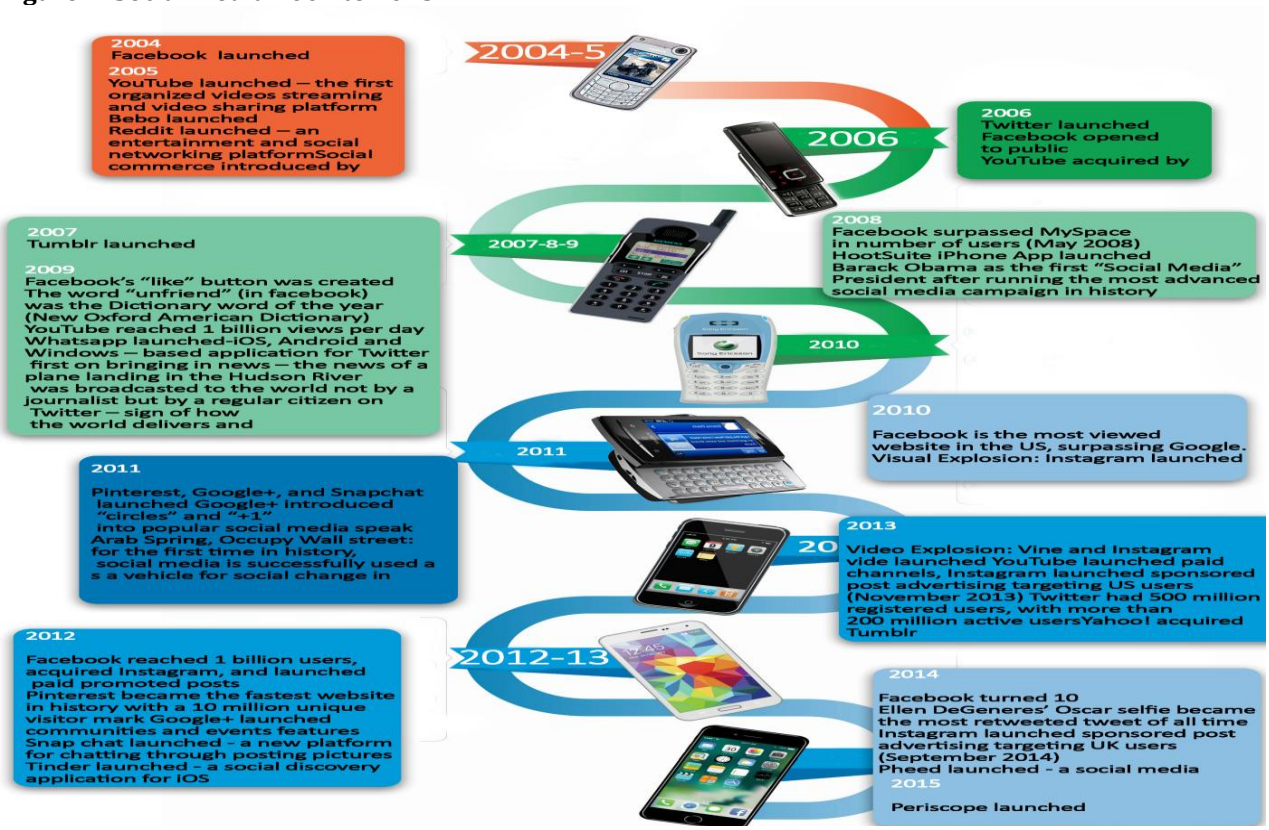
Name	No. of Branches
First Capital Bank Limited (formerly Barclays Bank of Zimbabwe	**26**
The Small and Medium Enterprises Development Corporation	**6**
Agricultural Development Bank of Zimbabwe (Agri bank)	**47**
Infrastructure Development Bank of Zimbabwe (IDBZ)	**17**
Standard Chartered Bank Limited	**21**
Tetrad Investment Bank Limited	**5**
People's Own Savings Bank	**35**
Eco bank Zimbabwe Limited	**12**
Nedbank Zimbabwe Limited	**11**
National Building Society	**2**
Banc ABC Bank Limited	**27**
Steward Bank Limited	**2**
FBC Building Society	**17**
Stanbic Bank Limited	**67**
NMB Bank Limited	**20**
CBZ Bank Limited	**66**
FBC Bank Limited	**16**
Met bank Limited	**8**
ZB Bank Limited	**47**
CABS	**54**

Effects of Covid-19 on the Financial Sector of Zimbabwe: As the ramifications of the COVID-19 pandemic continue ringing with many echoes, financial institutions remain responsible for balancing their integral function (Segal and Gerstel, 2020). People will continue to need essential banking services throughout these trying times. Sad to note is the fact that in the wake of this novel coronavirus pandemic, financial institutions are facing a completely new experience. Wu and Olson (2020), observe that the pandemic is already radically worsening the economic outlook for Africa, with growth expected to collapse to a negative 1.6% and a real per capita fall of 3.9%, making the year 2020 the worst. The available literature in Zimbabwe shows that the COVID-19 pandemic could be the most serious challenge to financial institutions in nearly a long time back. According to Segal and Gerstel, (2020) the performance of financial institutions suffer in the areas of fees, interest revenue, losses, and expenses.

These institutions have to engage in the widespread use of remote services. The forced remote work increases costs for setups. This sudden change to operating from homes has necessitated the need to channel funds towards network set-ups to meet client's needs. Furthermore**,** institution portfolios are under stress because of lending to households with volatile income and no assets, some of whom may be unable to maintain solvency (Whitaker, 2020). The sector faces yet another mammoth task of ensuring effective crisis responses, managing supply-chain disruptions, and safeguarding the well-being of its employees by adjusting daily working practices (Mattei and Gombeski, 2020)**.** Close to that, banks may not be able to retain their full workforce given the worsening market conditions and increasing cost pressures. In addition, financial institutions have to deal with the varied needs of their employees and customers from an experience, innovation, and delight perspective in order to provide various financial services, while preserving the trust and security of the customers (English and Liang**,** 2020). This terrible phrase in the history of financial institutions requires them to perceive social media use as an important advertising tool to retain clients**.**

Social Media during these Trying Times: Social media as an umbrella term needs defining to start with, to understand what it is as well as its role as an advertising tool. Given the variety of terms used to describe social media, it is not surprising that it also lacks a formal and well-accepted definition (Xiang and Gretzel, 2010)**.** In this writing, the researcher conceives social media as a 21st Century catch-all term that characterizes everything that has to do with the internet and the interaction of robotics (Billows, Baghel and Kavoura, 2014). In the same vein, Hudson (2018), purports that, social media refers to websites and applications that are designed to allow people to share content quickly, efficiently, and in real-time. The definition of social media is conceivably changing daily and will continue to do so. For markers, perhaps, the question might be; if social media represents a growing medium that could rapidly bring about more awareness, raise funds, and even promote positive social action, how can they use it to create positive change in Zimbabwe, in the face of COVID-19? Social media has been in existence since the early 2000s. It is an ever-changing array of tools and platforms built for any number of purposes as shown by the infographic in Figure 1 below**.**

Figure: 1 Social Media 2004 to 2015



Source: -Internet Marketing Agent, (2015).

As echoed by many scholars, social media is inexpensive since it uses the internet. Put simply, social media is all about facilitating people to express and share ideas, thoughts, and opinions with others. It is also about enabling people to connect with a lot of others. It has removed the burden of time constraints that were inherent in the traditional methods of communications. In the words of Acar and Polonsky (2007), "social media has provided online tools that enable one to many sharing of multimedia content and employs easy to use interfaces that enable even non-specialists to share and connect". From the professional front, it has been widely used for acquiring markets by new business ventures. Kaplan and Haenlein (2010), describe social media in relation to advertising as a system, which allows users to engage, collaborate, interact and share ideas. In fact, what it will be tomorrow; is virtually unpredictable for most of us. In this day, marketers should see social media with fresh eyes, as a powerful tool of marketing their businesses as well as addressing customer needs and strengthen relationships. The challenge for marketers, then, is to find new ways to capture the attention of consumers bombarded with too much digital noise or information every second of the day. Social media analysis ceases to be an added option, rather a necessity when businesses want their clients to take social media marketing to a completely new level. Close to this idea, one other area of focus in this paper, is streamlining the role of social media as an advertising tool during these trying times in Zimbabwe. Blundell and Machin (2020) propose that the first rule of advertising is that an advert has to have an effect.

At a time of crisis such as the COVID-19, people must dispense perceptions and experiences, assisting one another to attenuate the knock of COVID-19 on the financial institution and the all-embracing economy. In comparison to print and other media platforms, social media has become the major vehicle for information dissemination (Brown and Rocha, 2020). Many people are using Twitter, Facebook, and Instagram to stay current. Interestingly, in these trying times di Mauro, and Syverson (2020), have this to say, "…this crisis highlights the particular strengths of social media in how it can be used for the second type of purpose - that is a community and emotional support." The researcher finds the foregoing opinion plausible, particularly, given that financial intuitions could capitalize the duration of covid-19 to engage social media advertising in getting in touch with clients (Erken, 2020). When clients view a company's brand as solicitous rather than as a source of income, they tend to pay attention to what the company suggests. Contemporary scholars, such as Deb et al. (2020), perceive this as the distinction between using social media to talk to customers versus using social media to talk with customers and have them talk to each other through the company's brand. In this environment, therefore, understanding what customers feel, think, and say about a company in real-time is ever more critical. With the advent of COVID-19, financial institutions' customary and habitual practice transposed swiftly to working online. Social media helps financial institutions to be visible. Elgin, Basbug and Yalaman (2020), are of the view that devoted and trustworthy clients would maintain a company's operations booming, any time after the trying times, all because of social media. In the same view, they believe that, at the end of the scourge, companies will benefit from customers.

Social media has afforded clients and service providers to remain in touch despite quarantines. In the view of Sedlácek, and Sterk (2020), financial institutions could grasp the unequivocal power of social media to disseminate cooperative information and buttress employees and clients wholesomely. Due to the COVID-19 pandemic in Zimbabwe, the financial institutions have collaborated with a trusted civil society organization to randomize the timing of the dissemination of messages aimed at targeting misinformation about the virus to 27,000 newsletter WhatsApp subscribers (Saha, 2010). It examines how exposure to these messages affects individuals' beliefs about how to deal with the virus and preventative behavior. In a survey of 864 survey respondents, it found a 0.26σ increase in knowledge about COVID-19 as measured by responses to factual questions. Through a list experiment embedded in the survey, it further found out that potentially harmful behavior - not abiding by lockdown guidelines decreased by 30 percentage points. Dabla-Norris and Khalid (2020), suggest that, since the pandemic experience of this magnitude is the unique world over, social media's role is bound to keep growing. In understanding the nature of the pandemic after it has gone, upcoming cooperates will master workable ploys to handle such an unparalleled worldwide scourge. Social media has facilitated a unique alternative popularly dubbed "*Get in front of the camera"* to break the physical contact barriers. Going live on social media is a great way to continue making a human connection with the audience, especially when they are craving it the most during these times of social distancing. It is also the researcher's view that when properly used, social media can be a powerful tool in these trying times of the COVID-19 pandemic and beyond.

Policy Proposals: All eyes turn to the financial services industry to see if they can respond in a manner that reduces the economic impact of COVID-19. Nevertheless, the ever-looming rocketing social media usage is likely to stay there after the removal of lockdown restrictions. Social media will prevail as a pointer in fixing the identity, and direction of how businesses win clients forging ahead. If that becomes the order of the day, it may, therefore, be prudent for the financial institutions to particularly give careful attention to strategy and brand issues that will define their future, as market forces and customer behaviors potentially change coming out of this crisis. This study, therefore, recommends serious consideration of this upcoming second function of social media -which is, community and emotional support, and not just marketing their businesses.

3. Methodology

The study used a qualitative research technique coupled with a descriptive analysis because the underlying relationships of the research variables such as; the effects of covid-19 on the financial institutions and the role, of social media as an advertising tool were articulated (Craven, Liu, Mysore and Wilson, 2020). If the goal is to chronicle a phenomenon, such as in this current paper, the right choice is to use qualitative methods. Qualitative studies facilitate in-depth and detailed study of phenomena. According to Morse (1999), qualitative methods not only provide us with the means to explore complex and chaotic real-life situations, such as the current one, but also provide us with diverse options about how to deal with settings in line with the research problem.

Identification of the Population: From the twenty (20) leading financial institutions, (see Table 1), the researcher used a sample size of ten (10) financial institutions with the aid of a stratified random sampling technique to identify the financial institutions for prospective respondents.

Research Instruments: A semi-structured interview design was used as the major research strategy to gather data; the tool was segmented into three sections focusing on demographic and business profile information, questions on knowledge about effects of COVID-19 on financial institutions and finally questions on the role of social media as an advertising tool in Zimbabwe. The interviews targeted marketing managers of the selected financial institutions in Chinhoyi.

Data Analysis: Interview questions captured data on two fronts. The section after the social and demographic questions dealt with the effects of COVID-19 on financial institutions in general. The other section carried questions on the part played by social media as an advertising device in Zimbabwe. The researcher managed to interview all the intended ten (10) marketing managers. The data analysis from the sample generally, shows that the COVID-19 crisis has compelled companies to alter operations. The major effects of the virus on financial institutions as shown by the participants ranged from maintaining cash and liquidity to re-adjusting operations. Respondents overwhelmingly, agreed that the rocketing COVID-19 upsurge accounts for both a supply and a demand shock whose full immensity, duration and social aftermath are unknown. Most respondents 80% agreed that almost all financial institutions in Zimbabwe currently face the challenge of available means and profitability, which endangers an already ailing fiscal position. A big number of 85% expressed that financial institutions are under stress because of lending clients with unstable earnings.

