BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

04

Macro Management & Public Policies

Volume 2 Issue 4 | December 2020 | ISSN 2661-3360(Online)

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Volume 2 Issue 4 • December 2020 • ISSN 2661-3360 (Online)

Macro Management & Public Policies

Editor-in-Chief

Dr. Sang-Bing Tsai

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Volume 2 | Issue 4 | December 2020 | Page1-47
Macro Management & Public Policies

Contents

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Macro Management & Public Policies
https://ojs.bilpublishing.com/index.php/mmpp

EDITORIAL

Climate Change and Corporate's Sustainable Development

Chia-Huei Wu*

Department of Hotel Management and Culinary Creativity, Minghsin University of Science and Technology, Hsinchu 304, Taiwan

ARTICLE INFO

Article history
Received: 3 February 2021
Accepted: 3 February 2021
Published Online: 5 February 2021

Overview of the Articles in the Issue

This regular issue of the Macro Management & Public Policies collects four articles.

The first paper, titled *Two Kinds of Analysis in the Issue of Dealing with EDPs*, constructed two migration models to maximize the outcome of protecting the rights of EDPs and preserving their unique culture. using AHP, this study quantified the important characteristics which will eventually make a big difference on the outcome of settlement. Then the study got final results which indicated the most suitable countries for EDPs. Analyzing the results of Migration Models, the study gave policy recommendation at global and national level. Through the mathematic practice, the study also found some factors, such as languages, population density and religious beliefs, could seriously affect the ultimate choice of the migration place so authors recommended each nation positively took action to ensure EDPs could easily fit in. At last, the authors listed and compared three approaches to deciding where the home of EDPs should be. They concluded that only when UN in charge of this, it could make the best interest of both EDPs and different nations.

The second paper, titled *Analysis in Results Production mode of Chinese Media type Think-Tank,* tried to provide some useful suggestions for the current traditional media transformation, so as to encourage the media type think tank go abroad, raise the international influence, personalize the products, make it into Boutique, become a brand and the development strategy of the new think-tank with Chinese characteristics. The achievements of Chinese media-based think tanks will follow a new development trend through the establish of cooperative innovation system, achievements make and press system of "all media tendency", market-oriented transformation theory, brand strategy, and exerting international influence.

In the third paper, titled *How the News Media Cover Environmental Issues in United Kingdom: A Comprehensive Study of Mexico Gulf Oil Spill Disaster in 2010,* intended to investigate how news media in covering environmental issues in United Kingdom through the perspective of Mexico Gulf oil spill incident in 2010

**Corresponding Author:*
Chia-Huei Wu,
Department of Hotel Management and Culinary Creativity, Minghsin University of Science and Technology, Hsinchu 304, Taiwan;
Email: chiahuei530@gmail.com

 DOI: https://doi.org/10.30564/mmpp.v2i4.2885

particularly. In details, this study focuses more on the study of trends and patterns of news coverage on oil spill disaster during the research process. The sample is made up of two mainstream newspapers in UK (the Times and the Guardian) which are selected based on circulation figures and politically centre-based figures from April 2010 to April 2011. This study employs content analysis as its primary methodology to observe the trends and patterns of news coverage. In addition, this study not only discovers characteristics, trends and patterns of each newspaper but also uses comparative way to discover differences and similarities in order to investigate how national newspapers differ from each other when focusing on the same environmental news. Through the investigation step by step, this study answers the hypothesis and concludes that news media cover environmental issues in a particular ways as they adopt different trends and patterns in coverage while they still have some ways in common.

The fourth paper, titled *Governance and Tax Avoidance: Evidence from Nigerian Quoted Food and Beverage Companies,* examined the effect of corporate governance on tax avoidance of quoted food and beverage companies in Nigeria. Specifically, the study seeks to determine the effect of CEO duality on effective tax rate of quoted foods and Beverage companies. Ex post facto research design was adopted. The population of this study covered twelve (12) Foods and Beverages quoted on the Nigerian Stock Exchange as at 2019. Purposive sampling technique was applied (Non-random sample) in selecting nine (9) companies during the data collection process. Data were collected from annual reports and accounts of the sampled companies from 2013-2019. Data for the study analyzed using descriptive statistics and regression was used to test the relationship between the independent variable and dependent variables. This was done with aid of the e-view was at 95% confidence at five degree of freedom (df). The result shows that CEO duality was significant and had a positive coefficient on tax planning of food and beverage companies in Nigeria. The study therefore, recommended that non-separation of CEO from Chairman of the Board may lead to higher levels of tax planning; and an opportunity for manager's rent extraction, because of their dominating role in order to ensure that adequate oversight roles are separated.

DOI: https://doi.org/10.30564/mmpp.v2i4.2885

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Macro Management & Public Policies
https://ojs.bilpublishing.com/index.php/mmpp

ARTICLE

Two Kinds of Analysis in the Issue of Dealing with EDPs

Qilin Wu Jiazhi Xiu* Zeyi Wen

Economics Department, Minzu University of China, Beijing, 100081, China

ARTICLE INFO

Article history
Received: 20 July 2020
Accepted: 25 July 2020
Published Online: 30 November 2020

Keywords:
Climate change
Refugee
Carbon emission
Distribution of responsibility among countries
Settlement of refugee

ABSTRACT

The settlement of EDPs [1] is one of the most knotty problems created by climate changes. In this paper, our team will give a comprehensive solution to tackle it. We construct two migration models to maximize the outcome of protecting the rights of EDPs and preserving their unique culture. Firstly, we talked about the reasons why we should protect the rights and culture of EDPs. We conclude that it is not only the spirit of UN, the morale responsibilities of every nation but also a good deed for human being which possibly can stop nationalism in each country from rising. I this process, we decide to use "carbon dioxide emission per capita" as standard to distribute responsibilities to different nations because it is more fair and efficient. Secondly, we start to build Migration Models. By using AHP, We quantify the important characteristics which will eventually make a big difference on the outcome of settlement. Then we get final results which indicate the most suitable countries for EDPs. Analyzing the results of Migration Models, we give policy recommendation at global and national level. For the first one, we suggest that UN should decide where EDPs' be; when emergency happens or there are only few migrants, send them to the nearest countries to make sure of their safety and preservation of their cultures; and when it takes a long time to migrate and there are so many migrants, use Migration Model Two to decide because it needs to take the contribution to the world greenhouse effect, countries' finance and preference of EDPs into consideration. Through the mathematic practice, we also find some factors, such as languages, population density and religious beliefs, can seriously affect the ultimate choice of the migration place so we recommend each nation positively take action to ensure EDPs can easily fit in. After that we bring time factors into our model. We use linear regression model to see the time when those island nations will be submerged. It indicates that UN should step in this issue as soon as possible otherwise it can be uncontrollable owing to the sinking islands and rising nationalism. At last, we list and compare three approaches to deciding where the home of EDPs should be. We conclude that only when UN in charge of this, it can make the best interest of both EDPs and different nations.

**Corresponding Author:*
Jiazhi Xiu,
Economics Department, Minzu University of China, 27 Zhongguancun South Avenue, Beijing, 100081, China;
Email: ascro@qq.com

 DOI: https://doi.org/10.30564/mmpp.v2i4.2194

1. Introduction

1.1 Background

Climate changes have been a more and more serious issue for human being. Dreadful scenes, such as people living in the islands looking hopelessly at the ruins of their house after a hurricane or being rejected by the migration country, have aroused compassion all over the world.[2] Gradually we realize that it is the disaster of human being but not just the EDPs and so needs to be dealt with as a whole. Recently, a released UN ruling opened the door to the theoretical recognition of EDPs as refugees, which means EDPs will get protection by law in the near future. However, at this time, nations haven't reached an agreement about how to deal with these EDPs because too much interests and responsibility are involved in. How to deal with this knotty problem becomes a heated topic for the experts in all fields.

1.2 Restatement of the Problems

It is such a comprehensive issue that there is no way to take all aspects into account so our team make deep discussion on 5 of them. Here's how we consider this matter:

(1) What's the situation of EDPs?

(2) How do they change over time in terms of both the number of people and their culture?

(3) Why should we protect EDPs and what's the value of protecting those cultures of at risk nations?

(4) Where would their new home?

(5) Who can decide this, EDPs, each nation or UN?

(6) A recommendation for UN and nations to make their best in protecting human rights and culture preservation.

2. Why Should We Protect EDPs

2.1 The Value of EDPs' Culture

If an island nation wants to develop and survive for a long time, the culture of this country is extremely essential, because the culture of an island country has an immeasurable influence and effect on its economy, politics, comprehensive national strength and national quality, which is also the spiritual power for the residents of this island country to survive and develop continuously. The language, music, art, dance, social norms and cultural heritage may have great difference from island to island, even if they live within the same island chain. This is the so-called cultural difference. When the islanders have to move because of the rising sea level caused by the rising climate and global warming, their cultural heritage and customs will be greatly affected, which will heavily affect their normal life. Traditional marine fishing techniques used in the Marshall Islands, for example, are unlikely to be continuously used by families living in the Alps because of different geographical locations. In addition, the language barrier of island residents after migration also requires them to spend time to adapt and change. So it will have a great impact on their lives. In the future, as island residents continue to disperse, they will face the risk of losing their unique cultures, languages and cultural heritage. So for environmentally displaced persons, new resettlement efforts may be the last chance to rebuild their homes and preserve their cultures. Therefore, as for the perspective of existing and potential climate refugees, it is hoped that they can migrate to places where cultural heritage and cultures are suitable for their lives.

2.2 Quotation from UN

In the UNESCO World Declaration on cultural diversity issued by the United Nations, it is mentioned that "culture has different forms of expression in different times and places, and cultural diversity is the common heritage of mankind, which should be recognized and affirmed in the interests of the present and future generations." Therefore, in today's increasingly diversified society, it is necessary to ensure the harmonious relationship and coexistence of individuals and groups with diverse, different and developing cultural characteristics. This is also inseparable from the protection of human rights. To protect and assist these environmentally displaced persons, their cultures and human rights are fully in line with and actively respond to the urgent ethical need of safeguarding cultural diversity as stated in the United Nations Declaration. What's more, we should respect the rights of minority groups and indigenous people, and should not damage or limit the scope of human rights protected by international law on the basis of cultural diversity. Therefore, when environmentally displaced persons move to other different countries, it is necessary for all the countries to protect their cultural heritage and human rights.

2.3 Morale Responsibility of Other Nations

Because of the rising sea level, those island refugees who are in danger of their land disappearing completely need international support and responsibility from other countries for their successful migration and long-term survival and development which can greatly help them adapt to the new environment. The cause of sea-level rise is the aggravation of global warming. It is inseparable from the outcome of greenhouse gases produced by all the countries in

DOI: https://doi.org/10.30564/mmpp.v2i4.2194

the world. Therefore, under the leadership of the United Nations, all countries around the world should give a helping hand to EPDs, and shoulder their due international responsibilities, and properly handle the cultural heritage relations between their own residents and EPDs. Our group believes that if we want to share the burden fairly among countries, we should give them different proportion of responsibility according to the measurement of the amount of greenhouse gases produced by each country. Next, we will use data analysis to improve our point of view.

2.4 Our Principles to Distribute Responsibilities

Why Should We Choose "Total Amount of Carbon Dioxide Emission"

According to the average data in recent years, China is the country with the largest annual carbon dioxide emissions, with annual carbon dioxide emissions of 103.57 million tons. The second is the United States. According to the 2016 report of the American Lung Association, more than half of the people in the United States are facing the risk of breathing air pollution. Its carbon dioxide emission is 54.14 million tons. The next is India. There are 1.2 million people die of respiratory diseases every year in India, with the annual carbon dioxide emissions of 22.74 million tons. And then are Russia, Japan, Germany, Iran, Saudi Arabia, South Korea, Canada, etc.

We think that the amount of carbon dioxide emissions of a country is closely related to its comprehensive national strength and development level. Many developing countries are rising stars, so we can see that the carbon dioxide emissions of these developing countries will continue to rise in the future. But before that, the developed countries, which are temporarily leading in the comprehensive level of industry, have already had quite high carbon dioxide emissions, so we should take totally historical carbon emissions to measure the "contribution" of every country in the world to the serious greenhouse effect.

3. Migration Models

3.1 How to Choose Home for the EDPs

We suppose that it is necessary for the United Nations to formaly draw up the policy of the immigration for the environmentally displaced persons (the explanations of it will be showed in the forth section). If the policy lets the environmentally displaced persons freely choose their destinations of the immigration by themselves, it will causes a great many unpredictable results. For example, some malicious media will make up public opinion to uglify some countries who do not want to receive those environmentally displaced persons. It is one of the harmful results of too many rights to freely choose areas by refugees themselves. What's more, it will also make trouble if refugees select countries that only depend on welfare benefits and treatments or other economic standards. On the one hand, some countries with higher and better welfare benefits will have heavy burdens. On the other hand, environmentally displaced persons maybe have some difficulties in accommodating to a completely new and different places and local cultures.

In order to successfully protect both their human rights and original cultures which can let them settle down in a new country and fully enjoy their new lives, we draw up two plans of immigration. And these plans can make sure that refugees' original cultures' continuity can be protected to the utmost and those chosen countries have enough abilities and is willing to help and accept the environmentally displaced persons.

The analysis of these two arrangments of immigrations:

Model one:

The "nearby" in "nearby immigration" means the cultures' similarity, but it always turns out to be the locations' similarity.

(1) It can protect the continuity and completeness of their original cultures to the utmost.

(2) It is beneficial for the environmentally displaced persons to peacefully and comfortably get use to the new environment.

(3) It is easy to guarantee their human rights since they successfully get use to the new place.

(4) It may have difficulties in carrying out the plan . Here are two preconditions which are not easy to satisfy. Firstly, we should match the features of human geography between the immigrants and local people. [4]Secondly, we should know the number of the refugees that the countries which are the destinations of immigrations can accept. For example, the environmentally displaced persons nearby the Pacific Ocean are suitable to immigrate to Japan. If it happens, it will do great harm to the society and environment of Japan which can lead the extent of receiving refugees from the local people decreases. Therefore, the effects of this plan will be badly influenced.

Model two:

Receiving diffierent immigrants should base on the quota of diffierent country. As mentioned above, based on the requirement of fair burden sharing, the number of new residents absorbed by countries should be driven by their obligations to contribute to climate change. [3] And the countries that contribute the most to climate change have more moral obligations to bear the greater burden of receiving the environmentally displaced persons.

(1) It can help to successfully implement the policy. On

DOI: https://doi.org/10.30564/mmpp.v2i4.2194

a unified scale, the United Nations considers the natural environment and the financial capacity of the country of the immigration to select the appropriate and fair number of refugees. In this way, the method determined by the international authoritative organization ensures the realization of equity, thus maximizing the support of various countries.

(2) The huge differences in geographical and human conditions lead to many difficulties of those refugees to adapt to the immigration.

(3) Governments need to work hard to establish policies to protect the human rights of the environmentally displaced persons and their culture.

We decided to divide the refugees into two groups, one is that we can find a place suitable for them to live in, and the other is that we are not easy to find. For the group I, we will adopt the first arrangment which is to place them in an environment suitable for their living and protect the continuity and completeness of their original cultures to the maximum extent. As for group II, we give priority to the acceptance ability of different countries for refugees and make a reasonable distribution.

3.2 Variables

α: Eigenvector

β: Empowerment and vector

λ_{max}: The average value of empowerment and vector

CI_1: Consistency indicators of geographical environment

CI_2: Consistency indicators of population situation

CI_3: Consistency indicators of cultural customs

CI_4: Consistency indicators of carbon emission

CR_1: Consistency rate of geographical environment

CR_2: Consistency rate of cultural customs

CR_3: Consistency rate of population situation

RI: Freedom index

CR_4: Consistency rate of carbon emission in the last 10 years

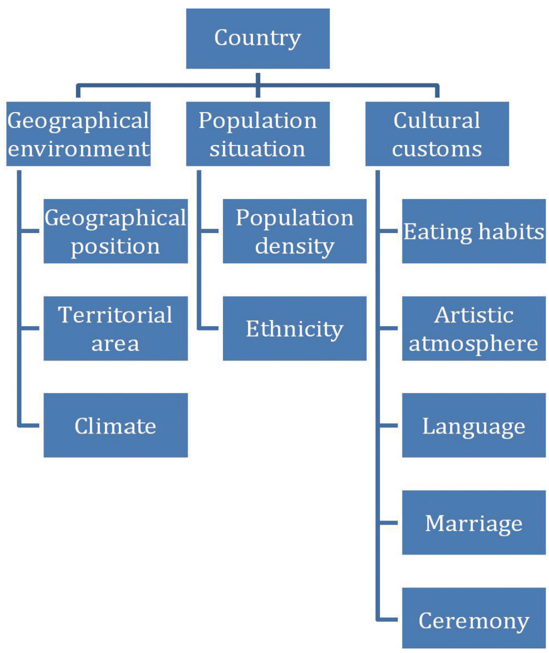
3.3 Model One

3.3.1 Brief Illustration of the Model One "Tuvalu cases"

At present, with the increasing greenhouse effect, many island nations like Tuvalu, Tonga with low altitude are facing the risk of global warming, rising sea level and the risk of being submerged by the sea and homeless. The rising of the sea level is increasingly threatening the lives and property security of the island people. So when the island nations disappear caused by sea level, they have to face the problem of immigration. So how to reasonably settle these environmentally displaced persons to various countries in the world and find suitable places for their survival and development is a serious problem nowadays. To solve the problem, we will take Tuvalu as a typical example.

Located in the South Pacific Ocean, Tuvalu is composed of nine circular coral island groups, covering an area of about 26 square kilometers. Due to the extremely low terrain, the highest place in Tuvalu is only 4 meters above the sea level. The rise of sea level caused by the greenhouse effect threatens Tuvalu seriously, and it is also a very serious threat to the whole world. Where will the residents of Tuvalu go? Next, we will use analytic hierarchy process (AHP) to demonstrate how can island nations like this with a large number of the environmentally displaced persons choose a good destination of immigration. The reason why we choose AHP is that it combines qualitative analysis with quantitative analysis to complete the following steps, and then it will give quantitative results of decision problems.

There are many countries around Tuvalu, and those countries closer to Tuvalu are more likely to make Tuvaluans adapt to their living conditions than other countries in the world. Their climate change and equation of time and so on are quite similar. At the same time, Tuvalu has a small territory and a small population, so we choose national immigration. We have selected three representative countries that are able to accept the environmentally displaced persons. They are New Zealand, Australia and Indonesia. We use AHP to see which country is more suitable for Tuvalu's climate refugees. We summarize the 10 criteria of evaluation into the following three aspects:



DOI: https://doi.org/10.30564/mmpp.v2i4.2194

3.3.2 Assumptions

(1) Tuvalu does not purchase other lands from other countries for immigration preparation.

(2) New Zealand, Indonesia and Australia accept all the immigrants. (no rejection)

(3) Tuvalu has no preference for New Zealand, Indonesia and Australia.

(4) Tuvalu regards nearby immigration as the most efficient way of immigration.

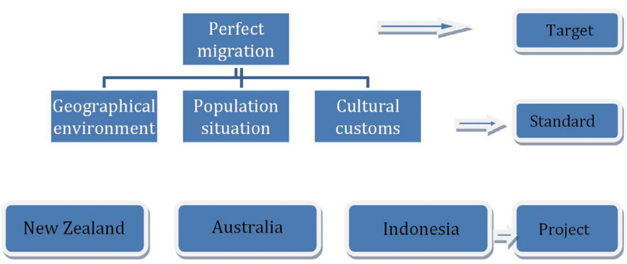
3.3.3 Model Logic and Structure

(1) Logic

First of all, we believe that the goal of "perfect migration" is not only the movement of people., but also the protection of human rights of the environmentally displaced persons as much as possible in terms of culture, quality of life, language and religion. So we look up the data of geographical location, land area, climate conditions, population density, race, eating habits, artistic atmosphere, language, marriage, etiquette and other aspects as the basis of analysis.

Then we will summarize these aspects into three categories: geographical location, population situation and cultural customs. According to the comparison between different countries, we will give different weights, and finally find the most suitable country for Tuvaluans.

(2) Structure of the model



Following is the model structure:

(1) The decision-making problem is divided into three levels: target level, standard level and project level. The hierarchy diagram is shown above.

(2) We will carefully and repeatedly compare each other to determine the weight of each aspect to the final goal, as well as the weight of each scheme to each criterion.

(3) The above two weights are integrated to determine the weight of each scheme to the target.

3.3.4 Mathematic Practice and Conclusion

Scale and comparison matrix

Relative importance scale a_{ij}, and it is the comparison of two schemes under a certain standard to get the relative weight.

We are suppose that there are n factors: X={x-1,x2,…,xn}, We need to compare their impact on a criterion or goal in the previous layer, and then determine the proportion of a criterion in that layer. $a_{ij} = \frac{1}{a_{ji}}$

Scale:

aij	Definition
1	i is as important as j
3	i is slightly more important than j
5	i is more important than j
7	i is a bit more important than j
9	i is absolutely more important than j
2,4,6,8	the scale value corresponding to the intermediate state between the above two judgments
Reciprocal	aij=1/aji

Comparison matrix:

Firstly, we calculate and estimate the relative data and write down the positive reciprocal matrix based on geographical environment, population situation and cultural customs of those target countries and work out its eigen value. What's more, we have to the empowerment and vector and the average value of empowerment and vector. (In the appendix)

	Geographic environment	Population	Cultural heritage	α
Geographic environment	1	3	2	0.539
Population	1/3	1	1/2	0.164
Cultural heritage	1/2	2	1	0.297
	1.833	6.000	3.500	

Secondly, Consistency test:

According to the following equation, we can work out CI_1, CI_2, CI_3

$$CI = \frac{\lambda_{\max} - n}{n-1}$$

CI_1=0.048 CI_2=0.009 CI_3=0.048

Dimensionality (n)	1	2	3	4	5	6	7	8
RI	0.00	0.00	0.58	0.96	1.12	1.24	1.32	1.41

According to $CR = \frac{CI}{RI}$, we can work out the following results:

CR_1=0.083 CR_2=0.016 CR_3=0.082

CR_1≤0.1 CR_2≤0.1 CR_3≤0.1

When CR ≤0.1, it indicates that we have passed the consistency test.