The majority of such clients may fail to own up. Close to 80% indicated that there was a hike in uncollectible loans and about 80% again indicated that the acute swings in investor sentiment due to the COVID-19 virus have affected lending to the private sector. On the question of the almost overnight switch to remote working, 65% of the respondents felt that it has heightened the need for financing computerized information tools. In addition, a majority of 75% of the respondents indicated that because of changes in operations, there is increased fraud and information security risk. On a lighter note, 75% of the respondents felt that, even though COVID-19 may have the potential to destabilize the economy, the general thrust to move forward to digitization is leveraged. A clear understanding by banking operators of their gap in the provision of services is becoming more tangible than ever before, with COVID-19, making them even more inclined to accelerate the digital transformation path through partnerships and collaborations within the fintech community in Zimbabwe. About 75% of the respondents agreed that financial institutions have shown a realization of the seemingly two contesting syllogisms.

On one hand, companies can use social media for commercial advantage. On the other, for mutual neighborhood. In other words, companies use social media to mark, trade, merchandise their business. The researcher appreciates a scenario where financial institutions need not just relay information to customers in a linear method rather it should be transactional. The majority 80% of respondents agreed that social media are becoming primary sources of information and that they can now play a new role in fostering the welfare of the community - not just reaping from it. Half of the respondents held the view that even though, for most banks, cyber security is a key part of crisis management; social media warns and educates consumers on how hackers capitalize the setting to pilfer private and personalized information. In these significantly higher levels of remote access to data and core systems, therefore, employees and management do not become more susceptible to social maneuvers in light of the plight.

4. Results and Discussions

From the findings, the financial sector in Zimbabwe has suffered severe COVID-19 scourge at the time. The study reveals that the coronavirus outbreak has caused extensive and widespread economic woes for consumers, businesses and communities in Zimbabwe. The key highlights of the research findings are-

- The Zimbabwean economy has been ill-equipped to cope with the mounting risks of COVID-19 given its already ailing economy.
- COVID-19 imposed restrictions have stemmed foreign currency inflows into Zimbabwe.
- There is an anticipation of increased electronic printing of money, which may further undermine the measures to tackle hyperinflation and exchange rate volatility in Zimbabwe.
- The customary banking framework in Zimbabwe is disintegrating at the time, preserving capital rather than lending. The study reveals that increased provisions for credit losses and lower interest income from a sustained decrease in interest rates dominate the financial sector of Zimbabwe. Thus, a spike in bankruptcy was witnessed in these financial institutions.

Results significantly reveal that the scourge has forced financial institutions to change how they work especially in re-adjusting operations. The sector has witnessed increases in costs for setups because of the forced remote work, which arrived without any form of preparation. Institutions are in a dilemma figuring out whether to lend or not to a client who may not be able to settle their dues. The study also shows a general perception by customers seeing banks as having abandoned them in their moment of need. Because of this, customers switch banks. At the time of writing, the study reveals a burden on the fiscal state of financial institutions whose consequences are unknown. Most importantly, the study reveals that social media is proving, to be the primary sources of information and that they have another role, for mutual neighborhoods especially in these trying times. These unprecedented challenges may continue to have a broad impact on the risk profile of financial institutions in Zimbabwe for some time, both financially and operationally. For the financial sector, this takes on heightened importance during this crisis, because trust and reputation are integral to what they offer clients. Now that people resort to social media, not only for amusement but also for use as information provenance, the financial sector should seriously consider the second function recommended in this paper.

The researcher agrees with Wolter and Kranzusch (2020) when they propose that, "instead of self-glorifying social media brand posts, brands should be seen to embrace the communal logic of social media during the COVID-19 crisis." Guterres (2020) argues that the need to have social media circulations should be cozy to the user and not just comfortable to the producer. The researcher feels that brands that put customers first, with the helpful information in these trying times, will stand and excel after the crisis. Within this research paper, the researcher finds reason to add voice and say that it is time that marketers should connect their social media subscriptions to the real-time context. Hassan (2020) argues that "during the COVID-19 pandemic, companies that lead with empathy and genuinely address customer needs can strengthen relationships". As an overall aspect of the findings and the arguments in the literature review, therefore, marketers should see social media with fresh eyes, as a powerful tool of marketing their businesses as well as addressing customer needs and strengthen relationships. Lastly and interestingly to note, is that the digital economy is booming, who knows COVID-19 might be a blessing in propelling countries like Zimbabwe which have been sleeping giants for a very long time to create valuable solutions for the digital economy.

5. Conclusion

It may not be debatable that during the COVID-19 pandemic, distinguishing and disseminating correct information remain a battle**.** Based on the findings, one thing certain perhaps is that the practices of patrons will keep transposing in against the COVID-19 pandemic**.** This paper concludes that, while COVID-19 presents a crunch time for businesses going forward, it is important to realize that the current media environment is a major shift no marketer has navigated before and is changing constantly. If financial institutions are looking for a North Star in today's unsettling times, then social media advertising should focus on community and emotional support as revealed in the findings. Consumers are looking for solace and fellow feeling, honest relationship, cushion and support. On the whole, the run-up to today's tense atmosphere has seen social media play all kinds of roles. At its best, it has brought timely information to people, increasingly, people who are, shut-in. Social media, done well, lends itself to combining speed with trust-building in these trying times**.**

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 13, No. 2, April 2021 (ISSN 2220-6140)

Infodemic and Economic Fact Analysis at COVID-19 Crisis: Developing Country Perspective

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Abstract: Although COVID-19 prevention is effective through social management, long-term implementation of lockdown has resulted in unemployment, an economic downturn, disrupting casual social activities, and creating anarchy. It is difficult to answer the question "Health or Economy" directly, especially for developing countries like Bangladesh. The researcher' tried to excavate how people responded with the misinformation and harmful aspects of improvident information on this pandemic accompanied by the economic crisis. The impending recession could be avoided by setting economic priority and effective policy response for the poor and vulnerable segment of the population. In this paper, the researcher used nethnography, shadow observation, and focus group discussion by video conferencing along with content analysis of print and electronic media to gain insights into the study. This paper will help governments and their partners to understand how the communities acted upon their communications and to prioritize contingency measures in crisis and post-crisis recession.

Keywords: *COVID-19, Infodemic, Misinformation, Economic Policy, Stimulus Package, Policy Response.*

1. Introduction

An economic crisis has emerged from the COVID-19 pandemic. It halted all economic activities. The income of the informal sector has fallen drastically caused by shutdown while wealthy people are adhering to stay at home and social distancing. The deep uncertainty of the days ahead for everyone else includes the middle class. Law enforcement agencies are struggling to maintain social distancing to the dawn curb of the spread of COVID-19. It is unlikely to ask people of low income, and day labor to stay at home without ensuring food at their home. Along with the health care crisis, the people of Bangladesh have to face fear, panic, and uncertainty of income. The government took no inclusive policy response. It seems that- policymakers do not have any thoughts about cultural and socio-economic diversity. What is the judgment about the movements of people? Once said, all closed except garments. Then again said, we need to keep the economy afloat. Isn't it creating confusion in the public's mind? In this COVID-19 pandemic, we have seen severe misinformation on social media and electronic media since people do not have trust in official information provided by the ministry of health and Institute of Epidemiology, Disease Control and Research (IEDCR).

Along with the socio-economic effects of COVID-19, we have tried to comprehend how people react to misinformation and what are the consequences of improvident information. In regards to all vulnerable segments of the population- The middle class is in a catastrophic trap. They cannot ask for help with their self-esteem. The middle class is going outside to secure their job with the fear of lay-off by keeping aside the risk of life. Few incidents of eviction have been reported in the newspaper that due to unable to pay rent of residence. This was later resolved with the intervention of the police. However, there is no demographic and occupation category done by the government agency as a safety net for the economically vulnerable people. According to a rapid survey jointly done by the Power and Participation Research Centre (PPRC) and BRAC Institute for Governance and Development (BIGD) revealed that- above 70% drop of income for all extremely poor, moderately poor, and vulnerable non-poor alike; 71% in urban and 50% in rural have experienced economic inactivity, and reduced consumption 40% poor, 30% vulnerable non-poor (PPRC, 2020).

2. Literature Review

Coronavirus (SARS-CoV-2) which is known as COVID-19 has been spread out globally as a pandemic and has been affected without considering economic strength and nationality. Bangladesh officially confirmed its first COVID-19 positive cases by IEDCR (Institute of Epidemiology, Disease Control and Research) was on 8 March 2020 and have confirmed the first death cases on 18 March 2020 (IEDCR, 2020). Following other countries, Bangladesh has adopted several measures to slow down the spread of viruses like lockdowns, social

distancing, home quarantine, and bans of all international and local flights. The fact is that- most of these terms were unknown to the general people which created panic, fear, and uncertainty during the pandemic.
The definitional ambiguity of these new terms not only created public health crisis but also created severe misinformation among the Bangladeshi resident. Without considering socio-cultural & economic aspects and how people enacting to "lockdown", "Social Distancing". The government of Bangladesh has been provided information through press releases, print, and electronic media. Such information made the people panicked and helpless as if the information didn't disseminate in regards to socio-economic culture and context. For example, the government declared for lockdown on 23 March 2020 but people took it as a general holiday. School, college, and university were shut down but people are going to visit the shopping center and tourist spot (Cox's Bazar, Bandarban, etc.). Non-therapeutic preventive measures like social distancing, lockdown, travel ban, and remote office activities not worked adequately and implemented efficiently. Social distancing protocol sounds fancy but practically impossible to apply in massively populated Bangladesh. Dhaka, the capital city of Bangladesh; which is a megacity with 46 thousand people living per square kilometer (B.B.S, 2015). Moreover, there was 1.1 million slum dweller only in Dhaka city (B.B.S, 2015). Slum-dwellers, floating people (beggars, daily workers) and lower-income people are hardly aware of being infected by the coronavirus.

Besides this, Bangladesh also hosting more than a million Rohingya refugees where social distance and sanitization facilities are quite impossible. However, in a country like Bangladesh, a significant proportion of the total population has no savings and lives hand to mouth. Without a rationing system, the government went for lockdown. They didn't think about how poor and marginal people feed themselves in such a prolonged lockdown. Due to such policy loopholes and misinformation, all preventive measure of the spread of COVID-19 virus has been in catastrophic consequences. The health system of Bangladesh has broken down due to the unavailability of personal protective equipment (PPE) and other protective measures which also created an obstacle to combat COVID-19. Many doctors have been affected and also died by COVID-19. The healthcare worker was in a terribly susceptible condition. Because of insufficient healthcare facilities, the overburdened healthcare system had a very weak response at the initial stage of the pandemic. Failure of the healthcare system affected severely other important sectors like the economy, agriculture, and the supply chain of food, which ultimately results in a price hike of the necessary commodity. Electronic and social media played a vital role to spread misinformation, rumor, and fake news regarding the death and infection of COVID-19. This public health crisis has triggered panic buying, mistrust, social stigma, and hate towards infected patients.

Objectives of the Study: The explicit objectives of this paper intends to-

- To understand the socio-economic effects of COVID-19
- Policy loopholes as a preventive measure of the crisis
- To unfold the crisis of the low-income population
- The policy response to the economic crisis
- The ambiguity of the stimulus package
- Cause and effects of information
- Harmful aspects of improvident information

3. Methodology

This qualitative research relies on different secondary sources of data related to the corona virus, i.e., content analysis of print and electronic media, video conferencing of experts, and shadow observation. The researcher used focus group discussion of epidemiologists and financial analysts to gain insights, which was conducted by video conferencing and telephone with an unstructured questionnaire. Nethnography techniques are also used to scrutinize the online activities of social networking sites.

4. Findings

False Sense of Security: After the Second World War, the COVID-19 pandemic was the biggest crisis faced by world leaders. More or less, most of the country was in bewilderment due to the lack of specific treatment

and guidelines. Earlier in this pandemic government of Bangladesh has tried to create a false sense of security! Even though the foreign minister of Bangladesh has stated that – "Corona is not a deadly virus; It's like the common flu." (Jamuna TV, 2020). Health Minister said- "We are working so that the virus cannot enter Bangladesh,' he said- adding that the government is fully ready to face the situation even if the virus infects anyone" (Newage, 2020). These were the ground that resulted in no more seriousness and safety measures to prevent the coronavirus, and that reluctance continued to end in February 2020. As a consequence, people did not consider themselves the risk of the corona virus.

Besides this, there were some misperceptions about the coronavirus that are mostly spread on the social network. This virus will not survive in warm weather like Bangladesh. Religious leaders have spread the doctrine that Coronavirus will not come to this country; it results from the endless sin of developed nations. On the other hand, media has publicized news of the clinical trial of vaccines and potential medicine in such a way that- the coronavirus is about the end. TV channel and newspaper made some ridiculous claims of discovery of COVID-19 cure as lead news. Such an over-abundance of information created ambiguity and confusion. That has resulted in a reluctance to follow public health advice on preventive measures. There is a general perception of the politician that- they can understand better human psychology than bureaucrats. Deadly decisions were taken by them at the end of March 2020 while declaring "Lockdown". Instead of a lockdown or complete shutdown, they used the word "General Holiday' for 14 days. As a consequence, people were in festive mode, and 1.1 core people leave the capital city. Those people travelled by bus, train, and launch to spread the virus to all country districts. If the government could realize the severity of infection, they will declare the general leave after shutting down all long-distance communication.

The Controversial Decision of BGMEA: COVID-19 poses both economic and humanitarian crises. On this pandemic, Bangladesh Garment Manufacturers and Exporters Association (BGMEA) has played a dubious role with the government, nation, and garments workers. On March 25, 2020, the Prime Minister of Bangladesh announced an emergency fiscal stimulus worth Tk. 50 billion for the garments industry to tackle the crisis. The government ordered shut down for 10 days from March 26 of all offices and workplaces, including transport, which later extended until April 11. However, on April 4, thousands of garments workers headed back to Dhaka mostly on by foot from different districts to join their workplace, along with the sparking fears of contagion. Although all transportation service was halted, other than workers were informed that their garments are reopening and they will not get their wages if they do not join the workplace on time. By this blackmail game, the garment's owner put at risk the entire nation to infection. Whereas the leader of BGMEA and owners of garments announcement about reopen and close confused the workers. The million-dollar question is- Why do they not have any contingency fund for the salary of workers for two or three months? Be noted that- this RMG (Readymade Garments) sector is 40 years old leading export industry of Bangladesh.

Always receive benefits from the government's annual budget like minimal source tax (0.0025%), bonded warehouse, back-to-back LC facility, and also incentives for 4% if they go for business on the nontraditional market. Most importantly, the RMG sector corporate tax is 12%, and it becomes 10% when it goes for the green factory (Annual Fiscal Budget, 2019-20). Alternatively, the corporate tax is 38% to 45% for the other sector. Why did garments owners ask their workers to return to Dhaka with the fear of nonpayment of wages and termination? Which is a direct violation of the government's shutdown protocol? In this panic situation, we saw a total failure of inclusive communication between the state and its citizen. As a pressure group or bargaining agent for their rights, does BGMEA is superior to the government's law? Or the nation has compensated for the politicians who have come from the businessman? From humanitarian concern- is that logical that directive to join work and then asked law enforcement agency to prevent entering the city where all transportation was shut down? This exploitation and oppression are inherent to neoliberalism. Here, the government has failed to protect the rights of golden egg-laying foreign exchange-earners who were mostly socioeconomically vulnerable.

Biasness to Information: Another mischievous theory was to hide the actual situation by making the Institute of Epidemiology, Disease Control and Research (IEDCR) the sole authority to test COVID-19 patients at the very beginning of the infection. Hiding information or showing less will keep people away from panic. We saw daily infected COVID-19 patient was maintaining a series of multiplication of three where the

infection was supposed to be an exponential growth. The ruling government has confidence as if they covered up all previous disasters through media management. One after another, suicidal decisions pushed the whole nation into disaster. We usually give priority to that information that is available and see it over and over again. Here is the game of availability biases of information, although there is no scientific reason for the people of Bangladesh not to be afraid! Nevertheless, they have failed to realize the scale of the epidemic due to the control of information. There is also the counterpart of availability biases of information if someone gives piece information that is new to you. You will downplay its significance. Actually, that has happened. The policy was no test, no positive corona patients. Many people do not have trust in the government's assurance of tackling the situation and treatment facility of dedicated COVID-19 hospital.

Since they do not have evidence of death caused by COVID-19 or not being heard in the news on mainstream media. They think it was like natural death until or unless their family member or known someone being dead. Some researcher of home and abroad are trying to collect unofficial death occurred by the syndrome of COVID-19 that are not calculated on official death by IEDCR. According to their research report, they have found 386 people died with COVID-19 like syndrome between March 8 and April 30, 2020, whereas the government's official confirmed death counted 177. Among the unofficial death reported, 64% of the patient died without receiving any treatment (Dhaka Tribune, 2020). Center for Genocide Studies of Dhaka University reported 929 unofficial death of COVID-19 like syndromes between March 8 to May 12, 2020, while official death of governments recorded a total of 269 (The Daily Star, 2020). Fear is that the government will succeed in hiding the outbreak of the coronavirus with minimal effort. Death is just a number to them, but how will they compensate if someone lost only earnings members of the family due to the insincerity of government policy?

Hoax on the Stimulus Package: As a safety net of economic slowdown and to increase monetary supply, the government of Bangladesh has announced a stimulus package in two phases to protect the economy. The first stimulus package includes TK 50 billion to pay salaries and allowances for the export-oriented industry, specifically garments, and the second stimulus package includes TK 677.50 billion. Two packages are worth TK 727.50 billion, which 2% of Bangladesh's GDP (Gross Domestic Product). On the first package, Bangladesh bank has announced a detailed guideline about the disbursement of that money. This announcement has created a ray of hope for the business community. However, there is nothing about other export-oriented industries like frozen foods and leather. In the second stimulus package, there were four sub-packages

Package-1	Tk 30,000 crore announced for big industries and the service sector will be distributed by commercial banks as working capital loan at 9% interest rate with the government providing 4.5% in subsidy.
Package-2	Tk 20,000 crore, small and medium enterprises, including cottage industries, would also get the working capital loan at a 9% interest rate, with the government giving a 5% subsidy.
Package-3	Tk 12,750 crore package was earmarked under the Bangladesh Bank's Export Development Fund to facilitate raw materials imports under the back-to-back Letter of Credit at 2% from 2.73% interest rate.
Package-4	Tk 5,000 crore was made to facilitate the 'Pre-shipment Credit Refinance Scheme' at a 7% interest rate.

On this second stimulus package, a total of TK 677.50 billion was given as a repayable loan. Commercial banks are responsible for generating funds for this package. Economists and financial analysts have raised questions about the ability of most commercial bank's liquidity in this venerable economic situation. The entire banking sector is overburdened with substantial non-performing loans (NPLs). According to a recent article of "The Financial Express" in January 2000, the total aggregate amount of non-performing loans (NPLs) was near to TK 1 Trillion (The Financial Express, 2020). Moreover, the method of taking into consideration new NPLs would remain suspended according to the announcement of Bangladesh Bank's notice until June 2020. On this outbreak of the pandemic, the process of implementing this with transparency is questionable. Due to the

fragility of the economic system government is unable to finance this stimulus package. Therefore, the responsibility of the government has been imposed on the banking sector.

Moreover, these incentives will depend on who borrows and when? At the moment, these incentives are not very effective in tackling the major crisis of the economy. Bangladesh bank reduced some policy rates like Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) to meet the demand for liquidity. This will generate additional money for the economy. The government already borrowed substantial amounts from banking sectors, whereas its expenditure will increase due to the COVID-19 impact, and tax revenue collection will be reduced. So, inflationary pressure on the economy is worth noting after the crisis. In the current fiscal year, the policymaker has given the facility to some habitual defaulters. Most of the willful defaulters have a beneficial relationship either with banks owner or political connections. So, the disbursement of these funds to the coronavirus-affected business is erratic without monitoring the central banks. Priority was given to the wrong place, like carrying coal to the new castle!

The researcher tried to unfold whatnot in the stimulus packages instead of what is there. In this unprecedented situation- the priority of the economy must be recognized. The government of Bangladesh overlooked the collapse of the supply chain of perishable goods and aggregate demand. Unemployment in the informal sector is an enormous issue in this economic crisis. In order to eliminate joblessness in the informal sector, various supporting packages should be taken by the government as like food for work. Some countries designed their stimulus package to provide emergency cash support. We do not see anything about it on the packages. If you want to boost the domestic economy, direct financial assistance is required. At the moment, the domestic economy needs to be stimulated because we do not have control over the world economy and know when the crisis will end. The local production-based economy has to be implemented first, which will take the national economy forward. The industry of perishable goods like vegetables, milk, fish, and poultry must be protected. For which a separate incentive must be taken; otherwise, the crisis will be multidimensional within few months.

Limitations: The researcher has to rely on the nethnography and content of mainstream electronic media instead of field observation and face-to-face interviews of experts. Due to the protocol of social distancing, it was nearly impossible in this COVID-19 pandemic situation.

5. Conclusion and Recommendations

Coronavirus has forced us to rethink socialization. The world does not have had to go through such an experience in the past. People are under self-isolation with the fear, disbelieve, and insecurity of life. After the end of the pandemic, people may have to undergo this bitter mental panic. Economic stagnation, the perplexity of information, and ambiguity about the discovery of vaccines have multiplied the crisis. We have found distrust about the competency of the Institute of Epidemiology, Disease Control and Research (IEDCR). Anxious people have faced the horrible experience of getting a telephone connection provided by IEDCR while being able to test COVID-19 is like a blessing. People think that if they get infected, they will not get the opportunity to be admitted to the hospital and also will not get proper treatment. So that most of them have bought and stocked the medicine used on common flu. Researchers also revealed that- guidelines of the World Health Organization (WHO) are translated without considering the context of the economic and cultural diversity of Bangladesh, which created ambiguity and misinformation. For example- mass people never heard the word “Quarantine” before this pandemic.

Financial stimulus packages declared by the government of Bangladesh must be praised as an immediate response to the economic crisis. However, in this imminent crisis, it overlooked supply chain and logistic disruption to the secure agriculture sector, fall of aggregate demand of perishable goods, unemployment in the informal sectors, health care logistic crisis, and food security. That is, turn out not being able to understand the priority of the line of crisis policy and the policy of recession. Pandemic or epidemics cannot be tackled with medical science alone. Physicians, public health professionals, geneticists, and virologists are needed to control this pandemic. Of course, sociologists and economist also needed because it has both social and economic implications too. No concerted effort was made by the state to deal with the COVID-19 pandemic. Most importantly, if people are not involved in it, it will not be possible to deal with the pandemic.

To prevent and mitigate the spread of COVID-19, and also minimize economic loss, researcher and experts are given few suggestions which are listed below-

- The government must ensure personal protective equipment (PPE) and other protective measures for health workers.
- Provide immediate funding to health systems to deal with the pandemic.
- Acquire and declaring more private hospitals as a dedicated COVID-19 specialized hospital.
- Acquiring residential hotels for the mandatory isolation of the returnee expatriates.
- Spread prevention strategies should be taken to most populated areas that are more prone to disease.
- Private hospitals are reluctant to give the treatment of suspected COVID-19 patients. Make sure that-COVID-19 unit of each hospital must be separated and other common patients need to be treated according to their priorities.
- To minimize economic loss of lockdown, policy should be taken to encourage sanitization, social distancing, and wearing masks mandatory by the law enforcement agency
- Ensure rationing system for the economically vulnerable people.
- Make sure training of coping strategy with mental stress due to COVID-19
- Stop stigmatization by society and government authority.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 13, No. 2, April 2021 (ISSN 2220-6140)

Meta-Analysis of Seven Standard Experimental Paradigms Comparing Student to Non-student Populations

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Abstract: This study embarked on the very challenging proposition of systematically organizing and classifying an assortment of experimental economics essays pertinent to seven experiments performed with both non-student and student populations. The experiments were the Dictator game, Stag Hunt – Coordination game, Risk Aversion Measurement (as measured by the players type of lottery choice), Trust game, Guessing game, Prudence Measurement, and the Guessing game. This meta-analysis reviewed 126 published and unpublished papers collected from several journals and papers provided by several authors via the Google Groups "Economic Science Association - Experimental Methods Discussion" group. Ultimately, only 39 studies were utilized due to methodological alignment. While some studies showed statistically significant differences between non-students and students as indicated by their respective 95% confidence intervals, the overall random-effects model of each of the seven games showed not to be statistically significant. This study contributes to the literature in three important ways. First, the study generates a comprehensive inventory and review of experiments comparing student to non-student populations for the last four decades; second, the study points out a possible limitation when combining several studies of the same game, despite following similar protocols, suggesting that compounded contextual complexities might diminish aggregate effects of the individuals' behavioral responses to the financial incentives, and third, the study indicates that generalizations from one experimental economic study, may not render a solid base for extending statistical extrapolations applicable to the total population since the aggregate effects do not indicate substantial differences.

Keywords: *Experimental Economics, Economic Attitudes, Financial Decisions, Welfare, Game Theory.*

1. Introduction

A meta-analysis is an explanatory method utilized to summarize quantitative data derived from numerous distinctive research inquiries. The main goal of conducting a meta-analysis is to measure the degree of effect of the exogenous variable on the endogenous variable. Generally speaking, a meta-analysis employs statistical findings from each independent research as the units of estimation in all-inclusive research. These findings are aggregated by effect size or mean differences to obtain an estimated size of the effect (Becker, 1986). The contribution of the meta-analysis pivots on the fact that the indices of effect magnitude are scale-free. The scale-free index of an effect magnitude makes it possible to combine the findings of studies that follow the same guidelines of implementation. The meta-analysis was performed utilizing the most recent version of Medcalc form 18.9 (http://www.medcalc.org; 2018). In this study, the effects of group type (students versus non-students) on outcomes of each of the seven different experimental tasks, as indicated by the results of individual studies, were examined to determine the size of the overall effect. Heterogeneity between studies is assessed by Q and I^2 tests (Li et al., 2015). Q is considered a conventional measure of heterogeneity, called Cochran's Q, which is calculated as the weighted sum of squared differences between each study effect and the pooled effect across studies, with the weights being those used in the pooling method. The I^2 statistic describes the percentage of disparity among research studies that is due to heterogeneity rather than chance[1].