Thirdly, Final results:

Country	Score
New Zealand	0.173
Australia	0.668
Indonesia	0.159

Fourthly, Conclusion:

According to the result, Australia get the highest score. So we think that Australia is the most appropriate country for the Tuvaluans to immigrate among these three countries. It is reported that Australia government has refused the application to receive the environmentally displaced persons from the Tuvalu nowadays. So we propose the advice that the United Nations should take some actions to improve the relationship between Australia and Tuvalu and try everyone's best to protect the environmentally displaced persons' rights and cultures.

3.4 Model Two

3.4.1 Brief Illustration of Model Two "Maldives cases"

Covering an area of 90,000 square kilometers, Maldives has 26 sets of natural ring firewood and 1,192 coral islands. 200 of these islands have permanent residence. These islands average 10,000 to 20,000 square kilometers and a sea level of 1.2 meters. It is about 600 kilometers from the south of the India and around 750 kilometers from the south of the Sri Lanka.

Through the deep research on the rock core got from the Maldives islands, researchers have found that, nearly 10,000 years ago, the sea level of Maldives' islands rose at a shocking speed of 15 meters per thousand years owing to the meltdown of the icebergs in North Pole. Coincidentally, the coral reef around the area grows at the same speed and thus not get swallowed by the ocean. It is important to note that all of the beautiful scenes in Maldives lie in a sea level of only 1.8 meters and over 80 percent of their lands have a sea level of less than 1 meter. To be more specifically, the ocean will swallow these cute and beautiful islands one by one in less than a century, if the data from UN is reliable. That's why we choose Maldives to build our Model Two. Compared with Tuvalu, Maldives have many times both the land and the population as Tuvalu. So it is impossible for the residents in Maldives to move to a certain country together. Besides, considering the different contribution to the World Green House Effect, we add one more factor-carbon emission into our model to make the plan more fair.

3.4.2 Assumptions

(1) Maldives can't move to another country as a nation.

(2) Maldives doesn't prepare lands for the migration.

(3) Maldives have no preference to migration countries.

(4) The residents can accept migration country.

(5) China, America, Russia and India takes up the total carbon emission and ignore other countries' contribution.

(6) Owing to the limited ability of accepting refugees, such as government finance and population intensity, these countries can only take in 20 percent of the total refugees. The major 4 carbon emission countries are responsible for the rest 80 percent.

3.4.3 Model Logic and Structure

(1) Model Logic

We haven't simply use weight coefficient of carbon emission to distribute the burden of receiving EDPs because it will have negative impact on the preservation of at risk nations. How can we make plans for these refugees totally out of our wills but not theirs at all. If we do so, it is easily to imagine that lots of conflicts will take place through their fitting into the local society. Not only will it make harder for the refugees to fit in, but it will also put too much pressure on some countries' finance because we haven't take the will of EDPs and ability of migration country into account. Hence we should take both the carbon emission factor and population characteristic factors into the model. The factor we choose in Model Two includes geographic location, square of the country, climate, population intensity, ethnicity, food habit, art, languages, marriages and ceremonies. We divide these 11 factors into 4 categories:

geographic location
square of the country
climate
} geographic environment

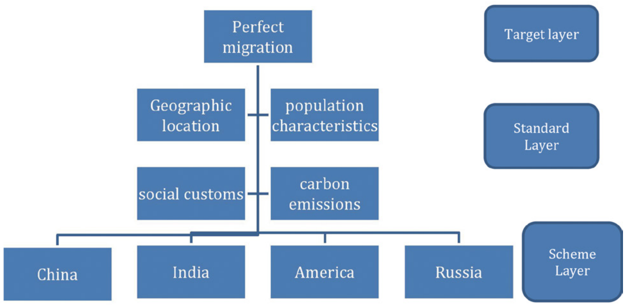
population density
ethnicity
} Population characteristics

food habit
art
languages
marriages
ceremonies
} Social customs

carbon emission → Carbon emission in last ten years

DOI: https://doi.org/10.30564/mmpp.v2i4.2194

(2) Structure of the model



Here comes how we choose migration country:

(1) The decision-making problem is divided into three levels: target level, standard level and project level. The hierarchy diagram is shown above.

(2) We will carefully and repeatedly compare each other to determine the weight of each aspect to the final goal, as well as the weight of each scheme to each criterion.

(3) The above two weights are integrated to determine the weight of each scheme to the target.

3.4.4 Mathematic Practice and Conclusion

(1) Scale

It is totally the same as the model one.

(2) Comparison matrix

Firstly, we calculate and estimate the relative data and write down the positive reciprocal matrix based on geographical environment, population situation and cultural customs of those target countries and work out its eigen value. What's more, we have to the empowerment and vector and the average value of empowerment and vector. (In the appendix)

Carbon emission:

Country	Carbon dioxide emission(10,000tons)
China	88035
America	46019
India	19329
Russia	12936

Comparison Matrix:

	Carbon dioxide emission(10,000tons)				α	β	λmax
Country	China	America	India	Russia			
China	1	1/3	1/7	1/8	0.050	4.012	4.044
America	3	1	1/3	1/4	0.127	4.019	
India	7	3	1	1/2	0.321	4.063	
Russia	8	4	2	1	0.502	4.084	
	19.000	8.333	3.476	1.875			

Secondly, Consistency test:

$$CI = \frac{\lambda_{\max} - n}{n-1}$$

According to the following equation, we can work out , CI_1, CI_2, CI_3, CI_4

$CI_1=0.082$ $CI_2=0.017$ $CI_3=0.050$ $CI_4=0.015$

Dimensionality (n)	1	2	3	4	5	6	7	8
RI	0.00	0.00	0.58	0.96	1.12	1.24	1.32	1.41

According to $CR = \frac{CI}{RI}$, we can work out the following results:

$CR_1=0.091$ $CR_2=0.019$ $CR_3=0.055$ $CR_4=0.016$

$CR_1 \le 0.1$ $CR_2 \le 0.1$ $CR_3 \le 0.1$ $CR_4 \le 0.1$

When CR ≤ 0.1, it indicates that we have passed the consistency test.

Thirdly, Final results:

Country	Final results	percentage
China	0.165	16.548%
America	0.177	17.743%
India	0.213	21.327%
Russia	0.444	44.382%

Fourth, Conclusion:

In the first place we have assumed that 20 percent of the Maldives's population move to the nearest countries and the rest of them will move to the 4 major carbon emission countries. According to our percentage converted from final results, China, America, India and Russia are respectively responsible for 16.548%, 17.743%, 21.743%, 44.382% of the undistributed population.

3.5 Policy recommendation

Our policy recommendation includes two parts: the first part is at the global level and thus to the UN. It helps them efficiently and fairly coordinate the efforts coming from all the countries. Our attention to the human rights and culture preservation lies in how we choose migration country for them; the other part is at the national level and thus to each nation. At this time, our care for the rights and culture of EDP is really clear.

3.5.1 Global Level

(1) When emergency happens or there are only few migrants, use migration plan one(model one)

Model one is focused on the realization of immigration plan one that immigrants are accepted from only one or a few countries which have talked above. It is beneficial for EDPs to survive in the new environment and retain their

 DOI: https://doi.org/10.30564/mmpp.v2i4.2194

cultures. This model is suitable for an island nation with a small territory and population. At the same time, it is a model of immigration with relatively small economic consumption and short time. Therefore, when an emergency causes the country to be submerged, model one can relatively quickly provide a new home for EDPS, but the UN should coordinate and grant some welfare policies of the host country at the same time.

(2) When it takes a long time to migrate and there are so many migrants, use migration plan two(model two)

Model two is focused on the realization of immigration plan two that immigrants are accepted by many countries at the same time which has mentioned above. This model is suitable for an island nation with a big territory and population.[5] It is a model of immigration with relatively big economic consumption like using tens of thousands of steamships and planes to pick up EDPS and a long time. Also, this model which will last for a long time and constantly carry on can be planned in advance. At the same time, the UN should coordinate and grant different welfare policies and assistance to different countries that have many EDPs.

3.5.2 National Level

According to the above research we have made, we are going to put forward some suggestions to assist those EDPs:

(1) Each country should set up a special organization mainly dealing with EDPs related matters and establish a foundation to receive nationwide assistance. And countries should try their best to put forward arrangement and measures for the protection of EDPS as soon as possible. It is greatly beneficial for everyone to maintain the stability of the whole country and even the whole world.

(2) All the countries should organize some national conferences on EDPs assistance to increase the sense of responsibility of the whole world's nations and increase the attention and acceptance of EDPS related issues by the whole world's nations.[6]

(3) Each country should set up special institutions in all parts of the country, which is used to adopt the suggestions of EDPS and its own residents about EDPs matters. These special institutions must fairly and peacefully deal with the matters between EDPs and its own residents, while ensuring that EDPS and its own residents have the same rights and obligations. It aims to avoid conflicts between the residents of the two countries.

(4) Nations should put forward some relevant laws to protect the rights of EDPs[7], such as the right of life, the right of health, the right of food, the right of fresh water. All the nations shall fulfill their duties to protect the human rights of EDPs through a series of measures and laws.

(5) After receiving EDPs, each country should set up a special language organization to train EDPs in their own language, and at the same time teach a small amount of basic use of the language used by EDPs to its own residents, so as to promote the integration of EDPs with local residents and cultures.

(6) After receiving EDPs, each country should regularly organize national cultural exhibitions to show the cultural heritages, customs and religious beliefs of EDPs' countries and the countries they have moved in. It can greatly create an atmosphere of mutual respect and inclusiveness which will do good to its cultural diversity, integrity and independence of active protections, and promote the perfect integration of the language, cultural heritages and religious beliefs of the environmentally displaced persons and the local communities.

4. Time Factors

4.1 Mathematical Practice

As we have mentioned above, we have written two different kinds of immigration arrangement for different situations of environmentally displaced persons in different countries. But one of the very important factors in the immigration plan is the time factor that when the island country is submerged or no longer suitable for people to live in. The data of this time is very closely related to the immigration plan. Therefore, we build a model three to have a general prediction of the time when the island country is submerged.

4.1.1 Model Logic

We find that the main cause of the rising sea level is global warming, and the main cause of global warming is the emissions of carbon, so we assume that carbon emissions are directly related to sea level height. Because the sea level in different regions of the world is different, we analyze the relationship between the carbon dioxide emissions and sea level in the past 100 years based on the sea level height and carbon dioxide emissions in 1920. And we find the specific relationship between them by linear regression method and predict the future sea level changes and the submerged time of island countries through the equation we work out .

4.1.2 Assumptions

(1) It is assumed that there is no rising of elevation caused by coral reef changes in the island countries. There

DOI: https://doi.org/10.30564/mmpp.v2i4.2194

will be no other factors causing the elevation rising of the island countries.

(2) It is assumed that the only factor causing sea level rise is carbon dioxide emissions, and other factors are ignored.

(3) Assuming that in the future, every country will not carry out any environmental policies and measures. At the same time, there is no increase of carbon emissions. And the global annual carbon dioxide emissions increase will remain basically the same.

(4) When using this model to predict the future sea level changes and the submerged time of island, it is assumed that the sea level growth rate and annual carbon emissions are unchanged, which are 7.5 mm/year and 30 billion tons per year respectively:

A: assumed sea level height of the island country in 1900

B: assumed global carbon dioxide emissions in 1900

4.1.3 Specific Steps

(1) Firstly, we look up the data of the sea level growth and carbon dioxide emissions in different years. And then we get the following form:

Year	1900	1910	1920	1930	1940	1950	1960
The height of sea level	a	a+49	a+102	a+149	a+201	a+264	a+339
Carbon dioxide emissions every ten years	b	b+2300	b+4620	b+6790	b+9160	b+11690	b+14020

Year	1970	1980	1990	2000	2010	2020
The height of sea level	a+94	a+106	a+119	a+134	a+144	a+156.5
Carbon dioxide emissions every ten years	b+16790	b+19690	b+22690	b+25860	b+29060	b+32330

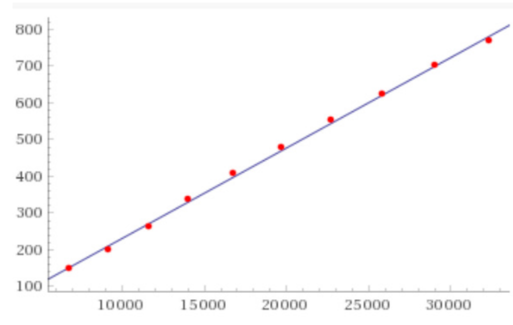
(2) Based on these data, a linear regression model is established

data	{{6790, 149}, {9160, 201}, {11690, 264}, {14020, 339}, {16790, 409}, {19690, 477}, {22690, 551}, {25860, 622}, {29060, 701}, {32330, 769}}
model	linear function

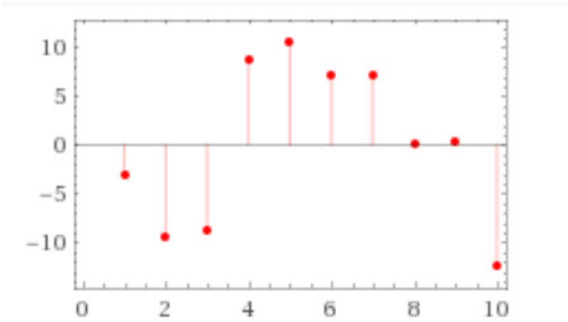
(3) Fit diagnostics

AIC	BIC	R^2	adjusted R^2
75.8656	76.7733	0.998477	0.998287

(4) Plot of the least-squares fit



Plot of the residuals:



(5) Least-squares best fit

Y=0.0246349x-15.134

4.2 How do the time factors affect Migration Models

Taking Maldives as an example, it is assumed that there are no other factors that cause the elevation of Maldives to rise or fall, and the elevation of Maldives is only determined by sea level. According to the data we have found, the average altitude of Maldives is 1.2m now. According to the above equation we have worked out, we can get x ≈ 49325.712708393. According to the hypothesis, we can know that the annual carbon emission is 30 billion tons per year. We can know that Maldives will be submerged after about 60 years, so we should put forward corresponding policies to protect the human rights and cultures of environmentally displaced persons as soon as possible.

5. Who should have the power to make plans for EDPs

Comparison between Different Approaches

After we compare 3 approaches to make decision on migration plans, we find that only UN has the ability to make it work:

(1) When EDPs deciede where they go

If the decision is made by personal intention, it is more about subjective factors than objective analysis, which will lead to some developed countries--the majority of people's choice, but this is totally unfair. At the same time, the subjective factors will lead to inconsistency or even conflict between EDPs' cultural environment and the culture of the chosen country. Everyone has his or her own favor, but in terms of making the decision of choosing different places to live in, we need to consider other factors, such as economy, politics; people often feel hard to make the most suitable choice for their own because of the difficulties in analysis and data access decisions. At this moment, people require a special institution that can base on the condition to analyze, recommend and make the most nicest choice.

(2) When each nation decide where EDPs go

If the choice is made by the nation, it is more likely to lead to unfair decisions. Due to the existence of some historical and objective factors, cultural and racial discrimination may exist in some countries. Therefore, EDPs will not be selected equally, which is not conducive to world peace and stability. What is more, it is a fatal blow to some cultures. In addition, the national policies must be based on the maximization of national interests, which means that the choice of EDPs is based on its own interests rather than the protection of EDPs' right and culture. It will cause damage to EDPs' right and its culture heritage.

(3) The reason why we think UN is most suitable to make decisions

To sum up, we choose the United Nations as the leader to introduce relevant policies and plans for unified deployment.

Firstly, the purpose of the United Nations is to maintain peace everywhere in the world; To develop friendly relations between countries; To help countries work together to improve the lives of poor people, to combat hunger, disease and illiteracy, and to encourage respect for each other's rights and freedoms; To be the focal point for coordinating national action to achieve these goals. The protection of EDPs' human rights and culture is consistent with its purpose.

At the same time, the United Nations is a combination of different sovereign states, which can provide a fair environment for different states to discuss relevant matters related to EDPs so as to safeguard the interests of each state and avoid possible disputes. Moreover, the United Nations can obtain a lot of first-hand data for analysis and discussion. Through comprehensive consideration and objective analysis, it will select the most appropriate countries for EDPs in different regions to realize their own human rights and protect their unique culture heritage.

Finally, the United Nations has more experience to deal with similar situations and more tools to deal with them such as the Afghan refugee problem nowadays. And UN has the UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES, which in more than 50 years has helped some 50 million people rebuild their lives. By the end of 2014, there were 7,685 staff in 125 countries helping refugees and others. Therefore, the United Nations can set up specialized agencies and specialized personnel to deal with the things relation to the EDPs' matters.

6. Conclusion

6.1 Strengths and Weaknesses Analysis

6.1.1 Strengths

(1) When using analytic hierarchy process, we established the level of all elements (including non-quantitative and quantitative), and clearly show the relationship between each level, each criterion and each element. When it comes to the comprehensive evaluation of different countries, it will be decomposed layer by layer and analyzed comprehensively on the basis of multiple single criteria evaluation. The data we work out is more convincing.

(2) AHP makes the evaluation program clearer and easier to understand, and let the calculation process go on smoothly, which is a simple and practical measure. According to the importance degree of the comparison results, the quantitative scale is 1 to 9, and the qualitative analysis can be changed into quantitative analysis reasonably and sufficiently.

(3) AHP transforms the collected information into a matrix set, and then processes it by using the linear algebra theory and method we have learned, which can provide deep and substantial data support for the final goal decision-making.

(4) When using analytic hierarchy process, if there are missing or insufficient parts in the research data, the importance of each element can still be obtained. It is a great convenience for us to collect information.

6.1.2 Weaknesses

(1) It is sometimes difficult for using AHP to compare two different elements. Sometimes it may have a little subjective tendency.

(2) AHP can not directly calculate and generate new decision-making scheme, but can only choose the best one among many given strategies.

(3) In the multi-level comparison of AHP, if the consistency index is not satisfied, the decision result calculated by AHP will be invalid.

(4) In the linear regression model, when model 3 is used to predict the submerged time of island nations, for the global carbon emissions are uncertain every year in

  DOI: https://doi.org/10.30564/mmpp.v2i4.2194

the future, there will be some minor errors if the carbon emissions increase at a constant rate.

Appendixes

Model One:

Geographic Environment:

	Geographic Environment			α	β	λmax
Country	New Zealand	Australia	Indonesia			
New Zealand	1	1/8	1/4	0.07	3.016	3.096
Australia	8	1	5	0.723	3.204	
Indonesia	4	1/5	1	0.206	3.068	
	13	1.325	6.25			

Cultural heritage:

	Cultural heritage			α	β	λmax
Country	New Zealand	Australia	Indonesia			
New Zealand	1	1/2	3	0.32	3.019	3.018
Australia	2	1	4	0.557	3.03	
Indonesia	1/3	1/4	1	0.123	3.006	
	3.333	1.75	8			

Population:

	Population			α	β	λmax
Country	New Zealand	Australia	Indonesia			
New Zealand	1	1/4	5	0.244	3.08	3.096
Australia	4	1	8	0.689	3.191	
Indonesia	1/5	1/8	1	0.067	3.016	
	5.2	1.375	14			

Model Two:

Geographic enveironment:

	Geographic environment				α	β	λmax
Country	China	America	India	Russia			
China	1	1/2	6	1/5	0.170	4.185	4.246
America	2	1	4	1/3	0.219	4.376	
India	1/6	1/4	1	1/7	0.053	4.045	
Russia	5	3	7	1	0.557	4.377	
	8.167	4.750	18.000	1.676			

Cultural heritage:

	Cultural heritage				α	β	λmax
Country	China	America	India	Russia			
China	1	3	1/3	2	0.233	4.061	4.051
America	1/3	1	1/5	1/2	0.085	4.024	
India	3	5	1	4	0.542	4.102	
Russia	1/2	2	1/4	1	0.140	4.018	
	4.833	11.000	1.783	7.500			

Population:

	Population				α	β	λmax
Country	China	America	India	Russia			
China	1	1/3	3	1/6	0.104	4.059	4.149
America	3	1	7	1/4	0.247	4.164	
India	1/3	1/7	1	1/9	0.045	4.028	
Russia	6	4	9	1	0.604	4.343	
	10.333	5.476	20.000	1.528			

References

[1] JP Guo, GQ Shi. Environmental refugees or environmental migrants - A Review Of the Study on the Appellation and Definition of Environmental Migration at home and abroad[J]. Nanjing Journal of Social Sciences, 2010(11).

[2] G. Kibreab. Environmental Causes and Impact of Refugee Movements:a Critique of the Current Debate, Disasters, 1997(21): 30.

[3] Derek R. Bell. Envrionmental refugees: What rights? Which duties? Georgetown International Environmental Law Review. 2011: 138

[4] UNHCR. Summary Of Deliberations On Climate Change And Displacement, International Journal of Refugee Law. 2011: 567.

[5] Neil Hodge. Global Environment: Acts or Emissions. International Bar Association Global Insight, 2012.

[6] Benoit Mayer. The International Legal Challenges Of Climate-induced Migration: Proposal for an International Legal Framework. Colorado Journal of International Environmental Law and Policy, 2011: 406

[7] HL Sun. A Legal thinking of the “Environmentally displaced persons”[J]. Legal Review of Nanjing University, 2011, 306.

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Macro Management & Public Policies
https://ojs.bilpublishing.com/index.php/mmpp

ARTICLE

Analysis in Results Production Mode of Chinese Media Type Think-Tank

Meng Chen*

Jiangsu Center, Xinhua think tank

ARTICLE INFO

Article history
Received: 13 August 2020
Accepted: 26 August 2020
Published Online: 30 November 2020

Keywords:
Think tank
Media think-tank achievements
Production model

ABSTRACT

Purpose / Significance: Through the analysis in the results production mode of the Chinese media type think-tank based on the media operation structure and communication platform, found there are structure and cooperation problems of spread and research line, team cooperation and transformation problem of research and spread, research production and media production positioning problem, and spread channel widening problem, this paper tries to provide a useful suggestions for the current traditional media transformation encourage the media type think tank go abroad, raise the international influence, personalize the products, make it into Boutique, become a brand and the development strategy of the new think-tank with Chinese characteristics. Methods / Processes: analysis the results production model of media-based think tank from four aspects: category, characteristics, existing problems and development trend. Results / conclusion: the achievements of Chinese media-based think tanks will follow a new development trend through the establish of cooperative innovation system, achievements make and press system of "all media tendency", market-oriented transformation theory, brand strategy, and exerting international influence.

1. Introduction

In recent years, many Chinese media like Xinhua News Agency, People's Daily, south window media, have begun to try to transform into think tanks. As the media think-tank gradually becomes an important part of the new type of think-tank in China, its production model based on the media operation structure and communication platform has gradually formed, showing distinct characteristics from other types of think tanks.

As of 2019, more than 50 media outlets, including 8 central media like Xinhua, People's Daily, 12 local media like south window media and more than 20 market-oriented media, have announced the establishment of think-tank business units or the overall transformation to think-tank. Joel Wuthnow & Dingding Chen (2020) mentioned, In 2018, the Chinese government announced 25 state-level high-end think tanks, and Xinhua News Agency is the only media think-tank. Xinhua News Agency or New China News Agency is the official state-run press agency of China. Xinhua is the biggest and most influential media organization in China, as well as the largest news agency in the world in terms of correspondents worldwide. Xinhua is a ministry-level institution subordinate to the State Council and is the highest ranking state media organ in the country alongside the People's Daily.

This paper will discuss the classification, characteristics, structure and cooperation problem of spread and re-

**Corresponding Author:*
Meng Chen,
Jiangsu Center, Xinhua think tank;
Email: 1615471347@qq.com

DOI: https://doi.org/10.30564/mmpp.v2i4.2278

search line, team cooperation and transformation problem of research and spread, research production and media production positioning problem, and spread channel widening problem and development trend of some representative media think-tank in China, so as to provide reference for the media transformation and the development of new think-tank in China.

2. Literature Review

Joel Wuthnow & Dingding Chen believe that While private think tanks have used a variety of strategies to secure funding and access to officials, a major constraint is the continuing influence of their state-run counterparts. Pascal Abb and Patrick Koellner(2015) think that China today hosts the second-largest think tank scene in the world, and many Foreign policy think tanks have received influxes of funding and increased the academic qualifications of their staffers in recent years. Foreign policy think tanks are in many ways linked to the government. While they seek to inform and influence foreign and security policy as well as public discourse on international affairs, they usually do not act as agenda setters.

In this article, the writer try to use SWOT analysis to analyse what are the strong advantages and weakness, opportunities and threaten exist in current time, use the data provide by Chinese government think tank resources Xinhua News Agency and local governmental media like South Window to make comparison.

3. Main Findings

3.1 Type Analysis of Results-Based Production Patterns of Media Think-Tank

The production of think tank results generally refers to the academic production process in which the think tank enters the research production process by accepting the government entrustment, undertaking the project, selecting independent topics and so on, and finally forms the academic production process of the ideological products such as consulting reports, research papers, academic reviews and so on.

Media think-tanks have not only media communication channels and public influence, but also the research ability and decision-making influence of think tanks. Media think-tanks still retain significant features of media production in production patterns. About influence side, media think tank has a long way to go to arrive the public.

The production mode of media think-tank is the production form and process of production through its own collection and research resources and through its own media platform. So it has limitation of resources. The production of this kind of products is the iconic production form of media think-tank, and it is an important feature of the dissemination power and influence of think tank.

Compared with other think tanks, the results-based production model of think tanks can be divided into three types: Traditional production models for results, Media results-based production model, Innovative production models. The definitions and differences between each other are below.

3.1.1 Traditional Production Models for Results

The production process of the traditional think-tank results is mostly carried out through government entrustment, bidding project, self-design project of think-tank, participation in other think-tank or institution project research and so on. On the topic direction, generally around the government development blueprint and public policy research. For example, from Xinhua New Agency website, the *Xinhua News Agency* has approved the project of the Central Propaganda Department, “Belt and Road” Foreign Communication and Discourse System Construction. In addition to selecting topics around the government’s strategic planning and policy, the think tank will also focus on local economy, enterprise development and social hot spots.

The output forms of the think tank, such as research reports and research reports, are generally published in the internal publications of the think tank and submitted to the government and related units through special channels. Such as local media watchtower think-tank set up the internal reference journal “watchtower research”. And academic papers and works are through the form of public publication, forming academic appeal and public influence. At present, the traditional production mode of think tank still occupies a dominant position in the production of Chinese media think-tank.

Therefore, it is an important task and goal for media think-tanks to consolidate and strengthen the channel construction of reporting results, form a systematic internal research product line and serve the government’s decision-making needs.

3.1.2 Media Results-based Production Model

Media-type think tank not like traditional production models for results with governmental background, governmental arrange, **it is like semi-governmental** organization, its media form of results are both traditional paper publications, but also adapted to the Internet era of websites and electronic publications, APP, WeChat public number,

 DOI: https://doi.org/10.30564/mmpp.v2i4.2278

Weibo and so on. Media-based production model can be divided into two categories: news production model and research production model.

(1) News Products Production

Through the media think-tank's external media and channels published news works, the main forms include investigation reports, current political commentary, economic situation analysis and so on. The production of news products is mainly done by the communication team of the think tank and some researchers, special experts and journalists are also involved in it. Because it is a news product produced by think-tank, it is no longer limited to stating and analyzing the causes of news events, but to explain the thinking of news events from the standpoint of observers and researchers and become an independent ideological work.

(2) Research Products Production

The main forms of research products include industrial development report, regional development report, economic situation analysis, public opinion report and so on. Think tank research team and external experts, with its own advantages of media resources to carry out research, more can reflect its advantages of media resources and communication channels, forming a good social communication power.

3.1.3 Innovative Production Models

The production of innovative products mainly includes evaluation index, conference forum and brand planning.

(1) Evaluation Index Product Production

On the basis of the collection of certain objective data and theoretical research, a standardized measurement index system is established in the research field, and the qualitative and quantitative evaluation products are given to the research objects.For example, Zijin Media think-tank interprets, studies and publishes the economic confidence in the public data of listed companies and the economic confidence index of Chinese people.

(2) Meeting Forum Product Production

With the help of the public relations propaganda ability of media-based think-tanks, we build and expand resources and circle platform operation, and gather experts and scholars to make suggestions and suggestions through holding closed meetings, round tables and public forums, so as to form the unique results of think-tanks. "Watch tank", for example, launched a series of "future forums" conference products.

(3) Brand Planning Products

Brand planning products are produced by accepting customizable brand planning products. For example, the south window media think tank in recent years through undertaking government and research institutions large-scale activities publicity, commemorative publications, video production and other projects to form a market-oriented product production model.

3.2 Characteristics and Advantages of Results Production Mode of Medium Size Think Tank

China's media-based think-tanks, with abundant media resources, media-oriented operation characteristics and diversified results of think-tanks, have formed a new model of production of think-tanks with obvious characteristics and advantages.

3.2.1 Diversified Resources, Communication and Interactive Platforms

The Chinese media think-tank itself has a huge database of traditional media information, author, topic and content. Some of these media after the transformation of think tanks, the original database to adapt to the development of think tanks, the formation of data and information platform, expert exchange platform, research platform and think tank results platform and other new think tank information platform (see figure 1).

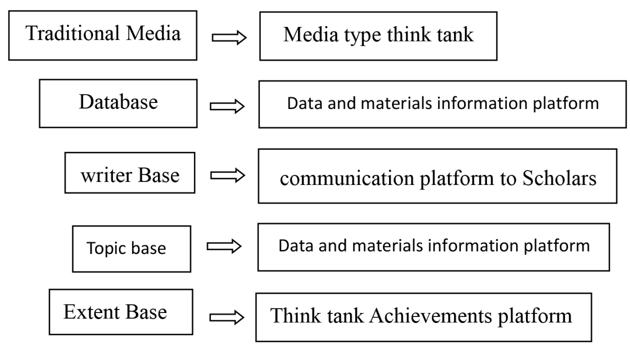


Figure 1. Database Transformation from Media to Media Think Tank

Taking the lookout thinktank as an example, its "Xinhua big data new think-tank cloud" is based on the database data accumulated by traditional media. It is mainly composed of interactive platform of data and information, online exchange platform of experts, open research platform of topic and display platform of results of think tank. Its goal is to become a comprehensive platform of crowd sourcing, crowd funding and online evaluation of thought interaction, achievement display and subject research [5].

Database is a valuable information resource and resource platform for media think-tank. Media think-tank can develop data products and form data assets through database resources, and can also use the platform to absorb and use favorable resources to expand the width and

  DOI: https://doi.org/10.30564/mmpp.v2i4.2278

breadth of the production line of think tank products.

3.2.2 A Pool of Research and Communication Professionals

Media think-tanks need "Outsider scholar" energy to hire researchers from universities and scientific research institutions, but also retain a considerable number of editors, journalists, a small number of them have research potential, have a unique view of current politics, the economy, expert journalists, editors who are good at in-depth reporting gradually try to transform to researchers, its main composition and sources are shown in Figure 2.

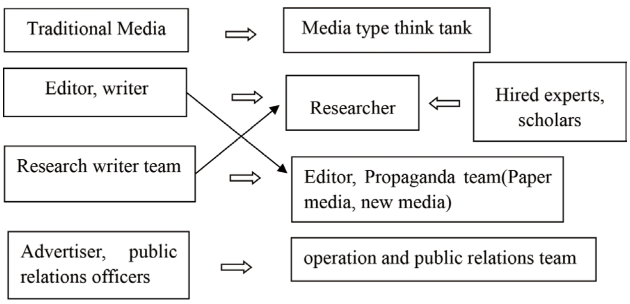


Figure 2. Main Composition of Media Think Tank

For example, the south wind window media think-tank research team is mainly composed of south wind window editor-in-chief, deputy editor-in-chief, executive editor-in-chief and other six people composed of a high-level editorial team. Watchtower now has more than 200 full-time researchers, editors and journalists.

3.2.3 Unique Production Processes that Blend Production and Communication

In the general think tank results production process, the work order of the communication end often occurs after the production end, and the results production is completed into the next communication process, showing a single line of development model (see Figure 3).

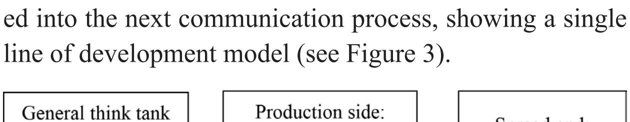


Figure 3. Production Processes for General Think Tank Results

The news products in media think-tanks become important ways to attract audience, guide public opinion and expand the influence of think-tanks through the analysis and observation of current politics and economic situation. Therefore, the communication end is no longer a subsidiary production end of the channel or tool. With the production end join into the production process, there is no sequence, no status, and the communication end of the product production can also be regarded as another form of expression of the production end.

Compared with ordinary think-tanks, the news products of media think-tanks can not only provide direction and clues for their research, but also spread the views of their think tanks to the broad audience of think tanks, and gradually form a unified production process of production and dissemination in the production of products, and it is possible to form an integrated system of results under the idea of unified planning, showing a unique model (see Figure 4).

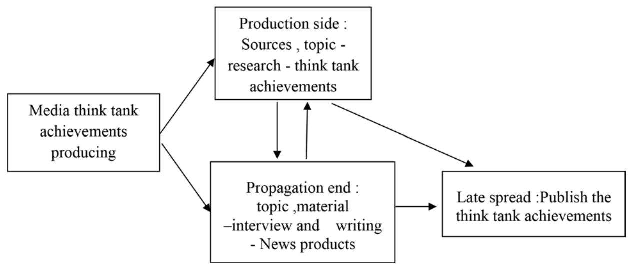


Figure 4. Main Results Production Processes of Media Think Tank

3.2.4 Product Production Model under Market-oriented Mechanism

Media think-tanks, due to the media, born with their own communication resources, channels and audiences, compared with other think-tanks, more influential communication after the transformation of think-tanks, related resources, talent also part into think-tanks, bring flexible development vitality. In three respects:

First: In the production of research think-tanks, media think-tanks are good at giving play to innovative mechanisms, through cooperation with institutions, enterprises and institutions to undertake projects, play their own advantages. For example, from the *People's Forum of People's Daily Society the People's Forum of People's Daily Society* has established an independent civil intelligence market research organization through the financing mechanism. It is not only an exploration of independent third-party research institutions, but also a major innovation in the operation mechanism of media think-tanks by undertaking ministry survey topics, index research, data evaluation and output.

Second: Media think tanks generally own their own paper publications and "two micro (*WeChat, Weibo*) end (news client APP)" new media. Business mindset to run its media well and rebuild the advertising operation mode is also another important way of thinking about the marketization of media-based think tank products. In 2013, from Watchtower database, for example, Watchtower set up its first self-media alliance, the rhino finance and economics alliance, to foster its *WeChat* public numbers and invest considerable marketing expenses to actively develop the advertising business of well-known customers.

Third: Media think-tanks tend to be more market-oriented when developing innovative products. Media think-tank has rich media resources and professional operation team, the public has a high degree of trust in its media research, publicity planning ability and quality. For example, from *the People's Network Research Institute* wbsite, *the People's Network Research Institute* through the organization of public marketing activities, organized media salon and other forms to achieve market-oriented results [4].

3.3 Current Issues in the Production of Media-based Think Tanks

The deep integration of research and communication is an important feature of the production mode of media think-tanks, and in the current construction of media think-tanks, the integration of research and communication must face many bottlenecks and problems that need to be solved.

3.3.1 Communication and Research Production Line Architecture and Coordination Issues

One of the major features of the production model of media think-tank is that communication and production line go hand in hand. Most media think-tanks have evolved from traditional media, among which there are problems such as communication, research system structure, and coordination of working mechanism. This involves a series of new and old policy coordination problems, process combing problems, market-oriented development of funds and the introduction of talent establishment, flexible compensation and other issues.

3.3.2 Collaboration and Transformation of Research and Communication Teams

Most media think tanks have two teams of researchers and communicators. This raises several questions: first, how the communication team can effectively realize the transformation of think tank, and guide the work thinking and skills of traditional media personnel to the work field of think tank. Second, how to give full play to the enthusiasm of the research team, so that it can play a greater role in the two production lines of traditional research products and media products with the cooperation of the communication team. Third, how to carry on the effective performance appraisal to the research team and the dissemination team personnel, implements the scientific reasonable incentive policy.

3.3.3 Positioning of Research and Media Products

At present, the production of media think-tank still has the problem of homogeneity and typology. Among them, there is the question of how to differentiate the products of media think-tanks and other think tanks. For example, how its research products reflect its own communication advantages while showing its unique research strength. When the media products compete with the media, especially the new media products, what kind of product orientation and development route should be established [2].

3.3.4 Expansion of Product Distribution and Distribution Channels

At present, most media think-tanks set up by the central media have special reporting channels, such as watchtower self-built high-end reporting channels, has become the central government's trusted reporting point, and has opened up direct reporting decision-making departments of internal communication lines. For most other media think-tanks, on the one hand, the lack of transmission channels through the decision-making department, on the other hand, its communication platform compared with the current rapid development of new media also lack a broader influence, so in decision-making influence and public communication power is insufficient.

4. Discussion and Conclusion

4.1 The Development Trend of Results Production in China Media Think Tank

Nowadays, with the increasingly fierce competition in the field of think tanks and the pressure of traditional media transformation, the pace of development of media think-tanks in China will further develop rapidly and usher in a new trend of development. But for the structure improvement of Chinese think tank, cooperation of research team and communication team, transformation, positioning research products and media products, spread to public and do more important research, it has a long way to go.

4.2 Give Full Play to the Advantages of the Cooperative Alliance of Think Tanks to Form a Collaborative Innovation Mechanism for Production of Results

On the one hand, building cooperative alliance and giving play to the advantages of collaborative innovation have become the general trend of the development of think tanks in the future. On the other hand, giving full play to

DOI: https://doi.org/10.30564/mmpp.v2i4.2278

the advantages of media think-tanks and realizing communication and cooperation on a unified platform, it is urgent to establish innovative cooperation alliances between media think-tanks in different regions and fields. In this way, we can optimize the allocation of resources among think tanks, strengthen the exchange of personnel, information and results, and realize the optimization of the results and effectiveness of media think-tanks [3].

4.3 Improving and Optimizing the Production and Dissemination System of "Everybody is the Media"

In order to meet the requirements of the transformation of the Internet era, most of the media have established "all media" news centers. As a research institution, media think-tanks should take the research as the logical starting point of all media news centers, push editing center transform to research-center. And form the standard process construction of integration of editing and research.

4.4 Specialized and Market-oriented Production and Operation of Products

In order to develop a powerful media think tank, we must make good use of products and resources to form a development trend of specialization and marketization. Make it economy effective. In the aspect of specialization, media think-tanks should make use of their own professional advantages, especially in the new economy and other fields to collect and study information data, and carry out frontier project research around the key areas of scientific and technological innovation and industrial transformation. For example, the analysis and monitoring of public opinion, the operation and service of data platforms and advertising planning in the field of data, etc.; in the market-oriented development of product production and operation, media think tanks should set up a product operation service side outside the current product production end and dissemination end, and build a product operation and public planning team, dedicated to the operation and promotion of think tank products.

4.5 Personalization and Branding Development Strategy

Media think-tanks come from the media and have a brand effect. *Xinhua News Agency's* watchtower think tank, *Guangming Daily's* Guangming think tank, *Hubei Daily's* Yangtze River think tank, and so on, its set up think tanks enjoy high visibility and attention in society. It is an important choice for media think-tank to develop in the future to give full play to the brand effect and adopt the strategy of individuation and fine-quality.

4.6 Production of Results Advocates "Going Abroad" and Exerting International Influence

At present, Chinese think tanks in international cooperation, strives for international discourse power, and enhances the appeal and influence of international public opinion is still extremely inadequate. The media think-tanks have inherent advantages in taking the road of international development, mainly reflected in two aspects. First, many media think-tanks are born out of traditional and authoritative media. Some media units at the central level, such as *Xinhua News Agency*, have its own accredited institutions and personnel abroad, have relatively mature international media and channels, and have initially constructed a certain international influence and voice. This laid the foundation for product promotion and promotion at its media think tank. Second, the media think-tank itself has a relatively strong communication team and research team, including a certain proportion of international talent, can adapt to the diversified, global work environment and research tasks.

Therefore, the production of media think-tanks must also actively advocate "going out", expands the achievements of new think tanks with diversified thinking and international vision, carries out international dialogue and cooperation with foreign think tanks, convey the "Chinese voice" to the world, and strives to build a new type of think tanks with Chinese characteristics with full international influence and competitiveness [1].

References

[1] Liang Wu, Yu Xia, Yan Ma. Research on the Path of Media Integration and Development Connecting with the Construction of New-type Think Tank with Chinese Characteristics[J]. Proceedings of the Chinese Academy of Sciences, 2016, 31(8): 879-887.

[2] Hailing Liu. Consideration on the Construction of Product Customized Media Think Tank [EB /OL]. [2018-04-13]. http://media.people.com. cn /n1/2018/0413/c419052-29925066

[3] Liang Wu. Research on the Integration Path and Mechanism of Media - Think Tank[J]. Press Front, 2018(2): 19-23.

[4] Yun Sun. Construction and Operation Mode of Industry Think Tank Alliance Based on Cooperative Innovation[D]. Changchun: Jilin University, 2018.

[5] Tian Gan. Looking at think tanks: the growth logic of media-based think tanks [J]. Media Review, 2015, 265(11): 20-23.

 DOI: https://doi.org/10.30564/mmpp.v2i4.2278

BILINGUAL PUBLISHING CO.
Pioneer of Global Academics Since 1984

Macro Management & Public Policies
https://ojs.bilpublishing.com/index.php/mmpp

ARTICLE

How the News Media Cover Environmental Issues in United Kingdom: A Comprehensive Study of Mexico Gulf Oil Spill Disaster in 2010

Ying Sun*

Hefei College of Finance and Economics, Hefei, Anhui, 230000, China

ARTICLE INFO

Article history
Received: 12 November 2020
Accepted: 2 December 2020
Published Online: 31 January 2021

Keywords:
News media
Environmental issue
Mexico Gulf Oil Spill Disaster

ABSTRACT

It is widely known that an increasing number of attentions have paid on environmental issues and meanwhile, the mass media promotes its role in helping define the concept and field of environment and also bringing environmental issues into social attention. This paper intends to investigate how news media in covering environmental issues in United Kingdom through the perspective of Mexico Gulf oil spill incident in 2010 particularly. In details, this study focuses more on the study of trends and patterns of news coverage on oil spill disaster during the research process. The sample is made up of two mainstream newspapers in UK (the *Times* and the *Guardian*) which are selected based on circulation figures and politically centre-based figures from April 2010 to April 2011. This study employs content analysis as its primary methodology to observe the trends and patterns of news coverage. In addition, this study not only discovers characteristics, trends and patterns of each newspaper but also uses comparative way to discover differences and similarities in order to investigate how national newspapers differ from each other when focusing on the same environmental news. Through the investigation step by step, this study answers the hypothesis and concludes that news media cover environmental issues in a particular ways as they adopt different trends and patterns in coverage while they still have some ways in common.