[1]In meta-analysis, the regular way of evaluating whether a set of single research studies are homogeneous is by means of the Q test. The Q test let us know about the existence of heterogeneity, but it does not inform us on the degree of such heterogeneity. In the last few years, the I^2 index has been interpret as measuring the degree of heterogeneity in a meta-analysis. In this paper, the Q test and the confidence interval around the I^2 index of all collected studies are compared by using the mean of the Monte Carlo simulation. The calculation indicates the utility of the I^2 index complementing the information provided by the Q test (Huedo-Medina Et all, 2006).

Heterogeneity is defined as significant when $p < 0.05$ in Q statistics and $I^2 > 40\%$ (Graziani, 2014). The results of the meta-analysis will be presented as a weighted mean difference and 95% confidence interval, with a significance level $\alpha = 0.05$. The data of each study and meta-analysis will be summarized with Forest plots. Additionally, due to the multiple types of estimates reported in each study, it was necessary to perform a generic inverse-variance approach to the meta-analysis. The inverse variance method focuses on the weight given to each study that is chosen to be the inverse of the variance of the effect estimate (i.e., one over the square of its standard error). In other words, the larger the research studies with smaller standard errors, are allocated more weight than smaller research studies, which have larger standard errors. It is well known that the student population is convenient due to relatively easy access by professors and flexible schedules while the general population may experience long commuting distances and rigid working schedules. Conducting this meta-analysis was very important due to the strong dependence on the student population recruited for social experimentation by economists and other social scientists. It is important to illustrate that scientific generalizations derived from experimental economic games may lead to challenges when attempting to develop a better understanding of the general population's financial decision-making and behavioral responses.

2. Criteria for Study Selection (Inclusion Criteria)

The inventory and analysis of papers to be considered for this study followed a rigorous and comprehensive selection process that is described in this section. As per Hedges and Becker (1986), there are three main requirements for any paper to be able to be included as a part of a meta-analysis. The first requirement is for the studies' methodology and calculations to follow similar guidelines, the second requirement asks for the studies to be independent, and the third condition requires that the studies must measure the same statistical parameters. Furthermore, the researchers sought additional characteristics, first, the researcher requested that all studies follow the same framing and game design; second, for all studies to compare students to non-student populations; Third, all studies must have included the specific dependent variables to be measured for each of the seven games. Fourth, all studies had to have adequate statistical data that would allow for the calculation of the effect size. For those studies that conducted descriptive analyses, necessary statistics for the transformations into effect sizes would include means and standard deviations. For studies that used inferential statistics, the appropriate transformation equations were applied, such as the conversion of regression coeffects to t statistics by utilizing its standard error.

3. Methodology

Experimental studies in economics are traditionally conducted using undergraduate students as subjects. A longstanding methodological question has been to what extent the results reported from this subset of the population generalize to different societal groups. This meta-analysis reviewed 126 published and unpublished papers collected through a comprehensive identification process from several journals and papers provided by several authors via the Google Groups "Economic Science Association - Experimental Methods Discussion" group. Ultimately, the list was narrowed down to only 39 studies due to methodological alignment in terms of utilizing representative samples of student versus non-student populations, same experimental economics' protocols (number of experiment rounds), and reasonable incentives to participate (financial compensation). The sample size varies from study to study; nevertheless, the study only included studies with a random sample selection rather than samples of convenience. The 39 studies represent all studies available that meet the minimum requirements to be included in this meta-analysis.

Dictator Game: The first game to be examined is the Dictator game. In the dictator game, the first player, "the dictator", determines how to split an endowment (such as a cash prize) between themselves and the second player (Andreoni et al., 2008). The dictator's action space is complete and therefore is at their own will to determine the division, which means that the recipient has no influence over the outcome of the game (Engel, 2011). In the meta-analysis, seven studies compared the observed donations of students to non-students. Table 1 below shows the results of the seven studies which compared students with non-students. Bekkers (2007) conducted a field study using a modification of the dictator game in a large random sample survey in the Netherlands (n=1,964). The amount of money earned with survey participation was included as a measure of the stakes in the donation decision.

Stakes varied from $7.5 to $13.75 and were $11 on average. Beramendi (2016) conducted lab experiments at the experimental lab with 66 University of Oxford students from the subject pool. Subjects were asked to allocate an endowment of 1000 ECUs between them and another randomly selected participant in the room. Participants were informed that only half of them would receive the endowment, and the ones who received the endowment would be randomly paired with those who didn't. In a study conducted by Cappelen et al. (2014, 2015), they compared the lab behavior of a student group and a non-student group, where the non-student group on all observable factors was almost identical to the representative adult population in Norway. Carpenter (2005) conducted a study co in field settings with naturally occurring variation in "social framing." The study compared the choices of subject managers drawn from a standard undergraduate population with subject managers drawn from the executive MBA (EMBA) program at Case's Weatherhead School of Management. In a study conducted by Charness et al. (2007), they explored the effects of social distance in experiments conducted over the Internet on three continents, in-classroom laboratory sessions conducted in Israel and Spain, and in computer sessions pairing participants from different states.

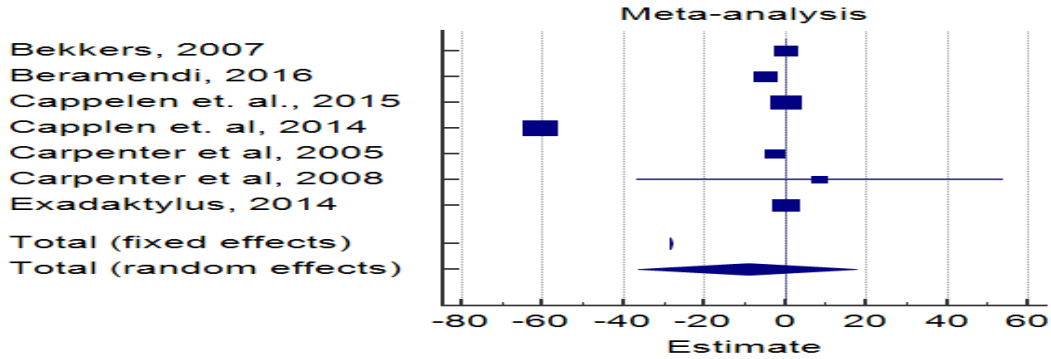
Participants were students at Middlebury College, nontraditional students at Kansas City Kansas Community College (KCKCC), and employees at a Kansas City distribution center. The stake in the dictator game was $100. Exadaktylos (2013) conducted a study in Spain with A total of 835 individuals participating in the experiment. One out of ten participants was randomly selected to be paid. The average earnings among winners, including those winning nothing (18.75%), were €9.60. Bekkers (2007), Beramendi (2016), Cappelen et al. (2014, 2015), Carpenter (2005), and Exadaktylos (2013) all found significant differences in mean donations between students and non-students 95% confidence intervals for the difference (non-students – students) estimates are reported in Table 1 below. Non-students on average gave significantly more donations than students in each study. However, for donations, the total random effect model was not statistically significant, t = -9.972, SE = 13.977, 95% CI [-37.367, 17.422], p =0.476. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity, Q = 7278014.82, p < .001, I^2 = 100.00%. The Forest plot can be found below (figure 1). The meta-analysis found no overall statistically significant differences in the amount of donations given by students and non-students.

Table 1: Meta-Analysis Results for Dictator Game Comparing Non-Students to Students

Study	Estimate*	Standard Error	95% CI	z	P	Weight (%)		N
						Fixed	Random	
Bekkers, 2007	0.35	0.04	0.278 to 0.424			8.94	14.90	1964
Beramendi, 2016	-4.73	0.04	-4.809 to -4.648			7.31	14.90	585
Cappelen et al. 2015	2.27	0.02	2.230 to 2.316			25.27	14.90	354
Capplen et al. 2014	-60.47	0.02	-60.500 to -60.436			46.04	14.90	254
Carpenter et al. 2005	-2.73	0.16	-3.043 to -2.424			0.49	14.90	63
Carpenter et al. 2008	0.37	23.12	-44.945 to 45.686			0.00	10.59	488
Exadaktylos, 2013	-1.88	0.03	-1.938 to -1.812			11.95	14.90	765
Total (fixed effects)	-27.82	0.01	-27.839 to -27.796	-2515.124	<0.001	100.00	100.00	4473
Total (random effects)	-9.97	13.98	-37.367 to 17.422	-0.714	0.476	100.00	100.00	4473

* Estimate was based on t statistic from the study.

Figure 1: Forrest Plot of Meta-Analysis for Dictator Game



Stag Hunt – Coordination Game: The second game in the meta-analysis was the Stag Hunt - Coordination game. The stag hunt is a game that describes a conflict between safety and social cooperation. In the meta-analysis, four studies compared the amount of coordination between non-students and students. Cooper (2005) conducted a study that set experiments in a corporate environment where a manager attempts to overcome a history of coordination failure by employees using either financial incentives or communication. Montmarquette et al. (2004), investigated the relationship between executive pay and performance after a merger by dissociating the respective influence of shifts, which occur in both compensation incentives and team composition. They experimented with professional farm apprentice students as well as with generic university students. Ferré et al. (2017), designed an experiment to study incentives for the adoption of more sustainable land management practices using a modified coordination game.

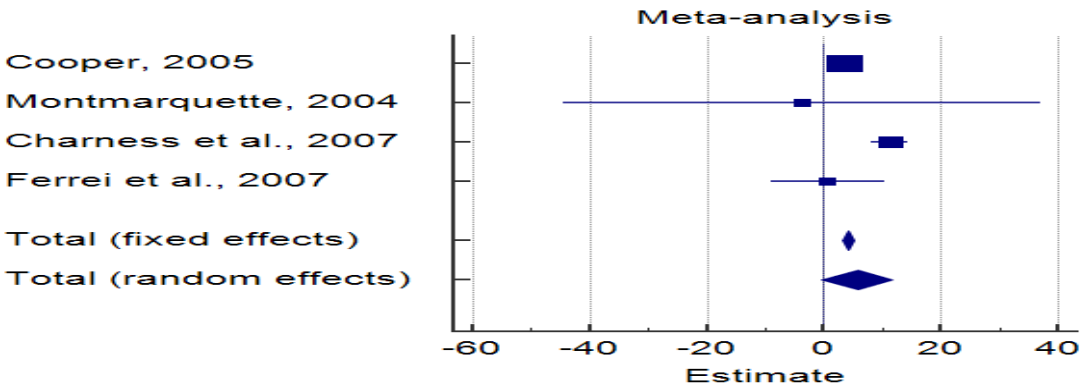
In one treatment, the experiment is highly contextualized and characterizes the situation of farmers and the cultivation of their land, while the other treatment uses abstract and context-free wording. The game was played between students and professionals. Table 1 below shows the results of the four studies. Cooper (2005, 2006) and Charness et al. (2007) found statistically significant differences in coordination between non-students and students with non-students showing more coordination than students as indicated by the positive values of the 95% confidence intervals. For coordination, the total random effect model was not statistically significant, t = 5.658, SE = 3.145, 95% CI [-0.506, 11.822], p = 0.072. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity, Q = 21.522, p = 0001, I^2 = 86.06%. The Forest plot can be found below (figure 2). The meta-analysis found no overall statistically significant differences in coordination between students and non-students.

Table 2: Meta-Analysis Results for Stag Hunt Game Comparing Non-Students to Students

Study	Estimate*	Standard Error	95% CI	Z	P	Weight (%)		N
						Fixed	Random	
Cooper, 2005	3.51	0.53	2.49 to 4.55			89.46	40.51	743
Montmarquette, 2004	-3.77	20.82	-44.58 to 37.04			0.057	2.16	1440
Charness et al. 2007	11.30	1.62	8.13 to 14.48			9.47	36.96	128
Ferré et al. 2017	0.67	4.94	-9.01 to 10.36			1.02	20.37	222
Total (fixed effects)	4.22	0.50	3.25 to 5.20	8.475	<0.001	100.00	100.00	2533
Total (random effects)	5.66	3.15	-0.56 to 11.82	1.799	0.072	100.00	100.00	2533

* Estimate was based on t statistic from the study.