1. Introduction

Human being as an individual live in the environmental world and all actions and behaviors generate impacts on both the natural eco-system and human society. Hence, it is essential to get a better understanding of environment through communicating information. Disasters are occurring more frequently around the world nowadays and the media becomes more and more pervasive throughout the whole society. As Davison (1982) states, public awareness is increased and national or international aid efforts are influenced by the media coverage given to particular disasters. In contemporary society, the media does not only report on events themselves but also does functions to interpret and construct meanings for the public.[1]

According to Hansen (2009), there is an increasing number of research have been done on the relations of mass media and environment which means that mass media has played a key role in bringing environmental issues into public and political concerns. Therefore, this study will continue focusing on previous research directions that with further investigation on how news media cover envi-

**Corresponding Author:*
Ying Sun,
Room 3402, Hefei College of Finance and Economics, Unit 1of Building 7, Brilliant Mansion , Zhengwu District, Hefei, Anhui, 230000, China;
Email: 32087675@qq.com

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

ronmental issues. [2]

The first section is about the literature review on this research field. This study picks out ten related literatures from other authoritative researches aiming at demonstrate and support the hypothesis of this study. Generally speaking, Hansen's (2010) statements will help us understanding the deep relations among environment, media and communication at first. Hansen's (2000) another research achievement will help demonstrating media coverage of environmental issues from perspectives of claims-making and framing on British newspapers secondly. Smith's (2000) research theory will help understanding media's policy on the representation of environmental issues thirdly. Bakir's (2005) research results will enhance our knowledge on media's role in risk communication, especially through analysis of Greenpeace and Brent Spar issues fourthly. Fifthly, the result from Molotch and Lester (1975) demonstrates news coverage given on Santa Barbara oil spill incident which will help pointing a direction at how to analyze newspapers in order to investigate news coverage on a specific environmental issue. Sixthly, the research achievement by Widener and Gunter (2007) will keep demonstrating interpretations of environmental issues from newspapers that focus on Exxon Valdez oil spill disaster. Seventhly, a new direction carried by Anderson and Marhadour (2007) on media politics of oil spill will analyzes and demonstrates how an environmental incident influenced by maritime policy in different country with a comparative research.[3]

The rest three literatures will be much closer to the topic of this thesis as they focus on research of media and Mexico Gulf oil spill incident particularly. The eighth literature refers to the evaluation of media coverage on Mexico Gulf oil spill investigated by Pew Research Center's Project for Excellence in Journalism (2010). It will discuss and demonstrate how the media cover oil spill disaster through seven key points. Ninthly, Associated Press (2010) investigate how newspapers cover BP oil spill incident which focus on a combination of media discourse and political discourse that will help better understanding the relationship between the media and agents of politics in news coverage. The last but not the least, according to the research result from Meckel and Vople (2011), it will improve understanding of how traditional and social media are interrelated in covering the BP oil spill disaster in 2010. All in all, the whole ten literature reviews aiming at demonstrate and support the question of how news media cover environmental issues in current study.[4]

The second section is about which methodology will be applied in this study. Content analysis is the only method in analyzing newspapers' coverage on Mexico Gulf oil spill incident in this study. Besides explaining why content analysis is used, this section will describe how to select sample articles, what kind of sample will be adopted and how to do coding categorization in order to better explain the research method in the research process.[5]

The third section is about data statistics and findings in terms of collected data analysis. The main purpose in this section intends to describe and analyze datum in each type and specifically manifests the differences and similarities of various ways in covering oil spill disaster for both two national newspapers in terms of each coding categorization.[6]

The last section in main body of the thesis is about a comprehensive discussion based on above data statistics and findings. The aim of this section not only does discussions of ways of news coverage in two national newspapers in UK but also does comparisons of how the *Times* and the *Guardian* differ from each other in covering the Mexico Gulf oil spill disaster. [7]

In short, this thesis intends to discuss how news media cover environmental issues particularly from perspective on Mexico Gulf oil spill disaster in 2010 that reported by the *Times* and the *Guardian* which belong to UK's national newspapers. On one hand, the study will investigate trends and patterns of each newspaper in covering this representative environmental disaster; on the other hand, the study will compare each trends and patterns in order to reveal the differences and similarities in their news coverage which will definitely help analyzing and demonstrating how news media does coverage on environmental issues.[8]

2. Literature Review

Both public and political concern has paid on environmental issues in a large extent as it has been a kind of social problem. According to Hansen (2010), the term "environment" has been associated with a special dialog about natural environmental problems which to do with relationship of human beings. Hansen (2010) also states that mass media and communication have played the vital role both in helping define 'the environment' as a concept and bringing environmental issues into social and political concerns. In the present paper, it tries to investigate and analyze how news media cover a particular environmental issue-Mexico Gulf oil spill disaster in 2010 and with the hypothesis that news media has its own trends and patterns in covering specific environmental issue with great contributions in making environmental problems issues for public and political consideration. The following ten literature reviews will attempt to demonstrate and support the hypothesis of current study.[9]

In the book by Hansen (2010), he had done a deep-going research on the relations among environment, media and communication. Each chapter in his book focused on a specific aspect to explaining and analyzing relations of media process with environmental issues. There were two specific questions that were addressed for supporting the study. As he states, understanding media roles in the construction of the environment and environmental issues gradually becomes a matter of designing the vital and interactive expression of environmental issues. According to Hansen (2010), there was a comprehensive literature on public opinions and attitudes towards environmental issues. Majority of researches suggested that public awareness and considerations about environmental issue gradually developed from 1960s and recent studies also indicated that public concerns have increased. Similarly, as Hansen (2010) stated, there was an increasing number of researches on media coverage of environmental issues which together with the searches on public opinion. In terms of related research, it suggested that environmental issue became a subject of media coverage in the 1960s firstly. Moreover, Hansen (2010) indicated that there has been a relatively dramatic increase research on media content and media interest in the analysis of environmental news coverage.[10]

Through the analysis of relations between mass media and the social construction of the environment from Hansen (2010), it concluded that it definitely requires a perspective which was beyond traditional approaches to the study of news media when trying to understand the character of the media in the development of environmental issues for both public and political concerns. Lastly, Hansen (2010) claimed that agenda-setting, propagation studies, research of public opinion and media influence, the study of media organizations and relationships of source and communicator in news production have all made significant contribution to our understanding of mass media and environmental issues in variety of ways.[11]

The next literature review in relation to the media coverage of environmental issue is strongly demonstrated by the research of Brent Spar as a representative issue of environment. In the research article written by Hansen (2000), he did detailed analysis and discussion on claims-making and framing on British news coverage of the Brent Spar controversy. At first, Hansen (2000) put forward the concept of claims-making by using dialectical method. He argued that if environmental issues did not be identified and defined, issues won't present themselves for public concerns or political actions. Hence, he got a conclusion that claims-makers play a crucial role for the identification and construction of social problems. Accordingly, mass media as a key public arena for definitions, voices of claims-makers should be given more attention and investigation. Generally, gaining media coverage often been seen as the most immediate task in the process of claims-making. So, Hansen (2000) pointed the vital element 'framing' in media coverage in order to better analyze and explain the British newspaper coverage of the Brent Spar issue.[12]

All of these results combined to answer one hypothesis of how news media does news coverage on environmental issues. It is clear from above literature analysis that different newspapers frame and inflect the specific issue which they give coverage to in an extremely different ways. Some prefer reporting the issue itself while others prefer to do reports including subjective opinion which try to affect public opinions. [13]

Thirdly, in the research article by Smith (2000), he did investigation on performance and changes of business, the media and the news environmental politic after the Brent Spar incident. Besides summarized the event itself, the discussion more emphasized media treatment of the issue and it looked at the influence of the Brent Spar on both business thinking on corporate responsibility and policy making about the representation of values in sophisticated decisions as well. [14]

The fourth literature should be mentioned is the investigation of Social Amplification of Risk Framework. SARF has been examined in order to get comprehension of the media's role in risk communication. In the process of investigation, the battle between Greenpeace and Shell UK over the deep-see disposal of the Brent Spar as a complicated heavily mediated risk communication case study was used to explore whether the Social Amplification of Risk Framework functioning well or not.[15]

First and foremost, Bakir (2005) pointed the purpose of Social Amplification of Risk Framework which aimed to inspect contextually how risk and risk event interact with psychological, social, institutional and cultural processes in ways that amplify risk perceptions and concerns, thus shaping risk behavior and consequences. According to Murdock et al (2003) and Pettes et al (2001), Bakir (2005) concluded that from the perspective of media studies, Social Amplification of Risk Framework had a number of critiques. The first aspect refers to SARF's static conception of communication; the second aspect refers to SARF's lack of attention towards how key actors use the media; the third one refers to its lack of systematic atten-

DOI: https://doi.org/10.30564/mmpp.v2i4.2553

tion towards the media as an amplification station; the last refers to its simplistic assumptions of how the media operate as an amplification station.[16]

In Bakir's (2005) research, UK television news reporting was chosen for close textual analysis given that in the Brent Spar issue. The campaigh of Greenpeace as pressure group targeted a decision of Shell UK and the UK government, hence, UK television news was expected to be a major amplification station. Also, as Layder (1998) maintains, the particular choice of UK television programs were governed by purposeful sampling. The research even found that more in-depth television evening news programs were chosen in order to achieve a wide rage of prime time television news debate on the Brent Spar issue. During Greenpeace's seven week campaign for direct action, every Spar-related broadcast provided a database of twenty news items as well.[17]

Apart from the analysis of how mass media did on Brent Spar, Bakir (2005) also analyze media's role in Shell's response to the risk signals. Journalist reporting was regarded as key way to translating Shell's details into sound-bites and creating matters of interpretation. However, it came late to weaken the influence of Greenpeace's risk signals. [18]

In the research of Bakir (2005), it highlighted the layering in various amplification stations including the mass media itself. Surely, the use of the Social Amplification Risk Framework to understand the Brent Spar issue highlighted the requirement for closer examination of media coverage during seven-week campaign of Greenpeace.

Regarding to another kind of news coverage of oil spill disaster, a series of investigation had focused on Santa Barbara oil spill incident. This is the fifth literature worth being mentioned to support the topic. Molotch and Lester (1975) published their research results on coverage that be given the Santa Barbara oil spill as local occurrence and national event by a national sample of newspapers. As they stated, case study was used in this investigation in order to developed a coordinating perspective and propositions about how to made news appearing generally in the United States. And then, they suggested a duplicable methodology which can be applied to test similar propositions in a wide range of cases. In the process of this investigation, Molotch and Lester (1975) borrowed from the ethno-methodological perspective instead of traditional theory and experience. Their strategy was to compare two available fields of news which was created for the Santa Barbara local publics and another was created by newspapers from the rest of the country. As for coding, it was coded in terms of the source of story, the location of the story in the newspaper, the length of the headline, the length of the story and the placement of the event in the story as a given occurrence was found in the newspaper. With the development of research, Molotch and Lester (1975) found that none of the sampled newspapers came close to the local paper according to the number of occurrences covered although the Santa Barbara oil spill was considered as one of the nation's big stories in 1969.[19]

Among results, one surprising finding was that geographic propinquity to the oil spill is a good predictor according to frequency of occurrence reporting. However, there was one existing fact that frequency of occurrence reporting declined with an increasing temporal distance from the date of the spill. It didn't only refer to the coverage declined over time but also referred to the proportion of occurrences published in the local paper. Another surprising finding focused on different access to event making which pointed at subject. It provided an obviously discernible hierarchy among possible newsmakers according to access to newspapers with the president who was regarded as the most potent creator of events in the United States. The subject 'oil' came close to the president according to frequency of coverage. The third most excellent group of subjects was actions and statements in the federal executive branch. In addition, Molotch and Lester (1975) mentioned that oil companies and conservations were the most easily conflicting interest groups according to the use of newspapers after the spill. The third surprising finding focused on different access to event making which pointed at activities. The coverage which resulted from various activities indicated that the pattern that appeared was similar to that for occurrence subjects. Complying with previous findings in regard to access of both subjects and activities, Molotch and Lester (1975) pointed that the pattern can be divided into two specific patterns. One fingered that a nationwide coverage of activities was favorable to oil companies more than coverage given to conservationists. Another one pointed that national coverage of activities was thoroughly concentrated in a period immediately following the spill disaster when contrasted to local coverage. [20]

As the investigation used the findings to explore the relationship between procedures and habits of news producers on one hand and the content of coverage on the other, the problems of this study would follow up. One finding showed that an occurrence received much coverage close to its date of origin but subsequent related happenings received comparatively little coverage. Nevertheless, the tendency of American journalists did not persevere in a story to judge the consequence. But, all in all, with considerations that including the content of what is published and the types of news work procedures which have been allowed to resist as a kind of appropriate professional practice, the media supported the powerful without doubt.[21]

In allusion to above concept, the sixth literature followed to do detailed explanations. Widener and Gunter (2007) carried a research to examine the mutual interpretations of disaster recovery as developed in the alternative Alaska Native newspaper, the Tundra Time that following the Exxon Valdez oil spill disaster. In the process of research, they examined the dominant themes of recovery and characterized the interpretations provided by newspapers as an "Alaska Native perspective". Firstly, Widener and Gunter (2007) analyzed how recovery of the oil spill was portrayed in the *Tundra Times*, conducted a secondary analysis of the *Anchorage Daily News* and *Anchorage Times* and used secondary sources to undertake limited comparison of oil spill coverage reported in the Alaska media. Secondly, Widener and Gunter (2007) argued that the differences between the *Tundra Times* and the mainstream media lie in the processes by which they construct media packages. During this period, Widener and Gunter (2007) conducted an ethno-graphic content analysis to discover the meaning of recovery be portrayed in the *Tundra Times* after the oil spill disaster. There were four findings after this deep procedure of investigation. The first aspect refers to sponsor activities and media practices. Widener and Gunter (2007) found that the majority of claims makers were government representatives, scientists and Exxon oil spokespersons in their investigations of a long-term recovery in the *Anchorage Daily News*. Also, they found that seven of the eight Alaska Native voices appeared in the newspaper entitled with Fears Color Subsistence Life. In most aspects, the coverage presented in *Tundra Times* provided an obvious comparison with the voices that found in the mainstream media. Widener and Gunter (2007) even found that marginalized cultures and selective media had their own expertise systems. The second aspect refers to the cultural resonance. Widener and Gunter (2007) found that coverage of recovery was restricted basically to measurable existence such as financial compensation or wildlife after checking *Anchorage Daily News*. In contrast, the *Tundra Times* sought to make a connection between damage and expanding themes of respect, duties, and the betrayal of the oil industry and so on and so forth. The third aspect refers to package variation. Widener and Gunter (2007) suggested to including disagreeing views that lent credibility to the newspaper. They noted that articles in the *Tundra Times* emerged to resonate with a guarantee to both sustainable ecosystems and the state's economy of resource. In contrast, the *Anchorage Daily News* provided a wider range of perspectives which including the presentation of different assessments of whether a specific species had recovered or not. In a word, the *Tundra Times* and the *Anchorage Daily News* both offered an internal package variation. The fourth aspect refers to the constricting symbols. As Gamson and Modigliani (1989) suggest, constricting symbols sententiously capture the key position through image and word choice which is always regarded as the final tool in understanding media packages. As for this, constricting the key message of the *Tundra Times*, Widener and Gunter (2007) found its symbolic image was death while the *Anchorage Daily News* adhered to visual figure of tough wildlife.[22]

As a plenty of investigations were done how mass media covered oil spill disaster, Anderson and Marhadour (2007) carried a new direction on media politics of oil spill. It is the seventh literature to support the thesis. Their article examined the different ways that newspapers of Spanish, French and United Kingdom framed the *Prestige* oil spill. Also, it reported the findings of a comparative study of the different ways that inflected the issues with concern of the influence of the disaster and maritime policy among those three countries. Furthermore, Anderson and Marhadour (2007) analyzed how national and local newspapers differed in their framing of the *Prestige* oil spill. Looking at the method that been used, it found that the study was carried based on content analysis of newspaper coverage of the *Prestige* accident. The sample mostly selected from Spanish and UK newspapers with two French newspapers which in order to enhance cross-cultural contrast.[23]

According to Anderson and Marhadour (2007), there was crucial variability among space devoted to the oil spill by national and local newspapers in Spain, France and UK. The result showed that the highest level of coverage was in the Spanish local newspaper while the lowest number of articles was in UK during the sample period. In the process of coverage research, Anderson and Marhadour (2007) found that in the United Kingdom, the newspaper coverage reflected the fact that it was a country far away from the incident with a little consideration directly to the threat. Besides, UK newspapers had paid more attention on the consequences for the environment rather than the impact on the local organization or socio-economy after oil spill disaster. But regarding to French newspaper, the first report covered the *Prestige* oil spill as an accident spared from the country. But with the very quick and variable expansion of pollution, newspapers rapidly made an

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

association between arrival of balls and oil spill. Meanwhile, authorities feared that tourists would cancel travels because of the pollution. Anderson and Marhadour (2007) also noted that there was a tendency for the news media to concentrate on closer-to-home items to get a high degree of relevance. Through this point, comparison among these three countries manifested that local or regional newspapers gave much more concentrated and continuing coverage than national press. Generally speaking, national newspapers in Spain, France and UK framed *Prestige* oil spill in accordance to its environmental impacts and political controversy while local press in Spain focused on implication for local economy. The last vital finding in the study was that websites discussion about *Prestige* had an obvious effect on mainstream news coverage as it provided more competing accounts. Nevertheless, Anderson and Marhadour (2007) argued that internet news coverage still under the domination of news agency material.

Apart from findings in the study process, Anderson and Marhadour (2007) admitted that the study of *Prestige* oil spill had failed to provide a systematic analysis of news coverage to some extend.[24]

No matter how much extensive discussion and studies been done on media and environment, or specific environmental issues, such as Brent Spar, Exxon Valdez oil spill, Santa Barbara oil spill and *Prestige* oil spill, news media still have a limited research content to investigate media coverage on these typical environmental issues. Naturally, when a new catastrophic environmental incident appears, news media will move to do related tracking reports rapidly. It is widely known that Mexico Gulf oil spill causes tremendous impact on the earth which continued to gush for another three months since happening date April, 2010 and especially be seen as a new research representative of media coverage of environmental issues. Without doubt, such a disaster poses a set of challenges and opportunities for the news media. Recently, some of researches begin to investigate different aspects about media coverage of oil spill disaster. The following literature will show how the media cover the Mexico Gulf oil spill disaster and its related issues that analyzed and discussed by other researchers.

All of these results combined to answer one hypothesis of how news media does coverage on environmental issues. It is clear from above previous literature analysis that news media carefully choose different angles to cover the specific news. News media tried to report and explain the efforts to contain the oil spill and make reliable estimates of the extent of the environmental and economic damage out. And the news media coverage of the disaster also includes valid amount of technical and scientific expertise.

Nevertheless, the news media not only does coverage on events themselves but also functions to interpret and construct meaning for the public through its media coverage. On one hand, the media function to provide news of disasters; one the other hand, it also to reiterate social ideology that make contribution to social order. As Button (2002) states, the media decides which stories are the most news-worthy and whose voices the public will hear. However, Button (2002) then observes that it is unavoidable to make a combination of media discourse about disasters and political discourse about disasters which attributes to the power structures of society that links the media and the agents of politics.

This links to the ninth literature that has been researched by Associated Press (2010), they did investigation over six articles which covered the BP oil spill and analyzed them in three groups. The first two articles made up the control group that did not mention any government related words in the headlines.

In the case of BP oil spill, the first article of control group had a tendency to focus on the oil industry as the sinner of the disaster. This article framed the disaster as an accident and blamed it for human mistakes. The second article discussed the engineer's report on the oil spill. It evaluated the disaster with reference to government's agencies and personnel despite that there was bits of government terminology in the headline. In addition, the article analyzed the content of the report with criticism of federal regulators for not identified the high risk methods implemented on Deepwater Horizon. In a word, this article pointed specific faults in the operation of the oil industry and assessed the failure of government in monitoring the industry efficiently.

Following, the next two articles were published with terminology of government in the headlines along with reports of oil spill. The first one here mainly discussed government responsibility in step into oil spill issue. One side, it talked over the responsibility of oil companies; the other side, it insisted that the government was accountable for supervision and regulation as well. According to Associated Press (2010), the second one not only reported the disaster itself but also established the key role of government in federal safety regulation.

With deep-going research on last two articles, Associated Press (2010) found that the government was not the only one to be blamed in media coverage on Gulf of Mexico catastrophe. There was a criticism pointed to president as well. Apart from blames on BP's responsibility of the

 DOI: https://doi.org/10.30564/mmpp.v2i4.2553

disaster, the newspaper media also forcefully claimed that the president had huge responsibility in response to the disaster.

Based on the investigation by Associated Press (2010), it concludes that the media do not function barely to report on action but also assigns significance and value to the action with purpose. Media coverage of disasters involves government and even cast full blame on the government or the president in relation to a given disaster.

One more, Meckel and Vople (2011) investigated the relations between mass media and BP oil spill disaster and then published a report mainly on how traditional and social media were interrelated in covering the BP oil spill in 2010. As the explosion of the oil rig Deep Water Horizon in Mexico Gulf had caused the most tremendous oil spill in the history of United States, this disaster was considered as one of the major topics on the news agenda in the summer of 2010. According to the Meckel and Vople (2011), there was an intensive coverage in traditional media and ultra discussion on social networks in regarding to BP oil spill. The study on media coverage in both traditional media and social media was carried by Meckel and Vople (2011) in choosing the date from 31st, May to 30th, June that aimed at analyzing a complicated interrelation in the agenda setting and several media coverage. The results came from a quantitative and qualitative analysis of the coverage through seven major traditional media, two hybrid media outlets and social network like Blogosphere. First of all, Meckel and Vople (2011) concluded that traditional media and social media diffusely covered similar themes. But in details, they found traditional media focused more on political news and facts while social media did media coverage catered to rumors and human interest. In the next place, as Meckel and Vople (2011) stated, media releases mostly driven by President Obama and government, which means the news agenda regarded White House actions as its primary diver.

Based on the research results by Meckel and Vople (2011), it gets a conclusion that there is an obvious difference between traditional media and social media in covering the same environmental issue as they own diverse perspectives and purposes. Nevertheless, difference also has one thing in common that refers to the main driver of news agenda for media coverage in both traditional and social media.

By reviewing previous research achievements in this field, majority of investigation had addressed on claim-making and framing of news media on environmental issues, media policies on environmental issues and media's role in covering environmental issues. In details, most of researches focused on media's angles in news coverage on a specific environmental issue. The content analysis and case study were also the most popular methodology that been applied in this research field. Yet, the reporting angles of news media, such as coverage towards characteristics of environmental news, and the trends and patterns of news media in covering specific issue do not reach extended study and analysis on how news media cover environmental issues actually. Based on above previous research results, this thesis will keep intensive study on how news media cover environmental issue from Mexico Gulf oil spill disaster in 2010 particularly. Furthermore, it will focus more on perspectives of the trends and patterns of news media in covering a particular environmental incident.

3. Methodology

This chapter only discusses one method that will be used for this study: content analysis. It will observe the trends and pattern of environmental news coverage from two national newspapers (the *Times* and the *Guardian*) in United Kingdom and does comparisons between these two national newspapers with the purpose to analyze and discuss both similarities and differences of news media's representation concerning environmental issues.

3.1 Why Content Analysis?

According to Berelson (1952), content analysis is a kind of research methodology for the objective, systematic, and quantitative description to manifests content of communication. In the mean time, McCombs, Shaw & Weaver (1997) and McCombs & Shaw (1972) also maintain that mass media regard content analysis as the most productive method in investigating the phenomenon of agenda setting. In the book written by Hansen, Cottle, Negrine and Newbold (1998), they state that content analysis is a quantitative method by definition. This method aims to identify and calculate the occurrence of specified characteristics or size of texts and then it is able to figure out some information about messages, images, representations of texts and their wider social significance. Meanwhile, Barcus (1959) defines content analysis as the scientific analysis of communication messages that commands the analysis to be precise and systematic.