Figure 2: Forrest Plot of Meta-Analysis for Stag Hunt



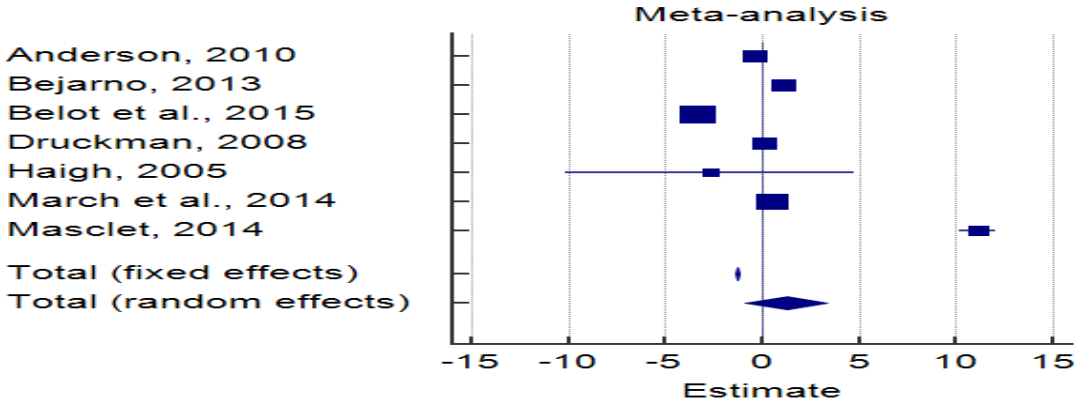
Risk Aversion Measurement: The third game in the meta-analysis was the lottery game which compared risk aversion between students and non-students in seven studies. All studies measured risk aversion by the player type of lottery choice. Table 3 below shows the results of the seven studies. Andsersen (2010), Bejerno (2013), Belot (2015, 2010), March (2014), and Masclet (2009) found statistically significant differences in risk assessment between non-students and students. For risk assessment, the total random effect model was not statistically significant, t = 1.247, SE = 1.085, 95% CI [-0.877, 3.371]. The Trust Game, designed by Berg et al. (1995) and otherwise called "the investment game," is the experiment of choice to measure trust in economic decisions. Anderson (2013) conducted a study that measured trust in samples from three related populations in the upper Midwest of the United States: college students, non-student adults from the community surrounding the college, and adult trainee truckers in a residential training program. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity, Q = 2333.16, $p < 0.0001$, I^2 = 99.74%. The Forest plot can be found below (figure 3). The meta-analysis found no overall statistically significant differences in risk aversion between students and non-students.

Table 3: Meta-Analysis Results for the Risk Aversion Game Comparing Non-Students to Students

Study	Estimate*	Standard Error	95% CI	Z	P	Weight (%) Fixed	Weight (%) Random	N
Andersen, 2010	-0.40	0.15	-0.69 to -0.10			9.63	15.83	44 254
Bejarano, 2013	1.10	0.17	0.76 to 1.43			7.49	15.81	28
Belot et al. 2015	-3.31	0.07	-3.44 to -3.18			48.29	15.87	200
Druckman, 2008	0.062	0.16	-0.25 to 0.37			8.47	15.82	214
Haigh, 2005	-2.71	3.80	-10.16 to 4.74			0.015	5.38	1062
March et al. 2014	0.52	0.09	0.34 to 0.71			25.06	15.86	3702
Masclet, 2009	11.10	0.46	10.20 to 12.00			1.04	15.44	144
Total (fixed effects)	-1.30	0.05	-1.39 to -1.21	-28.002	<0.001	100.00	100.00	5604
Total (random effects)	1.24	1.08	-0.877 to 3.371	1.151	0.250	100.00	100.00	5604

* Estimate was based on t statistic from the study.

Figure 3: Forrest Plot of Meta-Analysis for Lottery Game



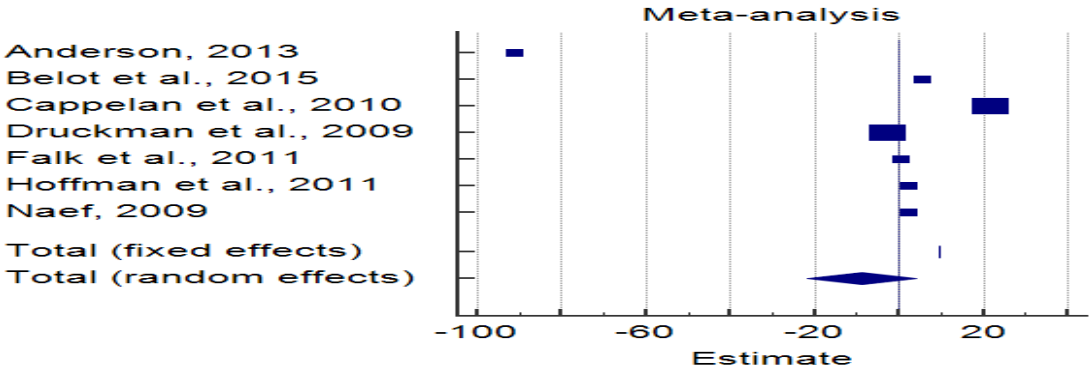
The Trust Game: The fourth game in the meta-analysis was the trust game which measured the amount of trust between students and non-students in seven studies. Belot (2015) in Oxford compared the behavior of students and non-students in the Trust Game. Cappelan (2010) compared student to non-student groups in Norway. Belot (2015) conducted a study in Oxford comparing students with non-students. Druckman (2008) recruited participants from a large, public university in the United States and the surrounding urban community and a substantial number of non-students. Hoffman (2011), conducted a battery of social preference experiments on business people from internet industries as well as on Berkeley students. Table 4 below shows the results of the seven studies. Andserson (2013), Belot (2015), Cappelan (2010), Druckman (2008), Hoffman (2011), and Naef (2009) found statistically significant differences in levels of trust between non-students and students. However, the total random effect model was not statistically significant, t = -8.844, SE = 6.537, 95% CI [--21.657 to 3.970], p = 0.176. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity, $p < 0.0001$, I^2 = 100.00%. The meta-analysis found no overall statistically significant differences in trust between students and non-students. The Forest plot can be found below (figure 4).

Table 4: Meta-Analysis Results for Trust Game Comparing Non-Students to Students

Study	Estimate*	Standard Error	95% CI	z	P	Weight (%)		
						Fixed	Random	N
Anderson, 2013	-91.02	0.32	-91.65 to -90.38			0.0077	14.29	192
Belot et al. 2015	5.40	0.08	5.25 to 5.55			0.14	14.29	128
Cappelan et al. 2010	21.69	0.004	21.68 to 21.70			49.89	14.29	254
Druckman et al. 2008	-2.77	0.004	-2.78 to -2.77			49.89	14.29	200
Falk et al. 2013	0.48	0.61	-0.70 to 1.69			0.0021	14.27	652
Hoffman et al. 2011	2.16	0.11	1.95 to 2.38			0.067	14.29	95
Naef, 2009	2.13	0.57	1.02 to 3.26			0.0025	14.28	193
Total (fixed effects)	9.44	0.003	9.43 to 9.45	3341.505	<0.001	100.00	100.00	1714
Total (random effects)	-8.84	6.54	-21.66 to 3.97	-1.353	0.176	100.00	100.00	1714

* Estimate was based on t statistic from the study.

Figure 4: Forrest Plot of Meta-Analysis for Trust Game



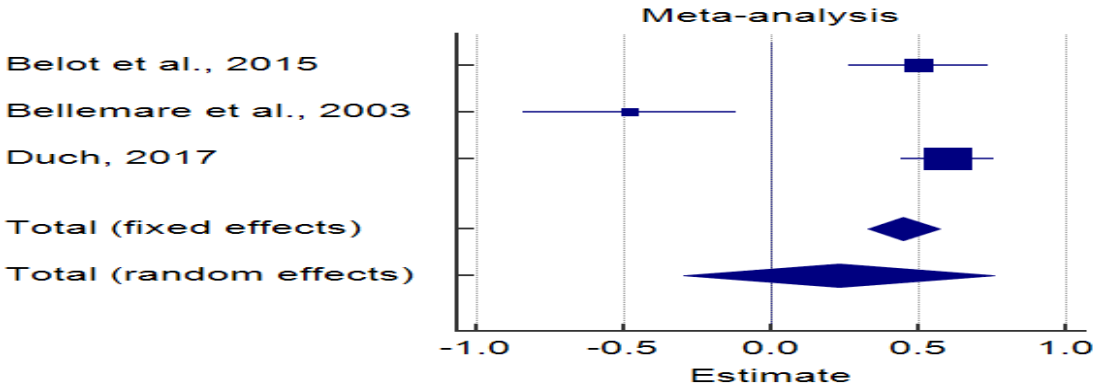
The Guessing Game: The Guessing game (also known as the beauty contest game) was the fifth game to be investigated. In the guessing game, participants are asked to pick a number between 0 and 100, with the winner of the contest being the participant that is closest to 2/3 times the average number picked of all participants. Measured societal trust and trustworthiness by combining the virtues of laboratory experiments and survey data using a representative sample of the Dutch population. Duch (2017) conducted studies in experimental labs in Oxford, Santiago, Chile, and Pune, India to compare the behavior of students and non-students. Table 5 below shows the results of the three studies. Belot, Bellemare, and Duch found statistically significant differences in levels of correct guesses, as defined by the individual guessing the closest to 2/3 times the average, between non-students and students. However, the total random effect model was not statistically significant, t = 0.231, SE = 0.268, 95% CI [-0.293 to 0.756], p =.387. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity Q = 29.014, p < 0.0001, I^2 = 93.11%. The meta-analysis found no overall statistically significant differences in the number of correct guesses between students and non-students. The Forest plot can be found below (figure 5).

Table 5: Meta-Analysis Results for the Guessing Game Comparing Non-Students to Students

Study	Estimate*	Stand. Error	95% CI	z	P	Weight (%)		N
						Fixed	Random	
Belot et al. 2015	0.50	0.12	0.26 to 0.74			27.24	33.86	502
Bellemare et al. 2003	-0.48	0.16	-0.84 to -0.12			11.46	30.96	126
Duch, 2017	0.60	0.08	0.44 to 0.76			61.30	35.19	128
Total (fixed effects)	0.45	0.063	0.33 to 0.57	7.166	<0.001	100.00	100.00	756
Total (random effects)	0.23	0.27	-0.29 to 0.76	0.865	0.387	100.00	100.00	756

* Estimate was based on t statistic from the study.

Figure 5: Forrest Plot of Meta-Analysis for Guessing Game



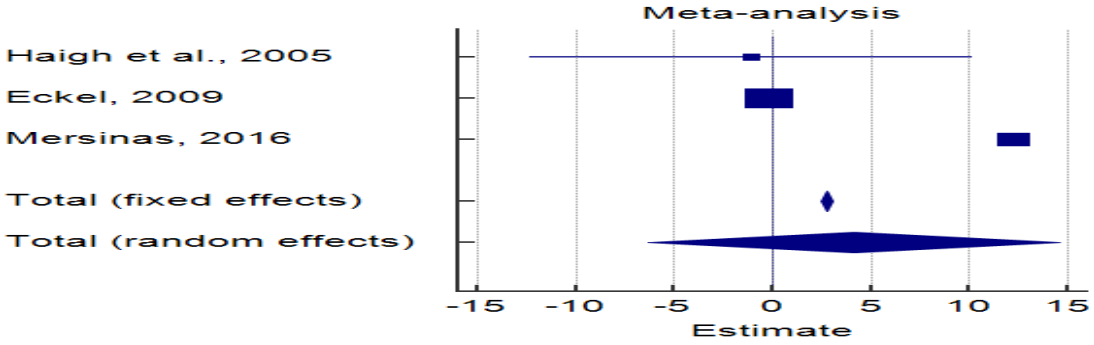
The Prudence task - The Pair-wise Lottery game was the sixth game analyzed in this meta-analysis utilizing three, studies. Haigh (2005) compared both students and non-students, specifically Chicago Board of Trade (CBOT) professional traders and undergraduate students. Grossman (2009) conducted a study in the SCSU Department of Economics Research and Teaching Laboratory. Subjects were recruited by email and posters to participate in a three-part experiment and participation was on a first-come, first-served basis, comparing students and non-students. Mersinas (2016) conducted an experiment with two different samples. The sample of information security professionals was drawn from previous students of the distance learning MSc in Information Security at Royal Holloway, University of London. The student sample was drawn from individuals registered in the database of the Laboratory for Decision Making and Economic Research at RHUL. Table 6 below provides the results of three studies in the analysis. Of the three studies, only Mersinas (2016) found statistically significant findings. However, the total random effect model was not statistically significant, t = 4.163, SE = 5.342, 95% CI [-6.307 to 14.633], p = 0.436. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity Q = 1648.61, p < 0.0001, I^2 = 99.88%. The meta-analysis found no overall statistically significant differences in prudence between students and non-students. The Forest plot can be found below (figure 6).

Table 6: Meta-Analysis Results for the Pair-Wise Lottery Game Comparing Non-Students to Students

Study	Estimate*	Stand Error	95% CI	z	P	Weight (%)		
						Fixed	Random	N
Haigh et al. 2005	-1.06	5.73	-12.29 to 10.17			0.052	25.96	118
Grossman, 2009	-0.22	0.15	-0.51 to 0.074			75.97	37.03	93
Mersinas, 2016	12.21	0.26	11.69 to 12.73			23.98	37.01	118
Total (fixed effects)	2.76	0.13	2.50 to 3.01	21.116	<0.001	100.00	100.00	329
Total (random effects)	4.16	5.34	-6.30 to 14.63	0.779	0.436	100.00	100.00	329

* Estimate was based on t statistic from the study.

Figure 6: Forrest Plot of Meta-Analysis for Pair-Wise Lottery Game



The Ultimatum Game: The Ultimatum game was the seventh game analyzed in this meta-analysis. This meta-analysis combined the results of eight studies which compared minimum accepted offer between students and non-students. Burks (2005) conducted a study in which participants were students at Middlebury College, non-traditional students at Kansas City Kansas Community College (KCKCC), and employees at a Kansas City distribution center. Exadaktylos (2013) conducted a study in which employed data from a survey experiment conducted with a representative sample of a U.S city's population. They reported behavioral data for the ultimatum game which included students and non-students as well as volunteers and non-volunteers. Fu (2007) conducted an experiment on ultimatum games with subjects who were representative of Tawain. The focus was on the size effect of monetary stakes when experimental subjects are "real" people rather than students as in previous studies. These results were compared with the student sample. Güth (2002) conducted a study in which readers of the German weekly, *Die Zeit*, participated in a three-person bargaining experiment. In the data analysis, they focused on student behavior as well as the non-student population.

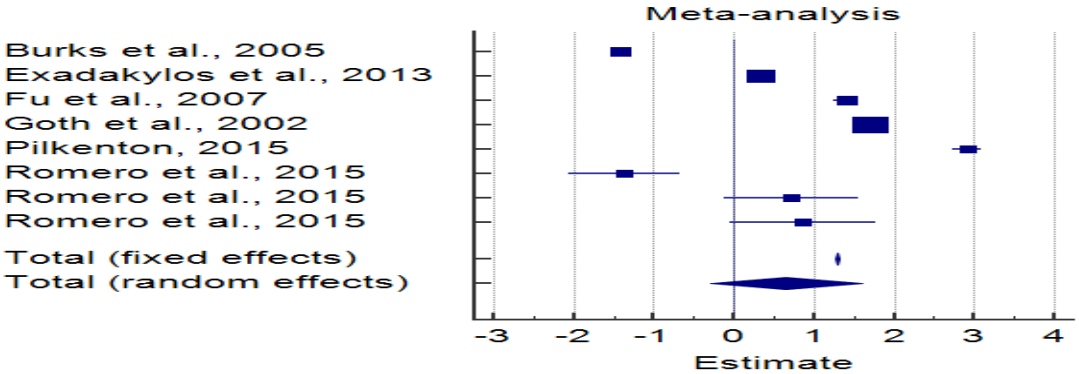
Pilkenton (2015) studied data that was collected over two weeks in two different locations in Davidson, NC– the Davidson Farmers' Market and on-campus at Davidson College. Romero (2015) conducted a study in which the main ethnic groups studied were: Mestizos, Indigenous, Montubios, and African-Ecuadorians. They worked with the standard subject, college students and non-standard subjects, villagers. Table 7 provides a summary of each study in the analysis. Exadaktylos (2013), Fu (2007), Güth (2002), Pilkenton (2015), and Romero (2015) found statistically significant results between non-students and students. Non-students tended to accept a larger minimum offer than students. However, the total random effect model was not statistically significant, t = 0.653, SE = 0.484, 95% CI [-0.295 to 1.602], p = 0.177. A random-effect model was chosen because of evidence of heterogeneity based on a significant test for heterogeneity Q = 9759.66, p < 0.0001, I^2 = 99.93%. %. The meta-analysis found no overall statistically significant differences between students and non-students in terms of accepting a larger number of minimum offers. The Forest plot can be found below (figure 7).

Table 7: Meta-Analysis Results for the Ultimatum Game Comparing Non-Students to Students

Study	Estimate	Stand Error	95% CI	z	P	Weight (%)		
						Fixed	Random	N
Burks et al. 2005	-1.40	0.036	-1.48 to -1.33			5.79	12.94	48
Exadaktylos et al. 2013	0.33	0.021	0.29 to 0.37			17.01	12.94	765
Fu et al. 2007	1.40	0.081	1.23 to 1.56			1.12	12.90	276
Güth et al. 2002	1.70	0.010	1.68 to 1.72			75.02	12.94	995
Pilkenton, 2015	2.91	0.090	2.73 to 3.08			0.93	12.89	105
Romero et al. 2015	-1.37	0.35	-2.07 to -0.68			0.060	12.10	40
Romero et al. 2015	0.72	0.43	-0.12 to 1.56			0.041	11.74	38
Romero et al. 2015	0.85	0.46	-0.059 to 1.77			0.034	11.55	31
Total (fixed effects)	1.29	0.008	1.27 to 1.31	149.269	<0.001	100.00	100.00	2298
Total (random effects)	0.65	0.484	-0.29 to 1.60	1.351	0.177	100.00	100.00	2298

* Estimate was based on t statistic from the study.

Figure 7: Forrest Plot of Meta-Analysis for Ultimatum Game



4. Overall Results and Discussion

As previously stated, the meta-analysis of the 39 studies revealed that while some studies showed statistically significant results between non-students and students as indicated by their respective 95% confidence intervals, the overall random-effects model of each of the seven games showed not to be statistically significant.' With this finding, the study points out a possible limitation of aggregating several studies of each

game, despite following similar protocols, the combined random effect is not significant, suggesting that compounded contextual complexities (specific market conditions during the study, intrinsic cultural factors of the studied population, other nuances of studies, etc.) may cancel or dilute the effects or statistical significance of each study. Furthermore, the research findings suggest that generalizations from one study, may not render a solid base for extending statistical extrapolations applicable to the total population since the aggregate effects do not indicate substantial differences. One motivation for economists for conducting experimental studies is to gauge more accurately how specific populations would respond to financial incentives to economic games. The research utilizing economic games has the practical intention of learning about the decision-making process of specific populations and to potentially serve as the base for generating policies, marketing campaigns, and/or educational interventions.

For example, in 2015, several research studies were conducted on welfare recipients in Miami to learn more about their respective financial decision as a guide to promoting policies supporting self-sufficiency. Putting into context the findings of the meta-analysis of the seven games, we can conclude that the inferences derived from the study on the economic attitudes and financial decisions among welfare recipients in Miami[2], may not be appropriate for other populations around the nation. The Miami study conducted the very same economic games and compared the results to the student population. This specific study did not find any statistical significance between these two groups, meaning that students and non-students (welfare recipients) exhibited similar responses, attitudes, and behaviors when playing the seven games. The researcher of this paper found a great level of support and encouragement from the Google Groups "Economic Science Association - Experimental Methods Discussion" group played a key role in reaching out locally and internationally which rendered a few studies to include in our research. Additionally, the main editor of the Economic Science Association (ESA) journal reached out to its worldwide members to request papers that aligned with our research initiative.

5. Conclusion and Recommendations

The first conclusion of our meta-analysis illustrates that there is not a definitive claim for establishing aggregated correlational behaviors when comparing experimental studies that include students and non-student populations. Having shared this information, we can argue that an important perspective to consider is the need for a larger sample of scientific essays to be included in subsequent meta-studies focusing on this topic. Future meta-analyses should be conducted with a larger number of studies in order to increase the statistical power of the Q test which measures the amount of heterogeneity of the studies. In this way, a more accurate estimate of the true effect size of the combined studies may be obtained. At the time of the collection and analysis of this paper, there was no other research to be incorporated; perhaps, essays on other languages should be considered. The second conclusion of this study arrives is that researchers need to take into account the limitations of combining and aggregating results from different populations at different locations; experiencing different factors at different times, framing and cultural differences, etc (Druckman, 2011 and Laban, 2017).

Although meta-analysis studies could contain flawed data analysis is emerging and passed on to researchers as “updated evidence” (Li et al., 2015). Using this kind of evidence that contains heterogeneous data sets leads to wrong conclusions. Researchers need to be sensitive to the fact that some papers may contain data that did not follow rigorous and comprehensive collection and tabulation processes. Due to this limitation, generalization derived from one specific study following a specific context could not be utilized in the crafting of government policies, marketing campaigns, and/or programmatic interventions. ESA should provide incentives to researchers to engage in further research that includes both students and non-student groups in the hopes of generating a much more comprehensive inventory of studies to conduct a future meta-analysis. Economic Science has become highly dependent on experimental methods to validate and augment principles

[2] Zumaeta, Jorge N., Economic Attitudes and Financial Decisions Among Welfare Recipients: Rationality and Risk Aversion, March 2020. (Pending Publication).

and theories. It is in the best interest of science that professional economic associations should incentivize further research in this area.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 13, No. 2, April 2021 (ISSN 2220-6140)

Integrating Approach to Build Customer Experiences: Lessons Learned from Mobile Customers in Ghana

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Abstract: Delivering a great customer experience is of paramount importance for any organization. The better experience customers have regarding the organization's products, or brands, the more repeat purchases and positive reviews they will receive. This paper explores the mobile mix as an integrated approach to facilitate a positive customer experience. A total of 415 respondents were selected and completed the survey through stratification and convenient sampling from10 regions. The study adopted a positivistic paradigm and followed a quantitative research approach. The SPSS Amos 25 was utilized to analyze the collected data. The empirical results revealed that the mobile service mix has a significant positive influence and relationship with customer experiences. This paper provides relevant and practical recommendations that could increase positive customer experiences in the mobile industry.

Keywords: *Experiential marketing, Customer experience, Mobile mix, Experiential mix, Mobile network operators, Ghana.*

1. Introduction and Background

According to Schmitt (1999a), experiential marketers observe that customers are rational and emotional human beings primarily concerned about realizing pleasurable experiences. Customer experience (CX) consists of the dimensions of sense, feel, think, act and relate (Wibowo et al., 2021; Schmitt, 2010). The sense experience is connected with the senses and the experiences of customers through seeing, hearing, touching, tasting, and smelling (Conti & Peachlivanidou, 2016; Wibowoet al., 2021). According to Schmitt (1999a) and Conti and Peachlivanidou (2016), the sense experience relates to the customer's sensory experiences, feel is the affective experiences and the creative cognitive experience is the think dimension. The physical experiences, behaviors and lifestyles of the customers constitute the act dimension. The social identity experiences resulting from relating to a reference group or culture refer to the related experience dimension (Gita, 2017; Ananta, 2016). In the context of this paper, customer experiences involve feelings and thoughts with regard to the rational, emotional, sensorial, physical and spiritual relations customers encounter with the people, processes and physical evidence of an organization. On the other hand, it refers to an organization's ability to create a sensory experience (sense), affective experience (feel), creative cognitive experience (think), physical experience, behavior and lifestyles (act) and social identity (relate). Effective and efficient implementation of customer experience programs could enable an organization to increase long-term sales and profit (Cuellar, Eyler & Fanti, 2015).

The better experience customers have the more repeat purchases and positive reviews organizations receive, while at the same time reducing the friction of customer complaints and returns (Morgan, 2017). Customer experience is the defining competitive differentiator for organizations (Keiningham et al., 2020; Duncan, 2017). The customer experience concept has been applied and employed in several fields, including hospitality, online shopping, country branding and the airline industry (e.g. Conti & Pechlivanidou, 2016; Grundey, 2008). However, little is known and there are no best approaches to building these experiences especially in the context of the mobile industry. Customer experience is being considered by researchers and marketers as alternative solutions to traditional marketing for achieving best results and organizational lifetime value (Shukla, 2007; Schmitt, 1999b). According to Danquah (2018), the limited emphasis placed on customer experience by organizations has denied them value for money. The lack of ideas in the creation of a positive customer experience is challenging a gap that needs to be solved to achieve the organization's objectives. In addressing this gap, research needed to be conducted to assist organizations to build a positive customer experience for a sustainable operation. A literature review is provided on customer experience, followed by a review on the mobile mix elements, and how to integrate it to build a positive customer experience. Next, the research methodology employed is discussed, whereafter the results are presented. Implications are presented and the paper concludes with recommendations for future research.

2. Literature Review

Customer Experience: According to Kalbach (2016), experience as a term has no precise definition as it is holistic, personal and situational and could be positive or negative. The concept of experiences is defined from different perspectives. For instance, Sundbo and Darmer (2008) refer to it as a mental journey that provides customers with memories of having performed something special, having learned something, or having just had fun. The experience involves a customer's engagement in an activity that facilitates expectations and results in something memorable (Wibowoet al., 2021; Adhikari & Bhattacharya, 2016). Experience functions as customers' personal source of information for the stories regarding their lives and are paramount for their self-perception (De Keyser et al., 2020; Mehmetoglu & Engen, 2011). Customer experience (CX) involves the actions, thoughts and feelings over time, which is subjective and not objective from the perception of the individual and goes around the lenses of situations and circumstances (Kalbach 2016). According to Adhikari and Bhattacharya (2016), customer experience refers to the customers' engagement in activities that produce expectations and facilitates a memorable experience. Customer experience programs enable organizations to stimulate and facilitate customers' feelings of deep emotion towards marketed products/services/brands (Gao et al., 2021). Customer experience also enables organizations to market products or services to customers (Bricci, Fragata & Antunes, 2016).

Customer experience consists of the dimensions of think, sense, feel, act and relate also known as experiential mix (Wibowoet al., 2021; Schmitt, 1999a) and experiential value namely, functional, emotional and social value (Farshad, Kwek & Amir, 2012). The sense experience is associated with the senses and the experiences of customers through seeing, hearing, touching, tasting, and smelling (Wibowo et al., 2021; Krishna & Schwarz, 2014). The think experience refers to creative and theoretical practices (Wibowoet al., 2021; Ananta, 2016) and the necessary intelligence that is required by an organization to create cognitive experiences and problem-solving through the creative involvement of customers (Gao et al., 2021; Alberg, 2014; Alkilani, Ling & Abzakh, 2014). The feel experience relates to customers' inner feelings and emotions towards organizations, brands, products or services (Wibowoet al., 2021; Schmitt, 1999a, 2010). It involves the customers' mood and feelings towards organizations, brands and products (Datta 2017; Yang & He, 2011). The feel experience could help an organization to provide customers with relaxation and excitement (Wibowoet al., 2021; Same, 2014). The act experience refers to the physical behaviors, lifestyles and interactions between an organization and customers (Conti & Peachlivanidou, 2016; Schmitt, 2010). It helps to explore or change customers' behavior, lifestyles and social interactions with friends and communities through business offerings to facilitate positive experiences. The related experience combines the sense, feel, think and act experience dimensions to arouse positive customer experiences (Wibowoet al., 2021; Ananta, 2016; Conti & Peachlivanidou, 2016).