Generally, the development of content analysis study is divided into two stages. As Krippendorf (2004) writes, content analysis proceeded simplistic studies but did management to produce remarkable findings in the early years. Previous studies found, for example, religious, scientific or literary matters in the media were declined in favor of

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

gossip, sports or scandal. Krippendorf (2004) then claims that the second stage of content analysis research has risen to questions of representations.

All in all, content analysis has been proven as an important study method in the research of newspaper content. In addition, content analysis can provide new insights, improve a researcher's understanding of a specific phenomenon and generate practical actions in the study of environmental coverage in newspapers.

3.2 Purpose

Content analysis is chosen as the primary method of research in this study because of its extensive utilization of the technique in previous researches which have some similarities to current study. In more detail, this study intends to examine news media coverage on environmental issues using three terms: trends, patterns and differences/similarities of the environmental articles which are defined by Krippendorff (2004, p. 47) as a kind of inference.

In the first place, the trends and patterns refer to observing individual characters of news coverage for these two national newspapers and even their changes among news coverage on one specific environmental issue. Aiming to find how news coverage behaves over time in a sample period. Here, this paper mainly focuses on studying each trends and patterns of news coverage in each newspaper through the sample period which including the number of article in each sample month, the location of story, the length of article, news sources and theme selection.

In the next place, comparisons between two national newspapers include differences and similarities on news coverage which mainly based on characteristics of news (length of article and location of story), types of news sources and theme selection.

3.2.1 Differences

The first term refers to the characteristics of environmental news which including the number of articles in each month of sample period, the length of article, location of story in each newspaper. It aims to find how these aspects differ from each other when cover the same environmental incident from different political centered newspapers in United Kingdom. The second term refers to the different news sources in each newspaper. It aims to find differentiations between political centre-left and centre-right newspapers. The third term refers to the theme selection in each newspaper in the same sample period. It aims to investigate the preference of each newspaper both on Mexico Gulf oil spill disaster.

These three terms will be analyzed in details in accordance to three aspects that are explained in the following section of coding categorization. As for this study, it is assumed to describe systematic relations between subject categories in newspapers.

3.2.2 Similarities

Apart from above presupposed research terms, this paper will not neglect similarities between two national newspapers through the comparison process. And the detailed explanation will be recorded in Chapter 4.

3.3 Methods

3.3.1 Selection of Newspapers

For this study, content analysis was conducted on two mainstream national newspapers in United Kingdom. They are the *Times* and the *Guardian.*

The selection is based on circulation figures and political figures. According to the British Business Survey (2005), the *Times* has the highest number of readers among diverse social class of any of the "quality" papers. The certified average circulation figures for November 2005 showed that The *Times* sold 692,581 copies per day. Besides, the *Times* is regarded as a politically centre-right newspaper. Although, the Guardian does not have the second highest circulation among the "quality" newspaper, it is a politically centre-left newspaper. However, these two national newspapers as representatives of the UK's mainstream newspaper, especially represent two political parties have comparative enough persuasiveness to explain how news media cover the same environmental issue in United Kingdom.

3.2.2 Unit of Analysis

As Pellechia (1997) defines, the unit of analysis means that environmental news story that be measured in column centimeters. Hence, this study will define environmental news content as that which deals with a specific theme on the same issue in terms of the purpose of research, but excluding positive or negative judgments. According to preliminary estimates, this definition will include plenty of reporting themes on Mexico Gulf oil spill disaster.

3.2.3 Sample

As the Mexico Gulf oil spill disaster happened 15 months ago, there are not over abundance of media coverage on this incident, especially focus on coverage of two mainstream newspapers. Hence, this study prefer choosing one year as the researched date which will observe the news coverage of such an incident from the time of occur-

 DOI: https://doi.org/10.30564/mmpp.v2i4.2553

rence 20th, April 2010 to 20th, April 2011. The reason why choose one year as a sample period is because one year can be regarded as a complete cycle in covering BP oil spill disaster, which is possible and convenient to compare the changes of news coverage.

As for sample tool, Nexis UK will be applied as a key tool in order to identify coverage in both national mainstream newspapers. First of all, typing 'BP oil spill' in Search terms section, and choosing UK National Newspapers in the Sources section, the *Times* and the Guardian are included here, then choosing the date between 20th, April 2010 and 20th, April 2011 in Specify date section. According to above three elements, the searching result shows 155 articles in total. As all results are not completely relevant to 2010 Mexico Gulf oil spill disaster, it is necessary to do further selection from subject section. As Nexis presents, there is a specific subject named '2010 Gulf Coast Oil Spill' which contains 56 articles. There into, the *Times* involves 25 articles while the Guardian presents 31 articles. The following investigation will be done through the comprehensive analysis of these 56 articles.

All collected articles are coded based on the coding categorization which will be discussed in section 3.4 in this chapter. The coding sheets will then be analyzed by using the SPSS software, Microsoft office with corresponding diagrams.

3.4 Coding Categorization

The coding categorization was divided into three sections: the characteristics of environmental news, news sources and theme selection. The coding categorization is designed based on the research objectives.

In the first section, the characteristics of environmental news coverage mainly focus on the number of articles in each mother of sample period and the location of the story in the newspaper (e.g. front page, news section, home page, financial page or other inside pages) and the length of articles. Coding categorization of Location of article and Length of article will be listed in Appendix 1.

In the next section, news sources here intend to observe the main sources that been quoted or referred to in the news coverage. It is the vital section as it suggests who makes the news basically. The main news sources list will be displayed in Appendix 2.

In the final section, the list of themes was compiled after above steps. It mainly aims at studying what is about the oil spill that the news coverage focuses on. Obviously, it seems a long list to provide a variety of themes from the same environmental issue. Coverage from different themes can contain different subjects. In addition, the "Others" category will include the least reported themes on the oil spill issue for both national newspapers. And the coding categorization will be list in Appendix 2 as well.

However, the main limitation in constructing coding categorization exists in the process of get a comparable measurement for theme listing to match both national newspapers. Hence, it will definitely take a longer time to get a comparably reliable coding categorization of content analysis. The final coding categorization will be given in Appendix, while the statistic analysis and findings will be discussed in Chapter 4 and a comprehensive discussion of research results will be stated in Chapter 5.

Statistic Analysis and Findings

This chapter analyzes news content which intends to observe both the trends and patterns of news coverage in each newspaper and the differences/similarities of news coverage between the *Times* and the Guardian. The comparison part in this chapter will be divided into three specific sections: the characteristics of environmental news, news sources and theme selection.

4.1 Trends and Patterns of News Coverage in Each Newspaper

It is a little bit difficult to figure out the change of news coverage on a specific environmental issue during the sample period for a particular newspaper. For this part, the paper will investigate the trends and patterns of news coverage of both the *Times* and the *Guardian* from the number of article in each month of the sample period and the placement of story with time progression.

4.1.1 Number of Article in Each Month (Sample Period) of Each Newspaper

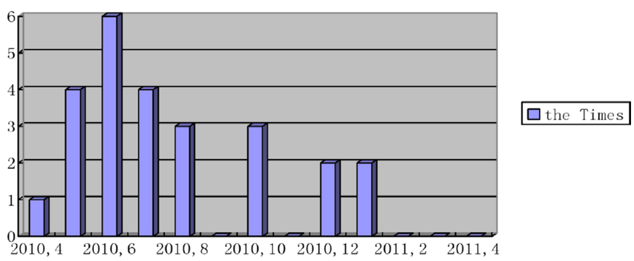


Figure 1. Number of article in each month in the *Times*

Above bar Chart 1 shows the number of article from 20th, April, 2010 which is the time of incident occurrence to 20th, April, 2011 in the *Times*.

Obviously, the general trend of news coverage in the *Times* presents a situation of fluctuation which reaches a largest coverage in June 2010 with 6 articles in total. There is no news coverage on Mexico Gulf oil spill in September 2010, November 2010, February 2011, March

DOI: https://doi.org/10.30564/mmpp.v2i4.2553

2011 and April 2011 while there are 4 articles both in May 2010 and July 2010, 3 articles both in August 2010 and October 2010, 2 articles both in December 2010 and January 2011. In addition, there is 1 article in April 2010 since the oil spill incident happened. According to the statistics of number of article, the quantity of news coverage in the *Times* manifests a rising tendency from the beginning and reaches its peak in June, and then gradual reduced to zero in September 2010. Although, the *Times* covers oil spill with several articles in later seven months, the holistic quantity of coverage decreases month by month until no coverage. If it divided the sample period into two parts, the first part which contains six months is the main time for oil spill incident coverage while the rest six months as another part does the least number of coverage.

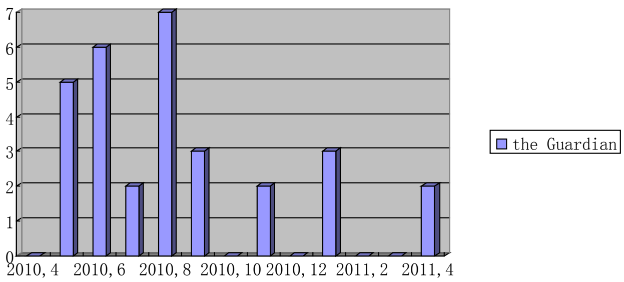


Figure 2. Number of article in each month in the *Guardian*

Above bar Chart 2 shows the number of article from 20th, April, 2010 which is the time of incident occurrence to 20th, April, 2011 in the Guardian.

The most obvious difference from the *Times* is that there is no coverage in April 2010 when the incident happened. However, more and more coverage begins in May 2010 with 5 articles and 6 articles in June 2010 and 7 articles in August although there is a little drop in July with 2 articles. And the quantity of news coverage in the Guardian reaches its peak in August 2010 which differs from the *Times* that in June 2010. As the bar chart shows, there is a fluctuation of the quantity of coverage from September 2010 to April 2011. There are 3 articles both in September 2010 and January 2011, 2 articles both in November 2010 and April 2011 while there is no coverage in the rest of 4 months. It has the similar situation as the *Times*, the first six months as a part has the majority of quantity of news coverage.

4.1.2 Location of Story in Each Newspaper during the Sample Period

According to data statistics, it finds that the placement of story in the *Times* and the Guardian has a little intersection area which means that it's not easy to compare relationship of the location of story. So, the following two bar charts listing number of article for each newspaper in its unique newspaper edition piece that in order to manifest the difference between them.

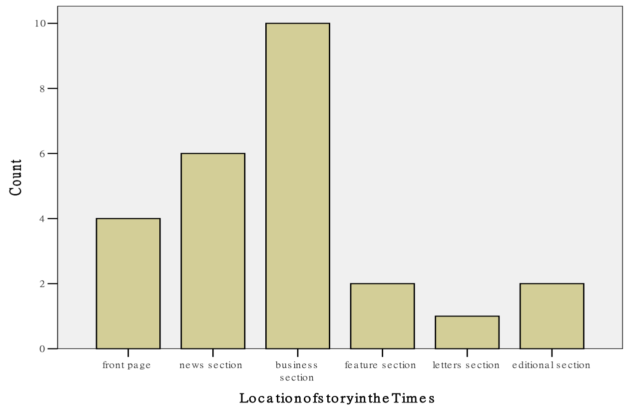


Figure 3. Location of story in the *Times*

After analyzing total 25 articles in the *Times* from 20th, April 2010 to 20th, April 2011, page classification as above bar Chart 3 shows that includes six sections: Front Page, News Section, Business Section, Feature Section, Letters Section and Editorial Section. The *Times* gives much more coverage of oil spill incident on the Business Section with 10 articles in total. The News Section ranks in the second place with 6 articles followed by Front Page which contains 4 articles. Furthermore, the Feature Section and Editorial Sections cover the same amount of article in 2 while the Letter Section only gets 1 articles of oil spill. As a whole, the *Times* put much coverage on the Business Section and the News Section in regarding to Mexico Gulf oil spill disaster while the Front Page not covers enough reporting.

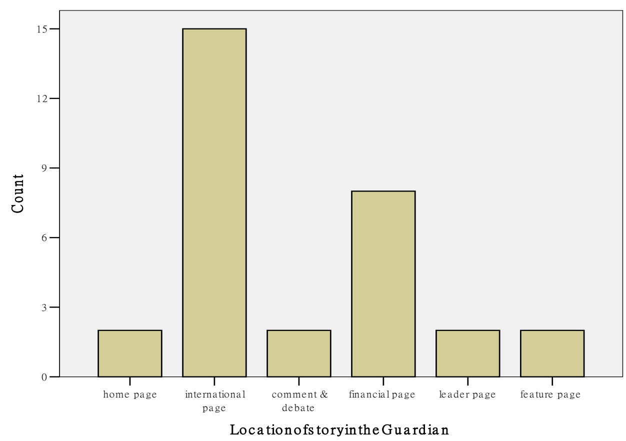


Figure 4. Location of story in the *Guardian*

With the same analysis, the page classification of the *Guardian* get a result as above bar Chart 4 shows that there are also six kinds of pages but with different specific classifications which including Home Page, International Page, Comment & Debate Page, Financial Page, Leader Page and Feature Page. It is obvious that the International Page owns the largest number of articles which focus on Mexico Gulf oil spill. Meanwhile, the Financial Page obtains 8 articles in total given by the *Guardian* which make it ranks in the second place. The rest four pages cover the same amount of articles of oil spill disaster. In a word, the *Guardian* put more coverage on International Page and Financial Page which differ from the *Times* as they both do news reporting on the same issue. And also in regarding to less covering pages, it finds that the *Guardian* put the equal amount of articles on each which is not the same as the *Times* does.

4.2 Comparison of News Coverage between the *Times* and the *Guardian*

It will be divided into three sections: the characteristics of environmental news, news sources and theme selection.

4.2.1 The Characteristics of Environmental News

As the explanation above in section 4.1.2, the comparison of characteristics of environmental news between these two national newspapers will basically focus on other two aspects: the number of article of each month during the study period, the length of articles.

4.2.1.1 The Number of Article in Each Month during the Study Period

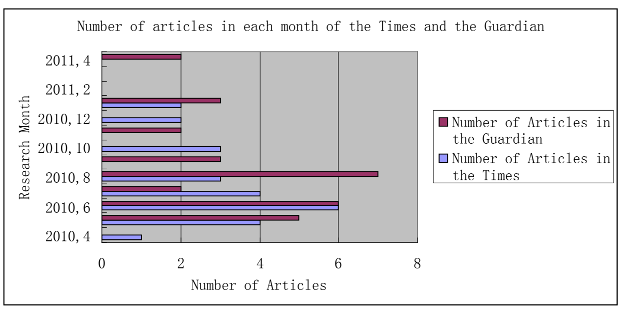


Figure 5. Comparison of number of article in each month of the *Times* and *Guardian*

The first different trends of the *Times* and the *Guardian* can be analyzed from the number of articles in each research month. As above strip Chart 5 shows, both of these two national newspapers have a tendency that the quantity of coverage reaches a maximum and then presents a drop trend with the time progression. However, the difference in their trend of coverage lies in the different quantity in each month. It is obvious that the *Times* gives immediate coverage since the incident happened on April 2010 while the *Guardian* does no response in the same month. The following four month from May 2010, both the *Times* and the *Guardian* give comparative large coverage on the oil spill. But, there is less coverage of both newspapers from the September 2010 to the end of sample period. And as the chart shows, the *Guardian* still does coverage on April 2011 when the incident happened a year while the *Times* has already stopped reporting this incident on February 2011.

4.2.1.2 The Length of Article

The figure below demonstrates that both national newspapers have a similar pattern of length of news coverage. The length of article is calculated by number of words in each article. And the coding process will be listed in Appendix 1.

Table 1. Descriptive statistics of length of article in the *Times* and *Guardian*

	N	Minimum	Maximum	Mean	Std. Deviation
The *Times*	25	29.00	1411.00	422.2400	437.80487
The *Guardian*	29	129.00	1322.00	592.2759	280.36111
Valid N (list wise)	25				

The figure in Table 6 above describes the length of article in each newspaper. It finds that minimum number of words is only 29 in a reported article in the *Times* while the minimum of the *Guardian* is 129 words; in regard to maximum words in each article, the *Times* and the *Guardian* contain proximate number of words which is 1411 and another is 1322.

The following two tables are listing frequency and valid percent of number of words according to coding categorization in order to help analyzing difference of media coverage in two national newspapers.

As Table 7 shows, 40 percent of coverage is less than 100 words which take up a high range in news coverage. Length between 101 and 300 words occupies 16 percent in total. Following by the length between 501 to 700 words and 901 to 1100 as they both take 12 percent in a whole. The third place is taken by the length between 701 to 900 and more than 1001 with 8 percent for each. The least percent refers to the length from 301 to 500 words. The result suggests that the *Times* prefer to cover the specific incident in a short and succinct report or in a long and detailed report.

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

Table 2. Length of article in the *Times*

	Number of Words	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 100	10	32.3	40.0	40.0
	101-300	4	12.9	16.0	56.0
	301-500	1	3.2	4.0	60.0
	501-700	3	9.7	12.0	72.0
	701-900	2	6.5	8.0	80.0
	901-1100	3	9.7	12.0	92.0
	more than 1101	2	6.5	8.0	100.0
	Total	25	80.6	100.0	
Missing	System	6	19.4		
Total		31	100.0		

Table 3. Length of article in the *Guardian*

	Number of Words	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	101-300	5	16.1	16.1	16.1
	301-500	6	19.4	19.4	35.5
	501-700	8	25.8	25.8	61.3
	701-900	7	22.6	22.6	83.9
	901-1100	3	9.7	9.7	93.5
	more than 1101	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Compare to the Times, there are some differences in the number of words in each article reported by the *Guardian*. According to above Table 8, there is no article with the length that is less than 100 words firstly. Secondly, the length from 301 to 500 words, 501 to 700 words and 701 to 900 words take major percent in contrast to the same coding categorization in the Times. However, there is less percent in last two coding categorization than those in the Times. The result suggests that the *Guardian* prefer doing coverage with moderate length while on the same reporting target.

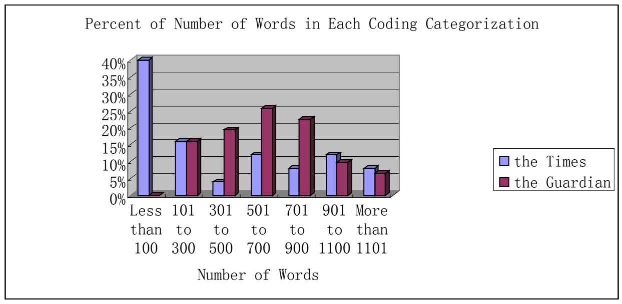


Figure 6. Comparison of percentage for length of article in the *Times* and the *Guardian*

The comparison of the *Times* and the *Guardian* on the percent of number of words aims to point the preference of each newspaper in order to investigate how different news media cover the oil spill incident. The bar Chart 9 above suggests that the *Times* seems to prefer using the least number of words in news coverage while the *Guardian* usually uses moderate number of words especially in 301 to 900 words in each article. In addition, comparing the words categorization of “901 to 1100” and “More than 1101”, it suggests that the *Times* uses comparative much more words than the *Guardian* in each coverage. In general, the *Times* tends to use the least or the most number of words in reporting the oil spill incident in contrast to the same coverage while the *Guardian* generally adopts a right amount of text.

4.2.2 News Sources

Table 4. Types of News Sources in the Times

	Types of News Sources	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Scientists/Experts	2	4.9	8.0	8.0
	Governmental officials	11	26.8	44.0	52.0
	Public relations officers	2	4.9	8.0	60.0
	Environmentalists	1	2.4	4.0	64.0
	Academicians	2	4.9	8.0	72.0
	International news agency	3	7.3	12.0	84.0
	Other	4	9.8	16.0	100.0
	Total	25	61.0	100.0	
Missing	System	16	39.0		
Total		41	100.0		

 DOI: https://doi.org/10.30564/mmpp.v2i4.2553

This section aims at comparing the main news sources used in both national newspapers to investigate the differences and similarities of the sourcing patterns and trends. This section will be divided into a following few sub-sections. The coding categorization of news sources will be listed in the Appendix 1. In general, the sourcing patterns for both national newspapers are quite similar with some small differences.

The above Table 10 shows that 44 percent of news sources in the *Times* come from Governmental officials about Mexico Gulf oil spill incident. Except for other news sources, international news agency is regarded as the second main news source for the Times. In contrast, Scientist/Experts, Public relation officers and Academicians have the equal percent in the news sources of the Times. However, the *Times* use the least news sources which come from Environmentalists. "Others" in coding categorization refers to the least quoting sources; this paper will not give explanation.

Table 5. Types of News Sources in the *Guardian*

	Types of News Sources	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Scientists/Experts	3	7.3	9.7	9.7
	Governmental officials	4	9.8	12.9	22.6
	Public relations officers	2	4.9	6.5	29.0
	Environmentalists	3	7.3	9.7	38.7
	Academicians	1	2.4	3.2	41.9
	International news agency	14	34.1	45.2	87.1
	Other	4	9.8	12.9	100.0
	Total	31	75.6	100.0	
Missing	System	10	24.4		
Total		41	100.0		

Compare with the quotation of types of news sources in the Times, the *Guardian* presents some difference in choosing the types of news sources. From above Table 11, it finds that International news agency takes the largest percent in the *Guardian*'s news sources. Governmental officials rank in the second place with 12.9 percent. Apart from other news sources, Scientists/Experts and Environmentalists get the same percent while Public relation officers follow with 6.5 percent. Obviously, the *Guardian* uses the least news source that comes from Academicians. The same as the Times, 'Others' here also refers to the least sources being quoted and it has no intersection to news sources in the Times, this paper will not do explanation as well.