Integrating Approaches to Build Customers' Experiences: Physical evidence (PE) or atmospherics involves the visual appeal and aesthetics of an organization (Amoah, 2016), as well as all non-living characteristics that exist during service encounters (Ullar & Islam, 2011). Physical evidence refers to the organization's physical environment (i.e. ambiance conditions), spatial layout and functionality and signs, symbols, and artefacts (Yiadom, 2019). The physical environment provides the right environment and setting in order to facilitate a positive customer experience (Schmitt, 1999a). The organization's buildings, spatial layout and functionality involve the layout or décor of the organization's servicescape that should be designed to impact customers' perceptions of offerings (Jauhari & Dutta, 2010). The spatial layout refers to the organization's arrangement, size and shape of machinery, equipment and furnishings, as well as the spatial relationships (Simpeh, Nasiru & Tawiah, 2011). An organization's functionality concerns the ability of equipment in an organization to improve and enhance performance (Simpeh et al., 2011).

On the other hand, corporate branding refers to the signs, symbols and artefacts which contribute to the atmospherics of an organization (Smilansky, 2009). Signs are the organization's labels utilized for directional purposes (i.e. the entrances and exits) and to communicate rules of behavior (e.g. no smoking, or no eating at the hall) (Holttinen, 2014). According to Helen, Adrian, Martin and Moira (1999), the processes in an organization enable experiential value to be created for customers. Processes refer to "the way we do things" (Helen et al., 1999). Organizations must ensure that a thorough knowledge of the business processes is gained on time (Lin, 2011). The elements of processes in the mobile service mix include technology development

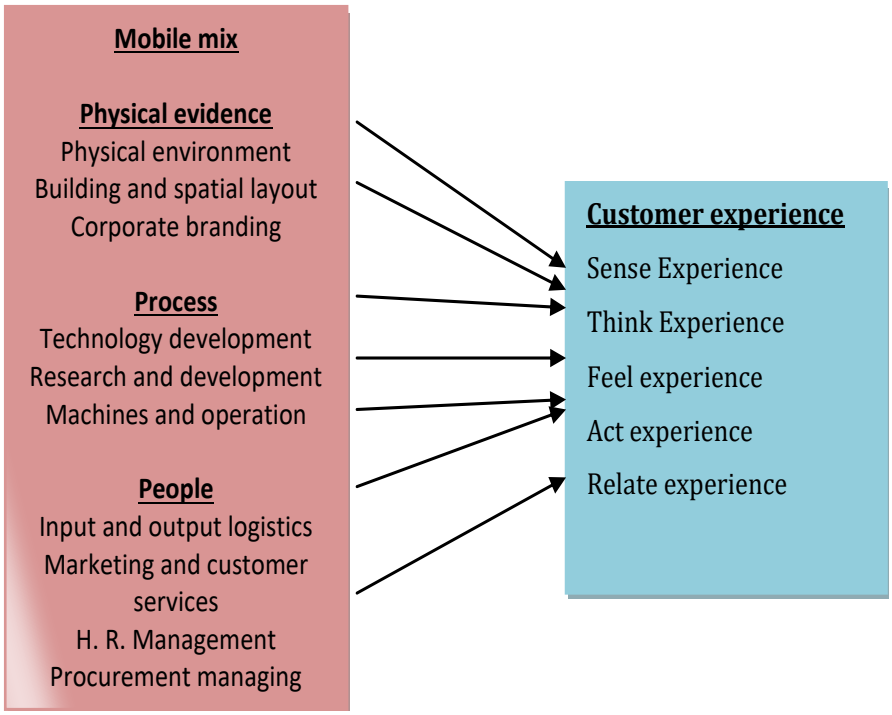
(TD), research and development (RD) and machines and operations (MO). According to Gurel, Orhan and Fazil (2014), technology in an organization is utilized in the marketing of products and services. Positive customer experience could be created if an organization uses technology to organize and disseminate experience-oriented information amongst employees (Cambra-Fierro, Gao, Melero-Polo & Trifu, 2021; Bilgihan, Cobanoglu & Collins, 2014). According to Lacoma (2018), the success of research and development does not necessarily depend on the money that organizations invest in it, but rather on the practices, talents and innovations of their employees. On the other hand, machines and operations involve all the functions, procedures and people used in the transformation of inputs to final products (Ehlers & Lazenby, 2010:123). The people mix includes input and output logistics (IOL), marketing and customer services (MCS), human resource management (HRM) and procurement managing (PM). Input and output logistics refers to how the organization receives stores and distributes inputs or raw materials for the product (inbound) (Ehlers & Lazenby, 2010). Lovelock and Wirtz (2011) explain that an organization's output or finished goods are produced in a distinct factory with properly controlled and quality check systems. According to Ehlers and Lazenby (2010), customer services, which involve the installation, repair of phones and machines and training must be offered to customers when the need arises. The employees of the organization must be perceived as adding extra and advanced talents, skills and energy to the delivery of mobile (Bounds, Mallgee, Mayhew & Van Deventer, 2011).

Primary Research Objective: Based on the variables and the hypothetical relationships indicated in Figure 1, the primary objective of this paper was to empirically test the hypothetical model and the associated hypotheses. Further, this paper explores how organizations can utilize the mobile mix (i.e. physical evidence, process and people) as an integrating approach to build memorable customer experiences.

3. Research Design and Methodology

The main aim of this paper was to determine the integrating factors that facilitate the building of positive customer experiences for organizations. Figure 1 illustrates the hypothetical model.

Figure 1: Integrated Approach to Build Customer Experience



Based on the research objectives and the hypothetical model the following hypotheses have been formulated:

H1: There is a relationship between the physical environment and customer experience
H2: There is a relationship between building and spatial layout and customer experience
H3: There is a relationship between corporate branding and customer experience
H4: There is a relationship exist between technology development and customer experience
H5: There is a relationship between research and development and customer experience
H6: There is a relationship between machines and operations and customer experience
H7: There is a relationship between input and output logistics and customer experience
H8: There is a relationship between marketing and customer service and customer experience
H9: There is a relationship between human resource management and customer experience
H10: There is a relationship between procurement and customer experience

This research utilizes a quantitative research design. A positivistic paradigm was adopted and a quantitative approach was followed. Primary data for the study was obtained through self-administered structured questionnaires administered to respondents using stratified and convenience sampling. The sampling units recognized in this study involved the mobile network customers in Ghana. This sample was confined to the total number of voice subscribers for December 2018, which has approximately 40,934,875 customers spread across all 10 regions of the country, namely Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Western, Northern, Upper West, Upper East, and Volta (National Communications Authority, 2019). To ensure the proportionality of the sample out of the total population of 40,934,875 customers, the market share of the population for the individual network operators was identified proportionally. These involved: MTN (20,092,798), Vodafone (9,606,427), Airtel (5,788,191), TIGO (4,551,958), and GLO (739,352).The calculations resulted in 49.1%, 23.5%, 13.33%, 11.93%, and 2% for MTN, Vodafone, Airtel, TIGO, and GLO, respectively. These individual samples resulted in a total of 384 participants for the survey. Additionally, using convenience sampling, a total of 31 customers at the premises of the mobile operators were added, representing a total of 415 participants. A five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) was used. The IBM's Amos Version 25 web was utilized to capture data.

4. Empirical Results and Findings

This section presents the results of the empirical investigation undertaken.

Profile of Respondents: More males (52.5%) than females (47.2%) participated in the study. The majority of the respondents were individual customers (65.3%), the rest were retailers (10.8%), agents (8.7%), wholesalers (8.4%) and others (6.7%). Most of the respondents were between the ages of 19 and 30 (51.8%), the rest were between the following ages: 31 and 40 (25.3%) 41 and 50 (17.1%), and 51 and 59 (5.8%). Also, over 94.9% of the respondents had formal and educational qualifications, with most respondents possessing a certificate/diploma/degree (43.4%) or a high school certificate (28%). The respondents mostly preferred MTN (50.4%), Vodaphone (26.7%), Airtel (12.3%), Tigo (7.3%) and then Glo (3.1%). Out of the 10 regions, the majority of the respondents were from Ashanti (27.2%), followed by Brong Ahafo (25.8%), Greater Accra (15.7%), Eastern (7%), Central (6.5%), Northern (5.1%), Western (4.3%), Upper West (3.6%), Volta (2.9%) and Upper East (1.9%).

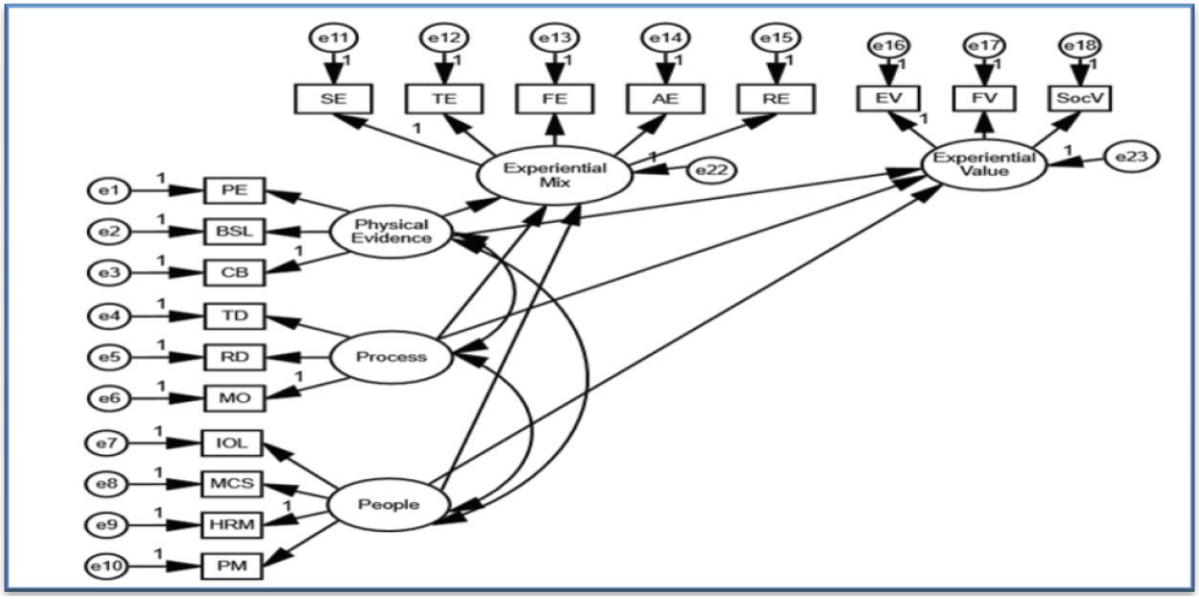
Validity and Reliability Analysis Results: A confirmatory factor analysis (CFA) was performed to test the relationship and impact between the mobile mix and customer experience (CX). For the researcher to check the influences and model fit through CFA, it must be noted that in an ideal situation, the Chi-square value should be insignificant or greater than 0.05. Also, since the Chi-square statistic and associated p-values are highly sensitive to sample size, with larger sample sizes significant p-values can be derived even if a model fits the data (Hair, Black, Babin & Anderson, 2014). In addition, the regression weights must be less than 0.05 or significant with the model fit indices depicting the following: CMIN/df<= 3, SRMR<= 0.08, CFI>= 0.95, RMSEA<= 0.08, TLI=0.9.A CFA analysis on 10 items referring to the mobile mix and CX was performed using IBM's SPSS Amos Version 25. This resulted in CMIN/df=3.049, SRMR=0.0359, CFI=0.948, RMSEA=0.07, Chi-square value insignificant at p=0.000, PGFI=0.684, TLI=0.939, and Regression weights at p=0.000. These indicate that all of the CFAs were better than the required threshold together with SEM results for the Chi-

square depicting a significant p=0.000. Therefore the model was deemed fit. It must be noted that a Cronbach alpha value of 0.90 implies that 90% of the data is reliable. According to Saunders, Lewis and Thornhill (2016), an instrument is deemed reliable if Cronbach's Alpha is at least 0.7 for the questionnaire variables. The reliability coefficients of constructs were above the 0.7 threshold which is deemed significant.

Results of the Relationship Analyses: The results of the Pearson Product Moment Correlations [PPMC] indicated positive correlations between all factors. The mobile mix and customer experience (CX) indicated a strong positive correlation relationship amongst variables in the study (r=0.816). The correlation relationship between physical evidence (PE) and CX dimensions were SE (r=0.511), TE (r=0.531), FE (r=0.524), AE (r=0.513) and RE (r=0.451). The relationship between the mobile mix element physical evidence (PE) and the entire CX dimensions resulted in a strong value of r=0.623. It must be noted that, apart from the relationship between PE and RE which indicated a moderate correlation relationship, the PE and CX variables displayed a strong positive relationship in the study. Also, the mobile mix element process and CX dimensions showed the following relationships SE (r=0.568), TE (r=0.642), FE (r=0.609), AE (r=619) and RE (r=596). Therefore, there was sufficient evidence of construct validity and inter-item reliability of the questionnaire. In totality, the mobile mix element process and CX indicated a strong positive correlation relationship (r=0.747). On the other hand, the element people in the mobile mix indicated a strong correlation relationship with the CX dimensions, with SE (r=0.639), TE (r=0.691), FE (r=0.717), AE (r=0.664), and RE (r=617).Also, a strong correlation relationship was found between the element people and CX with a value r=0.820. To justify and identify the correlation results statistically, as well as the goodness-of-fit of the model, structural equation modelling (SEM) was performed. The results for the SEM analysis indicated that the factors had a dual relation with each other and also significant. The model confirmed the goodness-of-fit with details involving CMIN/DF 3.049; SRMR 0.0359; and CFI 0.948, approximately at the required threshold of 0.95; RMSEA 0.07; PGFI 0.684; and TLI 0.939. The regression weight had a value of p=0.000 in all the hypothesized variables, and a standard scaled Chi-square (x^2) measure of p=0.000 insignificant was established. This clearly shows that the Model met the required goodness-of-fit of the datasets. Therefore, there was a strong significant relationship between the mobile mix (i.e. physical evidence, process, and people), and customer experiences.