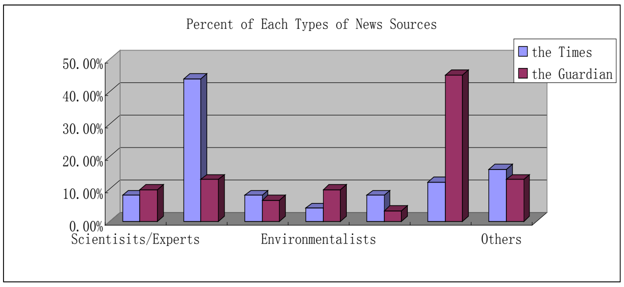


Figure 7. Comparison of percentage of type of news sources in the *Times* and the *Guardian*

The most significant difference between the *Times* and the *Guardian* on types of news sources lie on two aspects. In the first place, the *Times* regards Governmental officials as its main news sources while the *Guardian* cites news mostly from International news agency that focus on the Mexico Gulf oil spill disaster. But, it also reveals that Governmental officials and International news agency are both considered as the popular news sources cited in the *Times* and the *Guardian*. In the next place, the news source from Environmentalists is the least one in the *Times* while the *Guardian* uses the least news source which is quoted from Academicians.

4.2.3 Theme Selection

As this paper investigate news coverage on environmental issue through analyzing the Mexico Gulf oil spill incident particularly, it's essential to find on which themes two national newspapers prefer to focus separately. The coding categorization of theme selection will be listed in Appendix 1.

Table 13 above shows different themes chosen by the *Times* on Mexico Gulf oil spill news coverage. According to date statistics, it finds that the coverage on the theme of Marine life, Restoration and BP's economic losses takes the large proportion comparatively in the *Times* while the theme of Governmental responsibility, BP's responsibility, Environmental policy and Impacts on society get equal percent in news coverage. In contrast, other five themes, Deep sea pollution, Disaster prevention, Impacts on oil industry, President Obama and Energy are less covered in the *Times* on this specific incident.

DOI: https://doi.org/10.30564/mmpp.v2i4.2553

Table 6. Theme Selection in the Times

	Types of Theme	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Governmental responsibility	2	4.9	8.0	8.0
	BP's responsibility	2	4.9	8.0	16.0
	Deep sea pollution	1	2.4	4.0	20.0
	Marine life	4	9.8	16.0	36.0
	Environmental policy	2	4.9	8.0	44.0
	Disaster prevention	1	2.4	4.0	48.0
	Restoration	5	12.2	20.0	68.0
	Impacts on society	2	4.9	8.0	76.0
	Impacts on oil industry	1	2.4	4.0	80.0
	BP's economic losses	3	7.3	12.0	92.0
	President Obama	1	2.4	4.0	96.0
	Energy	1	2.4	4.0	100.0
	Total	25	61.0	100.0	
Missing	System	16	39.0		
Total		41	100.0		

Table 7. Theme Selection in the *Guardian*

	Types of Theme	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Governmental responsibility	4	9.8	12.9	12.9
	BP's responsibility	2	4.9	6.5	19.4
	Deep sea pollution	2	4.9	6.5	25.8
	Marine life	3	7.3	9.7	35.5
	Environmental policy	2	4.9	6.5	41.9
	Disaster prevention	3	7.3	9.7	51.6
	Restoration	1	2.4	3.2	54.8
	Impact on society	6	14.6	19.4	74.2
	Impacts on oil industry	1	2.4	3.2	77.4
	BP's economic losses	2	4.9	6.5	83.9
	President Obama	4	9.8	12.9	96.8
	Energy	1	2.4	3.2	100.0
	Total	31	75.6	100.0	
Missing	System	10	24.4		
Total		41	100.0		

Table 14 above shows another situation on Theme selection in the *Guardian* which obviously manifests a distinguishing coverage. It suggests that the *Guardian* does reporting on oil spill with much more preference on the theme of Governmental responsibility, Impact on society and President Obama. However, the coverage on the theme of Restoration, Impacts on oil industry and Energy takes the least percent in regarding to oil spill incident. The rest six themes seem to get more or less equal attention from the *Guardian*.

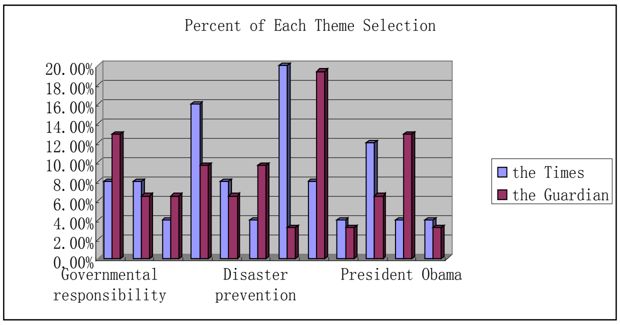


Figure 8. Comparison of percentage of theme selection in the *Times* and the *Guardian*

Through comparison of themes selection between the *Times* and the *Guardian*, it presents two main diversities specific to news coverage. The one is that there is no intersection on the most preferred theme in both national newspapers while the *Times* covers Marine life, Restoration and BP's economic losses, the *Guardian* chooses Governmental responsibility, Impact on society and President Obama; the another is that there exists some intersections in their least preferred theme on one hand, they still get a little opposite theme selection on the other hand. To be specific, both the *Times* and the *Guardian* cover the least proportion on the theme of Impact on oil industry and Energy. Nonetheless, the Restoration as the most preferred theme in the *Times* becomes the least preferred on in the news coverage of the *Guardian* while the theme of President Obama is the most welcomed one in the coverage of the *Guardian* changes into the least proportion in the Times.

5. Comprehensive Discussion

This paper sets out to investigate how the news media cover environmental issues through specific analysis from Mexico Gulf oil spill incident that been reported in UK's two national newspapers: the *Times* and the *Guardian*. In particular, this study not only focuses on the trends and patterns of coverage in each newspaper but also observes differences and similarities in the news trends and patterns

 DOI: https://doi.org/10.30564/mmpp.v2i4.2553

between the *Times* and the *Guardian*. In addition, the paper will discuss results from current research compares with previous research achievements which are mentioned in Literature reviews section. And then, it will suggest related problems that are raised during research processes on news representation of environmental issues.

Current research questions are listed below:

What are the news trends and patterns of the each national newspaper (the *Times* and the *Guardian*) in UK focusing on Mexico Gulf oil spill disaster?

What are the differences and similarities in the environmental news coverage of these two national newspapers in UK focusing on Mexico Gulf oil spill incident?

What causes the differences between the *Times* and the *Guardian* while in regarding to the same environmental news?

5.1 News Trends and Patterns in the *Times* and the *Guardian*

The news trends and patterns are investigated through analysis of the number of article in the coverage of every month during sample period, the length of article in each newspaper (the *Times* and the *Guardian*), the location of story in each newspaper (the *Times* and the *Guardian*), the news sources of news coverage and theme selection in the whole sample year coverage from 20th, April 2010 to 20th, April 2011.

5.1.1 News Trends and Patterns in the Times

First of all, it discovers that the quantity of news coverage in each month presents obvious fluctuations in the Times. Since the oil spill incident happened, the *Times* gives immediate reports lasting for five months until the August, 2010. In the meanwhile, the quantity of coverage in June stands for the highest number. Although, there are still several articles in October, December and January, the quantity of coverage decreases distinctly in the later months as if the *Times* becomes pay less attention on such an incident with the time progression.

Secondly, it discovers that the *Times* prefer using fewer words or more words in cover the oil spill news, generally less than 300 words or more than 900 words in regarding to the length of article. Certainly, the length of article in the *Times* with varietal presence as sometimes it chooses moderate number of words that little more or less than it usually adopts. But, it shows that the *Times* covers BP oil spill disaster in using extreme number of words especially, either less words or more words during the sample period.

Thirdly, directing at Mexico Gulf oil spill incident, the *Times* covers it basically on Front page, News section, Business section, Feature section, Letters section and Editorial section. Among these locations, the Business section has been given the most articles while the News sections and Front page following behind. It does not mean other pages do not cover this news but actually, Feature section and Editorial section covers the same amount of articles while the Letters section owns the least number of articles.

Fourthly, looking at the news sources in the Times, it discovers that majority of news come from Governmental officials and comparative large news from International news agency while other types of news course take a little percent individually. In terms of news sources coding categorization, it takes equal percent of news sources from Scientists/Experts, Public relations officers and Academicians. Apart from 'Other' in coding categorization, Environmentalists is regarded as the least news sources in the *Times* focusing on Mexico Gulf oil spill disaster.

Lastly, the *Times* cover the Mexico Gulf oil spill incident mostly from the perspective on the theme of Marine life, Restoration and BP's economic losses. And other themes in accordance to theme coding categorization own comparatively less equal percent in the coverage. These three types of theme take majority of proportion in total which manifest a preferred theme selection in the *Times* in regarding to Mexico Gulf oil spill incident.

5.1.2 News Trends and Patterns in the *Guardian*

Firstly, the quantity of articles in each month in the *Guardian* also presents an obvious fluctuation. But, it differs from the *Times* as it does not cover the incident in April 2010 when the incident happened and the largest quantity of articles in the *Guardian* is in August 2010. Another difference remains on the reporting duration of news coverage. The month between May and September is the time with largest quantity of coverage in the *Guardian* which contains 23 articles in total. The same time in the Times, the quantity of coverage reduces gradually and even in some months, there is no coverage on oil spill incident which means that the *Guardian* reduces its attention on such an incident over time as well. There is also a similar phenomenon for both national newspapers. It shows that the situation of quantity is intermittent from September 2010 to April 2011 which means that both national newspapers do not abandon the specific environmental news completely with time progression.

Secondly, it finds that the length of article in the *Guardian* greatly differs from the Times. The *Guardian* tends to use comparative moderate length of article in its news coverage which generally contains 500 to 900 words in contrast to the Times.

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

Thirdly, the *Guardian* covers the oil spill incident normally on six pages in regarding to location of article compares to the Times. There are Home page, International page, Comment & debate page, Financial page, Leader page and Feature page. But, only the International page and Financial page receive majority number of articles about Mexico Gulf oil spill incident. And the other four locations own equal number of article during the sample period.

Fourthly, with regards to news sources, it finds that the *Guardian* adopts the largest number of news from International news agency and a comparatively large number of news from Governmental officials which is a slight difference from the Times. If apart from the 'Other' in terms of coding categorization, arranged by valid percent of their actual quotation, Scientists/Experts and Environmentalists rank the first place in rest of types of news sources. Public relations officers is considered as the less adopted news sources while Academicians is the least quoted one in the *Guardian*.

In the end, it finds that the *Guardian* prefer choosing the theme of Impact on society, Governmental responsibility and President Obama especially rather than any other themes in coding categorization of theme selection. It makes a quite big difference with the theme selection from the Times. Moreover, the rest of types of theme can be divided into three categories which own 9.7 percent, 6.5 percent and 3.2 percent separately when focus on Mexico Gulf oil spill disaster.

5.2 Comparison of News Coverage between the *Times* and the *Guardian*

This section will discuss the differences and similarities between these two national newspapers (the *Times* and the *Guardian*) in United Kingdom in order to help understanding how news media cover specific environmental news and how they differ from each other. In addition, it will present candid appraisal of research findings and link findings to other previous research results from the Chapter 2 literature review. The last but not the least, limitations of this study and other recommendations for future research will be discussed as well.

The trends and patterns of news media that covers on Mexico Gulf oil spill incident presenting a roughly same tendency between the *Times* and the *Guardian*. As a whole, there are many related articles cover on oil spill incident since the disaster happened and the quantity of coverage decreases after reaches a peak of amount of news coverage. The news patterns are cyclical in the sense that the issue is only covered when it becomes public debate. The cycle situation here agrees with the theory of Issue Attention Cycle that proposed by Downs (1972) which means that a certain issue can be a center of public discussion for a period of time before fading away slowly. Moreover, environmental issues would not stay longer on the stage of public discussion as Downs (1972) suggests that the nature of conflict news is often short. Hence, the patterns of environmental news appear to be influenced by economic factors which restrict environmental news coverage. Besides, it finds that the *Times* covers the oil spill incident immediately in April since the disaster actually happened but the *Guardian* does coverage just begins from the next month, May 2010. This phenomenon can be explained by what Hansen (2000) points that Agenda-setting is a crucial element in media coverage. Moreover, claims-makers also play a vital role for the identification and construction of environmental news coverage.

Another important finding refers to the total number of articles in each newspaper's coverage during the sample period. According to Methodology part, this study analyzing 56 articles together from the *Times* and the *Guardian*. The total amount of articles seems not enough and lack of persuasion to some extent, but it reflects an obvious status that the quantity of news coverage in the United Kingdom is much less as it is the country far away from the incident place that leading to the country with a comparatively little attention directly to the disaster, which agrees with the previous research result suggested by Anderson and Marhadour (2007) that the geographic distance to the accident can go some way toward explaining this coverage since the national press tends to focus on stories that are much closer to local places. The finding in current study reflects that there are plenty of other factors that combining to affect the perceived newsworthiness of any given environmental news stories.

The length of article in each newspaper as a representative of characteristics in news coverage appears to be different which might because it is influenced by media framing. Although the length of article in two national newspapers present obvious difference, the one common character lies in both of them get a restriction in the length of its news articles. It seems a little bit hard to analyze what specifically causes the extremely different length in each newspaper but it definitely reveals a problem that it's really hard for newspapers to put the whole event and related information due to space limitations in print pages. Especially, other factors such as advertisers, editorial policies influence it in the same time, and even emphasize much more coverage on economic or political news.

The placement of article in the *Times* and the *Guardian* manifests significant differences as they do not put the same news articles on a comparative same layout of

DOI: https://doi.org/10.30564/mmpp.v2i4.2553

a printed page. In terms of individual printed pages, the Business section in the *Times* owns the largest number of articles while the International page in the *Guardian* does the same way. It finds that both the Front page of the *Times* and Home page of the *Guardian* do not receive the largest percentage of number of article which suggests that the environment might not be a prominent topic of discussion for both national newspapers. But, it does not mean that the environmental news is not a prominent one among various news topics. And obviously, this is a result that opposite to what Pew Research Center (2010) suggests that the oil spill disaster is regarded as a dominant news story. On the other hand, the *Times* and the *Guardian* put the same issue on complete different pages present a distinguishing feature individually. This is might because that these two national newspaper project news to their targeted readers; on the other hand, according to Cox (2006), both of newspapers do not fully use its front or home page to cover such a disaster show that the environment is not listed as a kind of priority news because that its impact is delayed or not easily observed. Moreover, Anderson (1997) also states that in terms of his content analysis findings, the environment sometimes does not fit the newsworthiness requirements actually.

While in regarding to types of news sources for the *Times* and the Guardia, it shows that both the Governmental officials and International news agency are the most welcomed news sources for the *Times* and the *Guardian* and the only difference lies in the *Times* uses more that from Governmental officials comparatively while the *Guardian's* more sources comes from International news agency. According to date statistics, the high dependency on Governmental officials for both national newspapers in UK manifests the dominance of government in the area of environmental news. It agrees with the states by Dunwoody and Griffin (1993) that the news from governmental officials is vital because that it is always available and credible. The second mostly wide used source for both national newspapers is from the International news agency, especially for the *Guardian* which highly depends on it. The same as Governmental officials, International news agency is considered as a credible one being quoted as well as Dunwoody and Griffin (1993) claim.

And as for other types of news sources, they are equally considered as the comparatively secondary sources for the *Times* and the *Guardian* that only take approximately 4 percent to 8 percent for each in terms of coding categorization. However, it does not mean that other news sources are not as important as the Governmental officials and International news agency in the area of environmental news coverage as the news sources only act as the providers of the news contents. In addition, there is an obvious situation that both the Environmentalists and Academicians as the news sources in both the *Times* and the *Guardian* are considered as the least sources for their quotations. As Dunwoody and Griffin (1993) suggest, issues and perspectives perceived and presented by environmentalists and academicians are less trustworthy more or less. Nevertheless, it should not over-state the power of news sources. Media organizations usually intervene to set the framing of news stories and the strategies of audience targeted by some of their forces.

In the end, both of national newspapers in United Kingdom show a completely different trends and patterns in the theme selection. In terms of coding categorization about theme selection, it shows that the theme of Marine life takes 16 percent, Restoration takes 20 percent, BP's economic losses takes 12 percent separately in the *Times* which account for high range in total. Nevertheless, the *Guardian* covers more on the theme of Impact on society, Governmental responsibility and President Obama which account for 19.4 percent, 12.9 percent and 12.9 percent separately. The result reflects that different newspapers project different news theme selection to their targeted audiences and communities. As Solosky (1989) mentions, newspapers usually strategize their news to be some particular thing that is close to their readers in order to get enough attention and thus to promote their circulations. Despite the difference of theme selection on the same environmental issue between the *Times* and the *Guardian*, there is one similar character that worth emphasizing. No matter which theme has been chosen in news coverage on this specific environmental news, both of two national newspapers have linked its coverage to public awareness and political concerns, which connects to what Hansen (2010) claims in the book 'Environment, Media and Communication' mentioned in literature review. Apart from their coverage on oil spill disaster itself, the news always extend their coverage to any related themes with further reporting which usually meet requirements of media policies.

5.3 Limitations and Recommendations

The whole study analyzes news coverage of the *Times* and the *Guardian* that focus on Mexico Gulf oil spill disaster from their characteristics of news coverage, trends and patterns. Besides above analysis, there are still some limitations pointing at this study which should be given enough attention.

First of all, the number of articles collected by Nexis is limit to some extend in sample period as the Mexico Gulf oil spill disaster happened in last year and there is not

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

enough news coverage in such a limited time. It means that the data statistics might not presents a complete representativeness in demonstrating the characteristics, the trends and patterns of news media in covering environmental issues, but all datum collected from Nexis are real and valid which help explaining its persuasion to some extend.

Secondly, this study investigates how news media cover environmental issues through five aspects of news characteristics: number of article, location of article, length of article, types of news sources and theme selection. But, it does not mean that other factors can not demonstrate the way which news media cover environmental issues. There is one factor that worth mentioning that refers to attachment at the end of news articles in each newspaper. The press always regards photographs as the best extra information attached to environmental articles. It is said that visual images are vital for environmental news representation in order to put some so-called soft elements into the stories. Nevertheless, the sample articles collected by Nexis do not contain any related attachments, especially for visual images. It leads to the lack of analysis through attachment aspect to investigate how news media further cover environmental issues; it means that this study has lost a particular direction to get a better understanding of news coverage.

Lastly, this study gets a conclusion that both national newspapers in United Kingdom have its own trends and patterns in regarding to covering the same environmental issue, Mexico Gulf oil spill while similarities and differences exist together. The content analysis only discovers how national newspapers cover the identical news but it can not give comprehensive and material reasons why these different phenomena appear. On one hand, it means that this study has greatly accomplished the confirmation of research hypothesis that news media use its particular trends and patterns in covering environmental issues; on the other hand, it manifests its insufficiency in fully investigating further in-depth relationship between news media and environmental issues.

Apart from above three limitations being realized in research process, this study prefers suggesting two aspects for future related researches. One refers to adding more useful coding factors under possible situation in content analysis, such as level of news coverage, focus of article and attachments which will definitely help investigating how news media cover environmental issues comprehensively. Another one refers to adding new methods combines with current research method, for example, using ‘Discourse analysis’ bond to ‘Content analysis’ in study or ‘In-depth Interviews’ which are aim to doing a comprehensive and ingoing study that meeting the purpose of media research.

6. Conclusion

As it is widely known, human’s understanding of the environment is shaped by media coverage to some extend. Hence, it means that the media plays a significant role to attract public attentions and enhance their knowledge of the environment.

Consequently, this study discovered that news media has its own trends and patterns in covering environmental issues, particularly from Mexico Gulf oil spill disaster been covered both in the *Times* and the *Guardian* in United Kingdom. Nevertheless, this study also discovered some problems in investigating media coverage on environmental issues.

In particular, according to findings of this study, both two national newspapers have their own characteristics in covering Mexico Gulf oil spill incident. One on hand, the *Times* does immediate coverage since the disaster happened and keeps reporting for four months with a decreasing tendency in rest months of sample period. Another character is that the *Times* usually use number of words which less than 300 or more than 900 in covering oil spill that means the *Times* prefer choosing either short but succinct or long but detailed length in its news coverage. Based on data statistics, the study discovers that the News section and Business section are the most popular locations of story for the *Times* focus on Mexico Gulf oil spill which expresses a tendency that . And the *Times* does not fully use Front page to cover oil spill disaster which show that the environmental issues cannot be considered as a prominent topic for newspaper coverage. In regarding to news sources and theme selection of specific oil spill incident, the study discovers that the *Times* tends to adopt news from Governmental officials and International news agency in term of news sources coding categorization which is in accordance to Dunwoody’s (1986) research result that the news from governmental officials is vital because that it is always available and credible. In addition, it also discovers that the *Times* focuses more on theme of Marine life, Restoration and BP’s economic losses in covering Mexico Gulf oil spill; on the other hand, the *Guardian* does not cover news since the disaster happened in April 2010, it begins to cover it from May 2010 and keeps reporting for five month but also with a decreasing trend in the rest seven months of sample period. But, it slightly differs from the *Times* as it still does coverage on April 2011 when the disaster happened for one year. On the contrary, the *Guardian* generally uses moderate length of article in coverage this disaster which refers to the number of words basically from 300 to 900 while in contrast to the Times. And the *Guardian* puts news of oil spill disaster more on International page and Financial page from statistics. Equally, in regarding to News sources and Theme selection, this study discovers that the *Guardian* mostly adopts news from Governmental officials and International news agency as well but the news source from International news agency takes up much more percentage compare to another type of news source. Besides, it also discovers that the *Guardian* chooses theme of coverage on Mexico Gulf oil spill differently which focuses much on Governmental responsibility, Impact on society and President Obama. It shows that different newspapers prefer choosing different themes when focusing on the same news issue in terms of different claims-making and framing in mass media.

Apart from individual characteristics of trends and patterns in news coverage of the *Times* and the *Guardian*, the study also discovers difference and similarities through the connection of each characteristic.

In the first place, although they cover the same environmental incident with different length of articles and different number of article in each month of sample period, the common character lies in the adoption that they both use valid and actual coverage which suit for each media framing. In the next place, both of the *Times* and the *Guardian* cover the disaster on its layout of a printed page but with the common situation that they put less coverage on Front page or Home page which manifest a problem that the environmental issues cannot be considered as a prominent topic for newspaper coverage so far. In the third place, the *Times* and the *Guardian* generally cover the oil spill issue come from Governmental officials and International news agency while other types of news sources in coding categorization take approximately equal percent, the obvious difference lies in the proportion of those two popular types of news sources. The *Times* tends to cite more news from Governmental officials comparatively while the *Guardian* adopts more from International news agency. It manifests that different newspapers have different claims-making and framing in terms of media policies. In the last place, there is a great difference of theme selection between these two national newspapers as they do not have an intersection on mostly preferring themes. But, the study discovers that both of them take the least coverage on the theme of Impact on oil industry and Energy as if these two themes do not have an enough closely relationship with the Mexico Gulf oil spill incident. Also, the Restoration as the most popular theme in the *Times* is considered as the least popular theme in the *Guardian* which focuses on oil spill disaster while President Obama is the most popular theme in the *Guardian* is regarded as the least one in the Times. It manifests both their similarities and differences on theme selection in regarding to Mexico Gulf oil spill incident. In details, both of the *Times* and the *Guardian* have a common thing lies in preference of theme selection which refers to their least preferred theme, and the different thing lies in their opposite theme selection in regarding to the most popular and the least popular theme.

The study not only investigates how news media does coverage on environmental issue with causes of this phenomenon but also discovers several problems in research process which is worth revising in future investigation. On one hand, the research on media coverage of environmental issues needs to add more coding factors in order to help analyzing the relationship between news media and environmental issues with the further and ingoing way; on the other hand, a variety of methods can be applied into investigation. In particular, as for methodology, it might be useful to apply 'Discourse analyses' to related researches. Furthermore, there is still a little study on the impact of media coverage on social behavior and psychology from the perspective of news coverage on environmental issues which is worth being investigated in the process of study on news media and environmental issues.

References

[1] Anderson, A. Media, Culture and the Environment. London: UCL Press, 1997.

[2] Anderson, A., Marhadour, A. Slick PR? The Media Politics of the Prestige oil spill. Science Commnication, 2007, 29(1): 96-115.

[3] Associated Press. Justice Department sues BP over gulf spill – Government says oil company, others ignored safety rules. San Jose Mercury News, 2010, 7A.

[4] Bakir, V. Journal of Risk Research, Taylor & Francis, 2005, 8(7-8): 679-691.

[5] Barcus, F. E. Communications content: analysis of the research. University of Illinois, 1959.

[6] Berelson, B. Content Analysis in Communication Research (Glencoe, Ill.: Free Press), 1952.

[7] British Business Survey. The Sunday Times, the Times, *Times* online, 2005. Available: http://www.thetimesme.com/obj/bbsf.pdf, 2011, July 01.

[8] Button, G. V. Catastrophe & Culture: The Anthropology of Disaster. Edited by Cox, R. Environmental Communication and the Public Sphere. London:Sage, 2002. Downs, A. (1972) Up and down with ecology-the "issue attention cycle". Public Interest, 2006, 28, 38-50.

[9] Davison, W. Mass Media (2nd ed.). New York: Holt

  DOI: https://doi.org/10.30564/mmpp.v2i4.2553

Rinehard & Winston, 1982. Dunwoody, S. The scientist as source. In S. Friedman, S. Dunwoody, C. Rogers (Eds.), Scientists and Journalists: Reporting Science as News, 1986:3-16. New York: Free Press.

[10] Dunwoody, S., Griffin, R. Journalistic strategies for reporting long-term environmental issues: A case study of three Superfund sites. In A. Hansen 259 (Ed.), The Mass Media and Environmental Issues, 1993:22-50. New York: Leicester University Press.

[11] Gamson, W. A., A. Modigliani. Media discourse and public opinion on nuclear power: A constructionist approach. Am. J. Sociol. 1989, 95:1-37.

[12] Hansen, A. Environment, Media and Communication. London: Routledge, 2010.

[13] Hansen, A. Claims-making and framing in British newspaper coverage of the 'Brent Spar' controversy. In Allan, S., Adam, B. and Carter, C. Environmental Risks and The Media. London: Routledge, 2000.

[14] Hansen, A., Cottle, S., Negrine, R., Newbold, C. Content analysis, in Mass Communication Research Methods. PALGRAVE MACMILLAN, 1998.

[15] Krippendorff, K. Content Analysis (2nd ed.). London: Sage. Layder, D. (1998) Sociological Practice: Linking Theory and Social Research. London: Sage, 2004.

[16] Lofstedt, R. E., Renn, O. The Brent Spar controversy: an example of risk communication gone wrong. Risk Analysis, 1997, 17(2):131-135.

[17] McCombs, M., Shaw, D., Weaver, D. Communication & Democracy: Exploring the Intellectual Frontiers in a Agenda-Setting Theory. Mahwah, NJ: Lawrence Erlbaum, 1997.

[18] McCombs, M., Shaw, D. The agenda setting function of the mass media. Public Opinion Quarterly, 1972, 36: 176-187.

[19] Meckel, M., Volpe, J. D. A Spill and a Spin. How Traditional and Social Media are Interrelated in Covering the BP Oil Spill 2010. In Panel Submission 61st Annual Conference of the International Communication Association. Boston, 2011:26-30.

[20] Molotch, H., Lester, M. Accidental News: The Great Oil Spill as Local Murdock, G., Petts, J. and Horlick-Jones, T. After amplification: rethinking the role of the media in risk communication, in N. Pidgeon, R. E. Kasperson and P. Slovic (eds) The Social Amplification of Risk, 2003, 1975:156-178. Cambridge: Cambridge University Press.

[21] Occurrence and National Event. American Journal of Sociology, 1975, 81(2):235-260. The University of Chicago Press.

[22] Pellechia, M. G. Trends in science coverage: A content analysis of three U.S. newspapers. Public Understanding of Science, 1997,6, 49-68.

[23] Pew Research Center. How the Media Cover the Oil Spill Disaster. Available, 2010. http://pewresearch.org/pubs/1707/media-coverage-analysis-gulf-oil-spill-disaster, 2011, June 29.

[24] Solosky, J. News reporting and professionalism: Some constraints of the reporting of the news. Media, Culture and Society, 1989, 11: 207-228.

[25] Widener, P., Gunter, V. J. Oil spill recovery in the media: Missing an Alaska native perspective. Society & Natural Resources, 2007, 20: 767-783.

Macro Management & Public Policies
https://ojs.bilpublishing.com/index.php/mmpp

ARTICLE

Corporate Governance and Tax Avoidance: Evidence from Nigerian Quoted Food and Beverage Companies

Ezejiofor, Raymond A.[1] Ezenwafor, Emmanuel C.[2]

1. Department of Accountancy, Nnamdi Azikiwe University, Awka. Anambra State
2. Department of Accountancy, Federal Polytechnic, Oko, Anambra State

ARTICLE INFO

Article history
Received: 30 November 2020
Accepted: 21 December 2020
Published Online: 31 January 2021

Keywords:
Corporate Governance
Tax Avoidance
CEO duality

ABSTRACT

The study determine the effect of CEO duality on the effective tax rate of quoted foods and Beverage companies. *Ex-post facto* research design was adopted. A purposive sampling technique was applied in selecting nine (9) companies during the data collection process. Data were collected from annual reports and accounts of the sampled companies from 2013-2019. Data for the study analyzed using descriptive statistics and regression was used with aid of the e-view was at 95% confidence at five degrees of freedom (df). The result shows that CEO duality was significant and had a positive coefficient on tax planning of food and beverage companies in Nigeria. The study, therefore recommended that non-separation of CEO from Chairman of the Board may lead to higher levels of tax planning; and an opportunity for manager's rent extraction, because of their dominating role to ensure that adequate oversight roles are separated.

1. Introduction

Corporate governance refers to policies and procedures adopted by firms to achieve certain sets of objectives, corporate missions, and visions concerning different stakeholders [1]. Corporate governance enhances the means through which the objectives are set, and the means of executing those objectives and monitoring performance are ascertained [2]. It is directed at improving corporate behaviour and the reliability of accounting information provided to the stakeholders [3]. Corporate governance is a combination of company's management, board, shareholders, and other stakeholders [2] According to [4], corporate governance ascertain if the finance providers earn a return on their investments.

Tax is a levy imposed on individual or legal entity by the Government or agent [5]. The government uses the proceeds from the tax to provide its legal functions, which include the provision of amenities and infrastructure, defense against external aggression, maintenance of law and order, regulate economy [5-6]. Corporate tax avoidance refers to the deliberate attempt to reduce the amount of taxes paid. Tax avoidance can be divided into acceptable (legal) tax avoidance and unacceptable (illegal) tax avoidance [7].

Previously, manufacturing companies in Nigeria were required to prepare accounts using the Statement of

**Corresponding Author:*
Ezejiofor,
Raymond A., Department of Accountancy, Nnamdi Azikiwe University, Awka. Anambra State;
E-mail: thaddray4life@yahoo.com;
Ezenwafor,
Emmanuel C., Department of Accountancy, Federal Polytechnic, Oko, Anambra State;
Email: emmancee2004@gmail.com

  DOI: https://doi.org/10.30564/mmpp.v2i4.2632

Accounting Standards. However, following the recommendation of the Financial Reporting Council of Nigeria (FRCN), henceforth from 2012 all manufacturing companies complied with the provisions of the International Financial Reporting Standards in the preparation of financial statements. On January 15, 2019, the FRCN released the Nigerian Code of Corporate Governance ('the Code'), according to Sections 11(c) and 41(c) of the Financial Reporting Council of Nigeria Act, 2011. This formed part of the move to strengthen and institutionalize corporate governance best practices in Nigerian companies. The Code adopts an approach in designing the minimum standards of practice that all the firms should adhere to [8].

Different stakeholders perceive such tax avoidance acts differently from its consequent implication. For instance, shareholders may prefer tax avoidance because it increases residual income and lowers the cost of debt [9]; whereas, the Government kick against tax avoidance because it lowers the amount of revenue available for developmental activities [10]. Negative consequences of tax avoidance include reputational damage and a decline in firm value [11]; which resulted to a lower in the return on investments of the shareholders [12]. Another issue is the question of if the firm enhances the economic well-being of the society [13]. Other consequences that may arise are related to political costs and marginal costs. High corporate tax avoidance leads to higher political costs [14]. Marginal costs are potential costs, such as penalties and fines imposed by the tax authorities [15]. Corporate tax avoidance is an outcome of policies/decisions taken by the leaders of a company [16].

Within the Nigerian context, few studies are yet to address the efficiency with which the board and other sub-committees discharge their responsibilities. According to [17] board and committee activity may be measured by the frequency of meetings.

Prior studies have conducted research on this nature in several countries. The studies provide counterintuitive predictions on the link between governance and tax avoidance. While some reported a positive effect, others report a negative association. Such studies have mainly used proxies such as meeting frequency, board size, board independence, CEO duality, among others as proxies for good corporate governance. The study therefore, sought to analyze the effect of corporate governance on tax avoidance from a developing country perspective.

2. Review of Related Literature

2.1 Corporate Governance

Several authors have defined corporate governance from diverse perspectives; According to [18], This expropriation acts include among others the diversion of profits/output; sale of assets or securities to other firms at below-market (fair) prices; employ unqualified family members in managerial positions; and/or over compensation packages. Corporate governance is concerned with enhancing corporate fairness, transparency, and accountability [19].

Corporate governance is the mechanisms aim at ensuring the fulfillment of corporate objectives [20,21] stated that corporate governance is the process that allows directors and auditors to assume their obligations towards shareholders and company stakeholders". [22] corporate governance as the systems that checkmate both internal and external to activities of companies to ensure that companies discharge their accountability to their stakeholders". [23]documented that "corporate governance is a procedure, by which corporate resources allocated in a way to attract stakeholders wealth. According to [24], it involves firm;s management, shareholders and stakeholders". Corporate governance is the system by which companies are directed and controlled [25]. The Organization for Economic Co-operation and Development [26] outlined five principles of corporate governance to include:

The rights of shareholders

Equitable treatment of shareholders

The role of stakeholders

Disclosure and transparency

The responsibility of the board.

Broadly, corporate governance mechanisms are subdivided into two: internal and external corporate governance mechanisms. The external governance mechanisms include such as the market for corporate control, the legal system, stock market, among others [27-28]. Internal governance mechanisms include such as the board of directors, manager's compensation, audit committee, remuneration committee, and ownership structure, among others [29-31]. The internal governance mechanisms are mainly associated with the structure, composition and, characteristics of the board of directors [32]. The study by [33] found a relationship between improved corporate governance and firm performance.

2.2 Corporate Tax Avoidance (CTA)

Corporate tax avoidance (CTA) has no specific accepted definition o in the literature [12]. This lack of universal definition follows the consequential tax effect of every business transaction aimed at increasing profit [13]. According to [34] CTA involves "taking advantage of legitimate concessions and exemptions foreseen in the tax law; and, involves the process of organizing business operations so that tax obligations are optimized at their minimum

 DOI: https://doi.org/10.30564/mmpp.v2i4.2632

amount". [35], reported that tax aggressiveness is the different legal or illegal activities management engaged to reduce taxable income. Tax planning forms part of strategic decisions by the managers aimed at reducing explicit and implicit taxes [36]. [13] defined CTA as a strategy in reducing corporate tax liabilities.

[37] opine that CTA refers to as a means of minimizing the company's tax accounting income". [12] sees tax avoidance as a strategy to reduce taxable income (e.g., tax shelters) at the other end.

[34] observed that generally, tax planning activities lead to a reduction in tax obligations. This however depends on the intensity and legality with which these practices are adopted. [38], stated that tax avoidance is the legal application of tax laws to one's selfish interest in order to minimize the taxable income within the law." [39], sees tax aggressiveness as an arrangement with the aim of avoiding tax.

Tax planning, avoidance or, aggressiveness has significant costs and benefits to a firm and its shareholders [40]. The benefits to the firm include such as higher cash flows and net income; while, to the shareholders, it implies higher residual income [41]. The costs include negative consequences such as large penalties, negative publicity [42], political costs [14], or the firm labelled as a "poor corporate citizen" [11]. Three conditions must exist for an individual or firm to engage in tax avoidance; incentive, access, and awareness [43]. Incentive implies that the perceived benefit must outweigh its costs. Access presupposes that the individual or firm has access to tax-minimizing strategies. Finally, the individual or firm is aware of the applicable tax laws that allow such opportunities available to avoid taxes.

[13] identified three classes of groups used in prior literature to measure tax avoidance. Which comprise of total book-tax gap; measures the proportional amount of taxes to business income and measures such discretionary.

There are several methods and/or schemes by which corporations engage in tax avoidance. [44], identified the use of transfer pricing, royalty programs, off shore tax havens and structured transactions. [45] identified other methods such as debt allocation as well as sourcing rules for foreign tax credits.

2.3 CEO Duality

[46] stated that a measure of board independence is whether the CEO also serves as the board chairman. The separation of CEO from Board chairman ensures adequate monitoring and checkmating the activities of management [24]. The non-separation of the two functions presents an obstacle and leads to managerial entrenchment [47]. Non-separation of the two roles decreases the effectiveness of the board in monitoring management [48]; and, its ability to control managers effectively [49]. The empirical literature documents mixed findings on the association between CEO duality and firm performance.

[50] found a significant negative association between duality and disclosure. On the contrary, [51] found an insignificant relationship between duality and disclosure. [52] reported a positive association between board independence and audit fees. However, the positive association was only present in firms without CEO duality; suggestive of the fact that CEO duality constraints board independence.

2.4 Empirical Studies

Quite a number of researchers have conducted a study on corporate governance and tax avoidance; the study of [53] ascertained the effect of corporate board characteristics and tax aggressiveness of Nigerian manufacturing firms. Sample of forty-nine (49) manufacturing firms was used. Data were obtained from annual financial statements for the years 2011 to 2016. The data were analyzed using the fixed effect panel regression model. The results showed that board size and board independence exert a significant negative effect on tax aggressiveness; while, board gender had an insignificant negative effect. [54], examined the effect of corporate governance, tax avoidance, and financial constraints'. The sample comprised of over thirty-five thousand (35,000) firm-year observations from 1990 to 2015. They employed two-stage least squares (2SLS) analysis to validate the hypothesis. The results showed that for firms with strong governance, tax avoidance had a negative impact on financial constraints. However, in weak governance, tax avoidance is associated with greater financial constraints and a greater likelihood of financial distress. [55], ascertained the Demographic characteristics of the board of directors' structure and tax avoidance from Tehran Stock Exchange. The study relied on secondary data; between the periods 2012 to 2016. The hypothesis was tested using panel regression models. The results showed that the presence of women on corporate boards reduces corporate tax avoidance; also, firms with larger board sizes were associated with more tax avoidance. [56], conducted a study titled 'Corporate tax and financial performance of listed Nigerian consumer goods'. The sample comprised of sixteen consumer goods firms quoted on the NSE. The data were analyzed using multiple regression analysis. The results showed an insignificant negative relationship between corporate tax and ROA. However, age and risk had a positive non-significant relationship with ROA; while, size showed a positive significant relationship with ROA. [57], investigated corporate tax avoid-

DOI: https://doi.org/10.30564/mmpp.v2i4.2632

ance of listed firms in Nigeria'. The sample comprised of nineteen (19) listed firms drawn from the list of NSE 30 firms on the Nigeria Stock Exchange. The data were obtained from annual accounts and were analyzed using descriptive statistics. The results showed that there exists variation across firms in the average long-run cash ETR. [4], undertook a study titled 'Tax Avoidance and Corporate Governance. The sample comprised four hundred and ninety five (495) firms in the Standard and Poor's 500 firms. The study covered the period from 2007 to 2015. The study relied on secondary data from Compustat and Institutional Shareholders Services (ISS). The hypothesis was validated using the fixed effects model. The results showed that board independence had a significant negative effect on tax avoidance; while, CEO duality had a negative insignificant effect on tax avoidance. [58], conducted a study whether corporate governance affect earnings management on tax aggressiveness?' The study employed secondary data from annual report and accounts from the official website of the companies and the IDX website. The results showed that good corporate governance moderates the influence of earnings management toward the tax aggressiveness.[59], studied the impact of governance mechanisms on tax aggressiveness: Empirical evidence from Tunisian context'. The sample comprised thirty-nine (39) firms listed on the Tunisian Stock Exchange. The data were analyzed using multiple regression techniques. The results showed that board size had negative non-significant effect on tax aggressiveness. Diversity, managerial ownership, firm size, and debt had a positive significant effect. The variable of audit quality had a positive non-significant effect; while, ownership concentration had a negative significant effect. [60] conducted a study titled 'The quality of reported earnings and the monitoring role of the board: Evidence from small and medium companies'. The study employed secondary data from the Johanessburg Stock Exchange and data from McGregor BFA. They used regression to examine the relationship. The study finds no evidence that boards and non-executive directors of SMEs adopt conservative accounting practices that will result in the asymmetric timeliness of earnings. [61], evaluated the impact of the board of directors' structure on tax avoidance in the companies listed in Tehran Stock Exchange. They employed a binary logistic regression. Results showed that board non-executive members and board change ratio had a non-significant effect on tax aggressive policy. However, CEO duality had a significant effect on tax aggressive policy. [62], studied the effects of the board of directors' characteristics on tax aggressiveness'. The sample comprised seventy three (73) companies listed on the SBF 120 index, France. The study employed multiple regressions to analyze the data. The results showed that board size negatively affects effective tax rate; board independence has a negative non-significant; board diversity has a positive significant effect on effective tax rate; and, CEO duality has a negative non-significant effect on effective tax rate.[53], ascertained the effect of the board of director composition on corporate tax aggressiveness'. They employed logit regression to validate the hypothesis. The results proved that higher rate of external members on the board of directors lower the likelihood of tax aggressiveness.

3. Methodology

An *ex post facto* research design was employed. This type of design is a systematic empirical inquiry, in which the researcher has no direct control of the variables in case of manipulation.

The population of this study covered twelve (12) Foods and Beverages in Nigeria. A purposive sampling technique was used. A total of three (3) out of the twelve (12) companies were inevitably excluded during the data collection process due to unavailability of data.

3.1 Methods of Data Analysis

Descriptive statistics and regression analysis were used to test the relationship between the independent variable (CEO Duality) and the dependent variable (corporate tax avoidance). This was done with aids of the e-view version

Table 1. Description of variables

Dependent Variable
CTA_{it} = Proxied as the Effective Tax Rate. This is the proportion of the profit before tax is paid as tax. It is computed as tax paid divided by profit before tax. The Statutory Tax Rate is the official corporate tax rate; which presently in Nigeria is 30% of the assessable profit.
Independent Variable
$CEODU_{it}$ = Takes the value of 1 if CEO and the chairperson positions are held by the same individual, 0 otherwise in the period (t)
Control Variables
$Size_{it}$ = Measured as the natural logarithm of total assets in the period (t)

9 was at 95% confidence at five degree of freedom (df).

Decision Rule

The alternative hypotheses is to be accepted if the p-value is less or equal than the alpha and to be rejected the if the p-value is greater than alpha at 5% significance level.

Model Specification

$ETR_{(i,t)} = \alpha + CEODU_{(i,t)} + Size_{(i,t)} + \mu$

Where:

$ETR_{(i,t)}$ = Effective tax rate of firm i at time t

$CEODU_{(i,t)}$ = CEO Duality of firm i at time t

$SIZE_{(i,t)}$ = Firm size of firm i at time t

μ = Error term (stochastic term)

Description of variables

The table below presents the description of the variables included in the model

4. Data Analysis and Result

The panel data obtained from the annual reports and accounts of the sampled firms from 2013 to 2019.

4.1 Descriptive Statistics

Table 2. Descriptive statistics of independent (corporate governance) variables

	ETR	CEODUALITY	AVERAGE_ASSET
Mean	9.401361	0.761905	1.38E+11
Median	9.000000	1.000000	8.05E+10
Maximum	17.00000	1.000000	7.45E+11
Minimum	0.000000	0.000000	0.000000
Std. Dev.	3.259674	0.427374	1.68E+11
Skewness	0.218983	1.229837	1.627434
Kurtosis	2.988632	2.512500	4.808414
Jarque-Bera	1.175654	38.51189	84.92026
Probability	0.555533	0.000000	0.000000
Observations	9	9	9

Source: E-Views 9.

The Table 2 (shown above), presents the mean (average) for each of the independent variables, median, their minimum, maximum, standard deviation, Kurtosis, Skewness, and the Jarque-Bera statistic (and associated p-value). The variable CEO Duality had an average value of 0.761 (76.2% of the entire observations recorded a value of one, i.e., CEO and Chairman of the Board are the same person; while 23.8% of the entire observation recorded a value of zero). CEO duality is positively skewed. The kurtosis values for CEO duality had values less than 3; they can be considered *platykurtic* relative to the normal. The Jarque-Bera statistic showed that CEO duality had p values>.05. The control variable firm size showed p values of the Jarque Bera statistic all less than .05; this is an indication of non-normality of the variable.