Based on the results of the correlation and the SEM analyses, hypotheses H1-H10 were all accepted as significant relationships were found between the following: there is a positive relationship between the physical environment and CX (H1), there is a positive relationship between building and spatial layout and CX (H2), there is a positive relationship between variable corporate branding and CX (H3), there is a positive relationship between technology development and CX (H1.4), there is a positive relationship between research and development and CX (H1.5), there is a positive relationship between machines and operations and CX (H1.6), there is a positive relationship between input and output logistics and CX (H1.7), there is a positive relationship between marketing and customer service and CX (H1.8), there is a positive relationship between human resource management and CX (H1.9), and there is a positive relationship between procurement managing and CX (H1.10). The empirical results from the study revealed that amongst the variables considered to have a positive influence on the experience of mobile network customers, with regards to the mobile mix elements, the building and spatial layout and physical environment in the physical evidence components were ranked highest with an estimate of 1.162, p=0.000 and 1.037, p=0.000, respectively. Figure 2represents the relationship between the mobile mix and the experiential mix (CX) that was tested.

Figure 2: Relationship between Mobile Mix and Experiential Mix (CX) Model



Analysis of Variance (ANOVA, and Multiple Comparisons): ANOVA was used to investigate whether or not selected respondent profile variables (i.e. age, education, region, and preferred choice of network operator) have a significant effect on the mobile mix (i.e. the physical evidence, processes, and people). It must be noted that the factor analysis retained all the variables in the mobile mix and the CX dimensions assembled in one factor, therefore all the variables were included in the analysis. The results for ANOVA and T-Test are summarised in Tables 1 and 2.

Table 1: ANOVA Results on Mobile Mix

Independent Variables	Dependent Variables (Mobile Mix)					
	Physical Evidence		Processes		People	
	F-value	p-value	F-value	p-value	F-value	p-value
Age	7.469	0.00**	6.251	0.00**	5.202	0.002*
Education	8.615	0.00**	6.973	0.00**	7.424	0.000*
Region	1.58	0.119	1.322	0.218	1.382	0.192
Preferred network operator	2.194	0.069	2.737	0.029*	2.666	0.032*

(*p<0.05; **p<0.001

The ANOVA test as displayed in Table 1 found a significant difference within the mobile mix factors for the demographic variables. According to Hair et al. (2014) for a better understanding and measure of differences through ANOVA, in an ideal situation, the significant (Sig.) value must be less than 0.05. The 0.05 indicates that between some of the groups of the demographic variables, there is a significant difference. Also, where the Sig. value shows a greater number than 0.05, there is no significant difference. The ANOVA results regarding the influence of age, education, region and currently preferred network operator variables on the mobile mix indicated that with age, f=7.733, df=3, and p-value=0 between groups. Therefore, a significant difference between the age groups on the mobile mix was found in the study. In addition, the results from the Tukey HSD (t-test) comparison of age groups showed the following values between age groups 19-30 and 41-50, as well as 19-30 and 51-59, were Sig=0 and Sig=0,026, respectively. These indicate values less than the 0.05 threshold, therefore, confirming the significant differences in the views of these age groups regarding the mobile mix. Also, a difference was found between age groups 31-40 and 41-50, 41-50 and 19-30, 31-40 and 51-59, as well as 41-50 and 31-40, with respective Sig. values of 0.044, 0, 0.0256, and 0.048. The age groups

51-59 and 19-30 also discovered a significant difference between the groups, with Sig=0.026; smaller than the 0.05 threshold.

The significant relationships between the age groups concerning the mobile mix indicated that there were different views amongst the age groups. It must be noted that some age groups reported no significant differences. Thus, the ANOVA test result between age groups 19-30 and 31-40, 31-40 and 19-30, 41-50 and 51-59, as well as 51-59 and 41-50, reported Sig. values larger than the 0.05 threshold. These were with the Sig values 0.381, 0.381, 1, and 1, respectively. The results from these age groups indicate that significant differences between the age groups on the mobile mix did not exist. As a result, those age groups share the same opinions and views with regard to the mobile mix. The ANOVA test between education level and the mobile mix was also conducted. The following values were discovered f=9.789, df=4, and p-value=0. These results showed significant differences between education and the mobile mix in the study. The t-test comparison result also indicated that the Sig. values of the mobile mix for the education levels were primary school and certificate/diploma/degree level Sig=0.001; high school and certificate/diploma/degree level Sig=0; certificate/diploma/degree and primary school Sig=0.001; certificate/diploma/degree and high school Sig=0; as well as certificate/diploma/degree and post-graduate qualification Sig=0.003. These resulted in a smaller value than the required threshold of 0.05.

The ANOVA test found a significant difference between average scores, showing that the views and opinions of these educational qualification levels on the mobile mix were different from each other. Nevertheless, there was no significance between the following levels of education on the mobile mix: no schooling and primary school, no schooling and high school, no schooling and certificate/diploma/degree, and no schooling and post-graduate qualification with Sig. values involving, 0.945, 0.946, 0.174, and 1, respectively.There was also no significant difference between primary school and no schooling, high school, and post-graduate qualification, as all the Sig. values were beyond the threshold of 0.05. As a result, the ANOVA test showed that the opinions and views from these educational levels supported the mobile mix. Lastly, an ANOVA test concerning the difference between the preferred network operator and the mobile mix was conducted. The following results were discovered: f=2.917, df=4, and p-value=0.021, as displayed in Table 1. These results indicated that no significant differences were found between average scores of the currently preferred network operator categories to the mobile mix in the study. Further, to confirm these results, the t-test comparison was conducted, and the results were: between MTN and Vodafone, Sig=0.129; between MTN and Airtel, Sig=0.057; between MTN and TIGO, Sig=0.847; and between MTN and GLO, Sig=0.469. Also, between Vodafone and Airtel, Sig=0.915; between Vodafone and TIGO, Sig=0.995; between Vodafone and GLO, Sig=0.957; between Airtel and TIGO, Sig=0.861; between Airtel and GLO, Sig=1; and between TIGO and GLO, Sig=0.911. These outcomes show that there was no significant difference between the average scores of these groups concerning the mobile mix. The values derived were all greater than 0.05. It, therefore, indicates that the customers within the preferred network operator groups shared the same opinions on the mobile mix.

Post-Hoc Tukey Test (T-Test): The post-hoc analysis for the mobile mix factor, with the associated sub-variables physical evidence: PE, BSL and CB; process: TD, RD, and MO; and people: IOL, MCS, HRM, and PM were conducted. The Post-hoc Turkey test is more useful than the ANOVA test result which only discovers and concentrates on the statistical significance of a study. The t-test results of the gender profile regarding male and female to the mobile mix and its sub-variables were analyzed. The result of the test is displayed in Table 2.

Table 2: T-Test Result on Mobile Mix

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference
PE	4.863	0.028	-0.548	412	0.584	-0.03637
			-0.552	411.529	0.581	-0.03637
BSL	2.403	0.122	-1.348	412	0.178	-0.07807
			-1.355	411.948	0.176	-0.07807
CB	0.010	0.920	-0.082	412	0.935	-0.00449
			-0.082	407.886	0.935	-0.00449
Physical Evidence	2.027	0.155	-0.751	412	0.453	-0.03964
			-0.753	411.478	0.452	-0.03964
TD	3.442	0.064	-1.335	412	0.183	-0.06413
			-1.342	411.985	0.180	-0.06413
RD	4.116	0.043	0.524	412	0.601	0.02803
			0.524	408.884	0.600	0.02803
MO	3.068	0.081	-0.036	412	0.972	-0.00176
			-0.036	411.818	0.971	-0.00176
Process	4.402	0.037	-0.287	412	0.774	-0.01262
			-0.288	411.787	0.773	-0.01262
IOL	3.389	0.066	-1.416	412	0.157	-0.06895
			-1.429	410.742	0.154	-0.06895
MCS	0.639	0.425	-0.558	412	0.577	-0.02990
			-0.559	410.384	0.576	-0.02990
HRM	1.734	0.189	-1.150	412	0.251	-0.06242
			-1.156	411.969	0.248	-0.06242
PM	6.869	0.009	-1.030	412	0.304	-0.05042
			-1.043	405.178	0.298	-0.05042
People	5.263	0.022	-1.233	412	0.218	-0.05292
			-1.241	411.930	0.215	-0.05292
Mobile Mix	4.309	0.039	-0.852	412	0.395	-0.03506
			-0.856	411.852	0.393	-0.03506

The equality of variance for the mobile mix component thephysical evidence and its sub-variables PE, BSL, and CB indicated the following results:physical evidence (t = -0.751, df = 412, p-value = 0.453), PE (t = -0.548, df = 412, p-value = 0.584), BSL (t = -1.348, df = 412, p-value = 0.178), and CB (t = -0.082, df = 412, p-value = 0.935). These weregreater than the 0.05; therefore, the values for these variables concerning men and woman did not differ significantly. Based on these results, the average scores of physical evidence, PE, BSL, and CB for the gendergroups were found to not be significantly different. The result also implies that the men and women in the study had significantly similar opinions on the factors. Also, the test for equality of variances for process and its sub-variables TD, RD and MO, discovered the following: process (t = -0.287, df = 412, p-value = 0.774), TD (t = -1.335, df = 412, p-value = 0.183), RD (t = -0.524, df = 412, p-value = 0.601), and MO (t = -0.036, df = 412, p-value = 0.972). These results denote that the values of process and its sub-variables were greater than 0.05; therefore, the average values for the factors and their relation to the respective gender categories did not differ significantly.

Consequently, the female and male groups had similar opinions regarding the variables. On the other hand, people and its sub-variables also discovered the following values in the t-test result: people (t = -1.233, df = 412, p-value = 0.218), IOL (t = -1.416, df = 412, p-value = 0.152), MCS (t = -0.558, df = 412, p-value = 0.577), HRM (t = -1.150, df = 412, p-value = 0.251), and PM (t = -1.030, df = 412, p-value = 0.304). These t-test results for the people and its sub-variables IOL, MCS, HRM, and PM indicate that the opinions of men and women did not differ significantly from each other, since the p-values were larger than 0.05. Therefore, the female and male respondents had similar opinions on the factors in the study. In totality, the mobile mix in the study obtained the following t-test result in the study (t = -0.852, df = 412, p-value = 0.395). This result shows a p-value larger than the threshold 0.05. In this manner, both gender groups in the study had overall similar opinions with regard to the mobile mix.

5. Conclusion, Recommendations and Managerial Implications

Conclusion: In conclusion, through this study, the network operators in Ghana, businesses and relevant policy-makers gained insight into how integrating the mobile mix components and its sub-variables will facilitate the building of positive customer experiences. Consequently, the management and role players of these organizations must be cognisant of the study's results and practical recommendations during future strategy and tactical development as well as the implementation. The results, conclusions and recommendations of this study indicate that the integrating of the mobile mix components could increase positive customer experience, thereby; facilitating customers' loyalty, increase in sales and profitability, as well as positive word of mouth advertisement.

Recommendations and Managerial Implications: Positive customer experiences are important to organizations worldwide. A number of managerial implications and recommendations with regard to the mobile mix and customer experience were made.

- Organizations must keep their environment tidy and clean.
- The architectural designs of the buildings of organizations should be attractive and well decorated and proper ventilation must be provided to customers.
- The signs, logos, uniforms of staff members, gifts and the entire corporate brand must be attractive to inspire a positive customer experience.
- Organizations should invest more in research and development in order to conduct proper needs assessments of their customers' preferences and tastes.
- Organizations should provide awards and recognition systems to their workforce to inspire them to provide good and friendly services to customers, thereby facilitating a positive customer experience.

The empirical results revealed a significant positive relationship between the mobile mix and customer experience. The results of this study show that where customers derive positive experience from their physical evidence, processes and people they are attracted to the organizations. Therefore, the following recommendations are made.

- Organizations must try as much as possible to design customer experience programs and campaigns that appeal to the five senses of customers successfully.
- Organizations should uniquely design and distinguish their physical evidence, processes and people elements from competitors to offer positive acts, think, sense, feel, and relate experiences to customers.

Limitations and Direction for Future Research: This research faced a limitation. It was found that about half of the respondents were between the ages of 19 and 30 years, which might have skewed the results to a limited extent. Due to this limitation, the results of this research should be generalized with caution, and it is suggested that future studies should strive to obtain the views and opinions of more equally distributed age groups. Despite the above limitation, a reliable measuring instrument can be employed by organizations. Views and opinions from the customers of the five registered mobile network operators in Ghana were

gathered. Other studies might want to expand the sampling frame and include policy development and implementation strategies in the measuring instrument.

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