4.2 Test of Hypothesis

H_1:There is a significant effect of CEO duality on effective tax rate of quoted food and beverage companies in Nigeria.

Table 3. Ordinary Least Square (OLS) analysis between ETR and CEODU

Dependent Variable: ETR

Method: Panel Least Squares

Date: 10/02/20 Time: 09:04

Sample: 2013 2019

Included: observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.84E-17	3.96E-17	-1.223676	0.2882
CEOUD	1.000000	2.88E-16	3.47E+15	0.0000
SIZE	0.000000	4.49E-22	0.000000	1.0000
R-squared	0.438092	Mean dependent var		1.000000
Adjusted R-squared	0.418327	S.D. dependent var		0.000000
S.E. of regression	2.72E-16	Akaike info criterion		11.70756
Sum squared resid	2.96E-31.	Schwarz criterion		1.000000
Log likelihood	-874.0671	Hannan-Quinn criter.		11.74018
F-statistic	7.548921	Durbin-Watson stat		0.411106
Prob(F-statistic)	0.000037			

Source: E-Views 9.0 Panel Regression Output, 2020.

Table 3 shoes an adjusted R^2 value of 0.42. The adjusted R^2, which represents the coefficient of multiple determinations imply that 42% of the total variation in

DOI: https://doi.org/10.30564/mmpp.v2i4.2632

the dependent variable (ETR) of the sampled companies in Nigeria is jointly explained by the explanatory variables (CEODU and SIZE. The adjusted R^2 of 42% did not constitute a problem to the study because the F- statistics value of 7.548921 with an associated Prob.>F = 0.0000 indicates that the model is fit to explain the relationship expressed in the study model. The value of adjusted R^2 of 42% also shows that 58 % of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from CEODU and SIZE there are other factors that mitigate ETR of quoted companies in Nigeria. The results shows that CEODU has a positive and significant relationship with ETR measured with a beta coefficient (β_1) and t- value of 1.000000 and 3.47 respectively and p- value of 0.000 which is statistically significant at 5% level.

4.3 Decision

Based on the empirical evidence that suggests that there is a significant effect of CEO duality on effective tax rate of quoted food and beverage companies in Nigeria.at 5% level of significance, thus, the alternative hypothesis of the study is accepted.

4.4 Discussion of Findings

All the corporate governance variables were insignificant. Studies have shown that low ETR rates imply that a firm engages in tax planning more aggressively; while, higher ETR rates may imply a more conservative approach to tax planning.

The corporate governance variable of CEO duality was significant; CEO duality had a negative coefficient. The sign of the coefficient of CEO duality is consistent with the study by [61] in Iran using binary logistic regression showed that CEO duality had a significant effect on tax aggressiveness.

However, the study by [4] on firms drawn from S & P 500 which documented a negative insignificant effect of CEO duality on tax avoidance. [32] showed that tax evasion were significantly lower in firms where board chairman is also the CEO. Also, [62] reported a negative non-significant effect of CEO duality on effective tax rate.

The control variables firm size is not significant. However, [16] in Indonesia reported a insignificant positive effect of firm size and audit quality on tax avoidance. [59] in Tunisia, reported a significant positive effect of firm size.

5. Conclusion

This study assesses the relationship between corporate governance and corporate tax avoidance. The study therefore, expands the scope of prior research by estimating the relationship. This study found that CEO duality impact positively on effective tax rate (ETR), and this was statistically significant. The control variable, firm size showed statistical insignificance at 5% level. It imply that to improve the value of the firm, the owners of the firm would prefer to reduce their taxable income. Besides, they desired to plan diligently for the company. The study therefore, recommended that non-separation of CEO from Chairman of the Board may lead to higher levels of tax planning; and an opportunity for manager's rent extraction, because of their dominating role in order to ensure that adequate oversight roles are separated.

References

[1] Poudel, R. L. Relationship between Corporate Governance and Corporate Social Responsibility: Evidence from Nepalese Commercial Banks. Journal of Nepalese Business Studies, 2015, 9(1):137-144.

[2] Organisation for Economic Co-Operation and Development [OECD], Principles of Corporate Governance. OECD Publications Service, 2004.

[3] Ianniello, G., Mainardi, M., Rossi, F. Corporate governance and auditor choice. Bicentenary Conference – Lecce, Italy, 2013, 9, 19-21.

[4] Pilos, N. V. D. Tax Avoidance and Corporate Governance - Does the board of directors influence tax avoidance? (Unpublished Master's Thesis). Erasmus School of Economics, Erasmus University, 2017.

[5] Edame, G. E., Okoi, W. W. The impact of taxation on investment and economic development in Nigeria. Academic Journal of Interdisciplinary Studies, 2004, 3(4):209- 218.
DOI: https://doi.org/10.5901/ajis.2014.v3n4p209

[6] Takumah, W. Tax revenue and economic growth in Ghana: A cointegration approach. MPRA Paper No. 58532, 2014. Available online at: https://mpra.ub.uni-muenchen. de/58532/1/MPRA_paper_58532.pdf

[7] Fadhilah, R. Pengaruh (Good Corporate Governance) Terhadap (Tax Avoidance) (Bachelor Thesis). Universitas Negeri Padang, 2014.

[8] Proshare. The FRCN Nigerian Code of Corporate Governance 2018, 2019. Available online at: https://www.proshareng.com/news/Business%20Regulations,%20Law%20&%20Practice/The-FRCN-Nigerian-Code-of-Corporate-Governance-2018/43590

[9] Lim, Y. Tax avoidance, cost of debt and shareholder activism: Evidence from Korea. Journal of Banking & Finance, 2011, 35(2): 456-470.

[10] Schön, W. Tax and corporate governance: A legal approach. In Tax and corporate governance. Springer,

Berlin, Heidelberg, 2008: 31-61.
[11] Hanlon, M., Slemrod, J. What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. Journal of Public Economics, 2009, 93(1-2): 126-141.
[12] Hanlon, M., Heitzman, S. A review of tax research. Journal of Accounting and Economics, 2010, 50(2): 127-178.
[13] Annuar, H. A., Salihu, I. A., Obid, S. N. S. Corporate ownership, governance and tax avoidance: An interactive effects. Procedia-Social and Behavioral Sciences, 2014, 164, 150- 160.
[14] Mills, L. F., Nutter, S. E., Schwab, C. M. The effect of political sensitivity and bargaining power on taxes: Evidence from federal contractors. The Accounting Review, 2013, 88(3): 977-1005.
[15] Chen, S., Chen, X., Cheng, Q., Shevlin, T. Are family firms more tax aggressive than non-family firms? Journal of Financial Economics, 2010, 95(1): 41-61.
[16] Tandean, V. A., Winnie, W. The effect of good corporate governance on tax avoidance: An empirical study on manufacturing companies listed in IDX period 2010-2013. Asian Journal of Accounting Research, 2016, 1(1): 28-38.
[17] Zalata, A., Roberts, C. Internal corporate governance and classification shifting practices: An analysis of UK corporate behavior. Journal of Accounting, Auditing & Finance, 2016, 31(1): 51-78.
[18] Yusoff, W. F. W., Alhaji, I. A. Insight of corporate governance theories. Journal of Business and Management, 2012, 1(1): 52-63.
[19] Effiong, S.A., Akpan, E.I., Oti, P.A. Corporate Governance, Wealth Creation and Social Responsibility Accounting. Management Science and Engineering, 2012, 6(4): 110-114. Available from: http://www.cscanada. net/index.php/mse/article/view/j.mse.1913035X20120604.559
DOI:http://dx.doi.org/10.3968/j.mse.1913035X20120604.559
[20] Silva, A., Vitorino, A., Alves, C., Cunha, J., Monteiro, M. A. Livro branco sobre corporate governance em Portugal. Instituto Português de Corporate Governance, 2006.
[21] Maier, S. How global is good corporate governance. London: Ethical Investment Research Services, 2005.
[22] Solomon, J., Solomon, A. Corporate Governance and Accountability. Chichester: John Wiley & Sons, 2004.
[23] Raut, S. Corporate Governance–Concepts and Issues. Institute of Directors, India, 2003. Available online at: http://iodonline.com/Articles/Corporate%20Governance%20and%20Sustainability%20Concepts%20Sreeti%20Raut.pdf
[24] Chapra, M. U., Ahmed, H. Corporate governance in Islamic financial institutions. Islamic Research and Training Institute, Islamic Development Bank, Saudi Arabia, 2002.
[25] Cadbury Report. Report of the committee on the financial aspects of corporate governance. London, England: Gee & Co, 1992.
[26] Organisation for Economic Co-Operation and Development [OECD]. OECD Principles of Corporate Governance. Ad-Hoc Task Force on Corporate Governance, OECD, Paris, 1999.
[27] Cremers, K. J., Nair, V. B. Governance mechanisms and equity prices. The Journal of Finance, 2005, 60(6):2859-2894.
[28] Bushman, R. M., Smith, A. J. Financial accounting information and corporate governance. Journal of Accounting and Economics, 2001, 32(1-3):237-333.
[29] Gebba, T. R. Corporate governance mechanisms adopted by UAE national commercial banks. Journal of Applied Finance and Banking, 2015, 5(5):23-61.
[30] Dalwai, T. A. R., Basiruddin, R., Abdul Rasid, S. Z. A critical review of relationship between corporate governance and firm performance: GCC banking sector perspective. Corporate Governance, 2015, 15(1):18-30.
[31] Denis, D. K., McConnell, J. J. International corporate governance. Journal of Financial and Quantitative Analysis, 2003, 38(1):1-36.
[32] Karaibrahimoglu, Y. Z. Is corporate governance a determinant of auditor choice?-Evidence from Turkey. Ege Academic Review, 2013, 13(2):273-284.
[33] Bhagat, S., Bolton, B. Corporate governance and firm performance. Journal of Corporate Finance, 2008, 14(3):257-273.
[34] Martinez, A. L. Tax aggressiveness: a literature survey. Revista de Educação e Pesquisa em Contabilidade (Journal of Education and Research in Accounting), 2017, 11(Special Edition, 6):104-121. Available online at: www.repec.org.br.
DOI:http://dx.doi.org/10.17524/repec.v11i0.1724
[35] Mgbame, C. O., Chijoke-Mgbame, M. A., Yekini, S., Kemi, Y. C. Corporate social responsibility performance and tax aggressiveness. Journal of Accounting and Taxation, 2017, 9(8):101-108.
[36] Franca, C. J. de, Moraes, A. M. L. de M. de, Martinez, A. L. Tributacao Implicita e Clientelas, Arbitragem, Restricoes e Friccoes. Revista de Administração e Contabilidade da FAT, 2015, 7(1):5-18.
[37] Dyreng, S. D., Hanlon, M., Maydew, E. L. The effects of executives on corporate tax avoidance. The Accounting Review, 2010, 85(4):1163-1189.

  DOI: https://doi.org/10.30564/mmpp.v2i4.2632

[38] Osuegbu, E. O. Good tax planning as legal options to the illegality of tax evasion. A paper delivered at the tax awareness forum for public and organised private sector organised by the Federal Inland Revenue Service, 2007.

[39] Braithwaite, J. Markets in Vice, Markets in Virtue. New South Wales, Sydney: Federation Press, 2005.

[40] Desai, M. A., Dharmapala, D. Tax and corporate governance: An economic approach. MPI Studies on Intellectual Property, Competition and Tax Law, 2008, 3, 13-30.

[41] Blouin, J. Defining and measuring tax planning aggressiveness. National Tax Journal, 2014, 67(4):875–900.

[42] Lisowsky, P. Inferring U.S. tax liability from financial statement information. The Journal of the American Taxation Association, 2009, 31(1): 29-63.

[43] Alstadsaeter, A., Jacob, M. Who participates in tax avoidance? Working paper. University of Oslo and WHU – Otto Beisheim School of Management, 2013.

[44] Sikka, P. Smoke and mirrors: Corporate social responsibility and tax avoidance. Accounting Forum, 2010, 34(3/4): 153-168.

[45] Gravelle, J. G. Tax havens, international tax avoidance and evasion. Congressional Research Service, 2013.

[46] Booth, J., Cornett, M., Tehranian, H. Boards of directors, ownership, and regulation. Journal of Banking & Finance, 2002, 26(10):1973-1996.

[47] Minnick, K., Noga, T. Do corporate governance characteristics influence tax management? Journal of Corporate Finance, 2010, 16(5):703-718.

[48] Firth, M., Fung, P., Rui, O. Ownership, two-tier board structure, and the informativeness of earnings -Evidence from China. Journal of Accounting and Public Policy, 2007, 26(4): 463-496.

[49] Holtz, L., Neto, S. A. Effects of board of directors' characteristics on the quality of accounting information in Brazil. Revista Contabilidade & Finanças, 2014, 25(66): 255-266.

[50] Al Arussi, S. A., Selamat, H. M., Hanefah, M. M. Determinants of financial and environmental disclosures through the internet by Malaysian companies. Asian Review of Accounting, 2009, 17(1): 59-76.
DOI: https://doi.org/10.1108/13217340910956513

[51] Said, R., Hj Zainuddin, Y., Haron, H. The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. Social Responsibility Journal, 2009, 5(2): 212-226.

[52] Bliss, M. A. Does CEO duality constrain board independence? Some evidence from audit pricing. Accounting & Finance, 2011, 51(2): 361-380.

[53] Edwin, O. A., Victor, O. Corporate board characteristics and tax aggressiveness: a study of manufacturing firms in Nigeria. Management, 2019, 8(4), Print ISSN: No 2277-8160.

[54] Bayar, O., Huseynov, F., Sardarli, S. Corporate Governance, Tax Avoidance, and Financial Constraints. Financial Management, 2018, 47(3): 651-677.

[55] Hoseini, M., Gerayli, M. S., Valiyan, H. Demographic characteristics of the board of directors' structure and tax avoidance: Evidence from Tehran Stock Exchange. International Journal of Social Economics, 2018, 46(2):199-212.
DOI:https://doi.org/10.1108/IJSE-11-2017-0507

[56] Kurawa, J. M., Saidu, H. Corporate Tax and Financial Performance of Listed Nigerian Consumer Goods. Journal of Accounting and Financial Management, IIARD-International Institute of Academic Research and Development, 2018, 4(4), ISSN: 2504-www.iiardpub.org.

[57] Salawu R. O., Ololade, B. M. Corporate tax avoidance of listed firms in Nigeria. Journal of Taxation and Economic Development, 2018, 17(2), ISSN: 1118-6017 .

[58] Prastiwi, D. Does corporate governance moderate the effect of earnings management on tax aggressiveness? Advances in Social Science, Education and Humanities Research (ASSEHR), 2017, 108: 8-13.

[59] Boussaidi, A., Hamed, M. S. The impact of governance mechanisms on tax aggressiveness: Empirical evidence from Tunisian context. Journal of Asian Business Strategy, 2015, 5(1): 1-12.

[60] Smit, A. The quality of reported earnings and the monitoring role of the board: Evidence from small and medium companies. Southern African Business Review, 2015, 19(Special edition 2): 52-73.

[61] Jalali, M., Jalali, F., Moridi, F., Garshasbi, A., Foroodi, A. The impact of the board of directors' structure on tax avoidance in the companies listed in Tehran Stock Exchange. International Research Journal of Applied and Basic Sciences, 2013, 4(9): 2526-2531.

[62] Zemzem, A., Khaoula, F. The effects of board of directors' characteristics on tax aggressiveness. Research Journal of Finance and Accounting, 2013, 4(4): 140- 147.

[63] Lanis, R., Richardson, G. The effect of board of director composition on corporate tax aggressiveness. Journal of Accounting and Public Policy, 2011, 30(1): 50-70.

Author Guidelines

This document provides some guidelines to authors for submission in order to work towards a seamless submission process. While complete adherence to the following guidelines is not enforced, authors should note that following through with the guidelines will be helpful in expediting the copyediting and proofreading processes, and allow for improved readability during the review process.

Ⅰ. Format

- Program: Microsoft Word (preferred)
- Font: Times New Roman
- Size: 12
- Style: Normal
- Paragraph: Justified
- Required Documents

Ⅱ. Cover Letter

All articles should include a cover letter as a separate document.

The cover letter should include:

- Names and affiliation of author(s)

The corresponding author should be identified.

Eg. Department, University, Province/City/State, Postal Code, Country

- A brief description of the novelty and importance of the findings detailed in the paper

Declaration

v Conflict of Interest

Examples of conflicts of interest include (but are not limited to):

- Research grants
- Honoria
- Employment or consultation
- Project sponsors
- Author's position on advisory boards or board of directors/management relationships
- Multiple affiliation
- Other financial relationships/support
- Informed Consent

This section confirms that written consent was obtained from all participants prior to the study.

- Ethical Approval

Eg. The paper received the ethical approval of XXX Ethics Committee.

- Trial Registration

Eg. Name of Trial Registry: Trial Registration Number

- Contributorship

The role(s) that each author undertook should be reflected in this section. This section affirms that each credited author has had a significant contribution to the article.

1. Main Manuscript
2. Reference List
3. Supplementary Data/Information

Supplementary figures, small tables, text etc.

As supplementary data/information is not copyedited/proofread, kindly ensure that the section is free from errors, and is presented clearly.

Ⅲ. Abstract

A general introduction to the research topic of the paper should be provided, along with a brief summary of its main results and implications. Kindly ensure the abstract is self-contained and remains readable to a wider audience. The abstract should also be kept to a maximum of 200 words.

Authors should also include 5-8 keywords after the abstract, separated by a semi-colon, avoiding the words already used in the title of the article.

Abstract and keywords should be reflected as font size 14.

Ⅳ. Title

The title should not exceed 50 words. Authors are encouraged to keep their titles succinct and relevant.

Titles should be reflected as font size 26, and in bold type.

Ⅳ. Section Headings

Section headings, sub-headings, and sub-subheadings should be differentiated by font size.

Section Headings: Font size 22, bold type

Sub-Headings: Font size 16, bold type

Sub-Subheadings: Font size 14, bold type

Main Manuscript Outline

Ⅴ. Introduction

The introduction should highlight the significance of the research conducted, in particular, in relation to current state of research in the field. A clear research objective should be conveyed within a single sentence.

Ⅵ. Methodology/Methods

In this section, the methods used to obtain the results in the paper should be clearly elucidated. This allows readers to be able to replicate the study in the future. Authors should ensure that any references made to other research or experiments should be clearly cited.

Ⅶ. Results

In this section, the results of experiments conducted should be detailed. The results should not be discussed at length in this section. Alternatively, Results and Discussion can also be combined to a single section.

Ⅷ. Discussion

In this section, the results of the experiments conducted can be discussed in detail. Authors should discuss the direct and indirect implications of their findings, and also discuss if the results obtain reflect the current state of research in the field. Applications for the research should be discussed in this section. Suggestions for future research can also be discussed in this section.

Ⅸ. Conclusion

This section offers closure for the paper. An effective conclusion will need to sum up the principal findings of the papers, and its implications for further research.

Ⅹ. References

References should be included as a separate page from the main manuscript. For parts of the manuscript that have referenced a particular source, a superscript (ie. [x]) should be included next to the referenced text.

[x] refers to the allocated number of the source under the Reference List (eg. [1], [2], [3])

In the References section, the corresponding source should be referenced as:

[x] Author(s). Article Title [Publication Type]. Journal Name, Vol. No., Issue No.: Page numbers. (DOI number)

Ⅺ. Glossary of Publication Type

J = Journal/Magazine

M = Monograph/Book

C = (Article) Collection

D = Dissertation/Thesis

P = Patent

S = Standards

N = Newspapers

R = Reports

Kindly note that the order of appearance of the referenced source should follow its order of appearance in the main manuscript.

Graphs, Figures, Tables, and Equations

Graphs, figures and tables should be labelled closely below it and aligned to the center. Each data presentation type should be labelled as Graph, Figure, or Table, and its sequence should be in running order, separate from each other.

Equations should be aligned to the left, and numbered with in running order with its number in parenthesis (aligned right).

Ⅻ. Others

Conflicts of interest, acknowledgements, and publication ethics should also be declared in the final version of the manuscript. Instructions have been provided as its counterpart under Cover Letter.

Macro Management & Public Policies

Aims and Scope

Macro Management & Public Policies publishes original research papers that offers professional review and publication to freely disseminate research findings in areas of Organizational Studies, Business Management, Human Rights, Environmental and Social Policy and more. The Journal focuses on innovations of research methods at all stages and is committed to providing theoretical and practical experience for all those who are involved in these fields.

Macro Management & Public Policies aims to discover innovative methods, theories and studies in its field by publishing original articles, case studies and comprehensive reviews.

The scope of the papers in this journal includes, but is not limited to:

- Sustainable Development
- Organizational Studies
- Human Rights
- Workplace Wellbeing
- Environmental and Social Policy
- Micro and Marco Perspectives
- Business Management
- Economic Development and Theory of Growth
- Integrated Reporting

Bilingual Publishing Co. (BPC)

Tel:+65 65881289

E-mail:contact@bilpublishing.com

Website:www.bilpublishing.com

About the Publisher

Bilingual Publishing Co. (BPC) is an international publisher of online, open access and scholarly peer-reviewed journals covering a wide range of academic disciplines including science, technology, medicine, engineering, education and social science. Reflecting the latest research from a broad sweep of subjects, our content is accessible world-wide——both in print and online.

BPC aims to provide an analytics as well as platform for information exchange and discussion that help organizations and professionals in advancing society for the betterment of mankind. BPC hopes to be indexed by well-known databases in order to expand its reach to the science community, and eventually grow to be a reputable publisher recognized by scholars and researchers around the world.

BPC adopts the Open Journal Systems, see on ojs.bilpublishing.com

Database Inclusion

Asia & Pacific Science Citation Index

Creative Commons

China National Knowledge Infrastructure

Google Scholar

Crossref

MyScienceWork

BILINGUAL
PUBLISHING CO.
Pioneer of Global Academics Since 1984

Tel:+65 65881289
E-mail:contact@bilpublishing.com
Website:www.bilpublishing.com

ISSN 2661-3360
04
9 772661 336200
Price: S$30.00