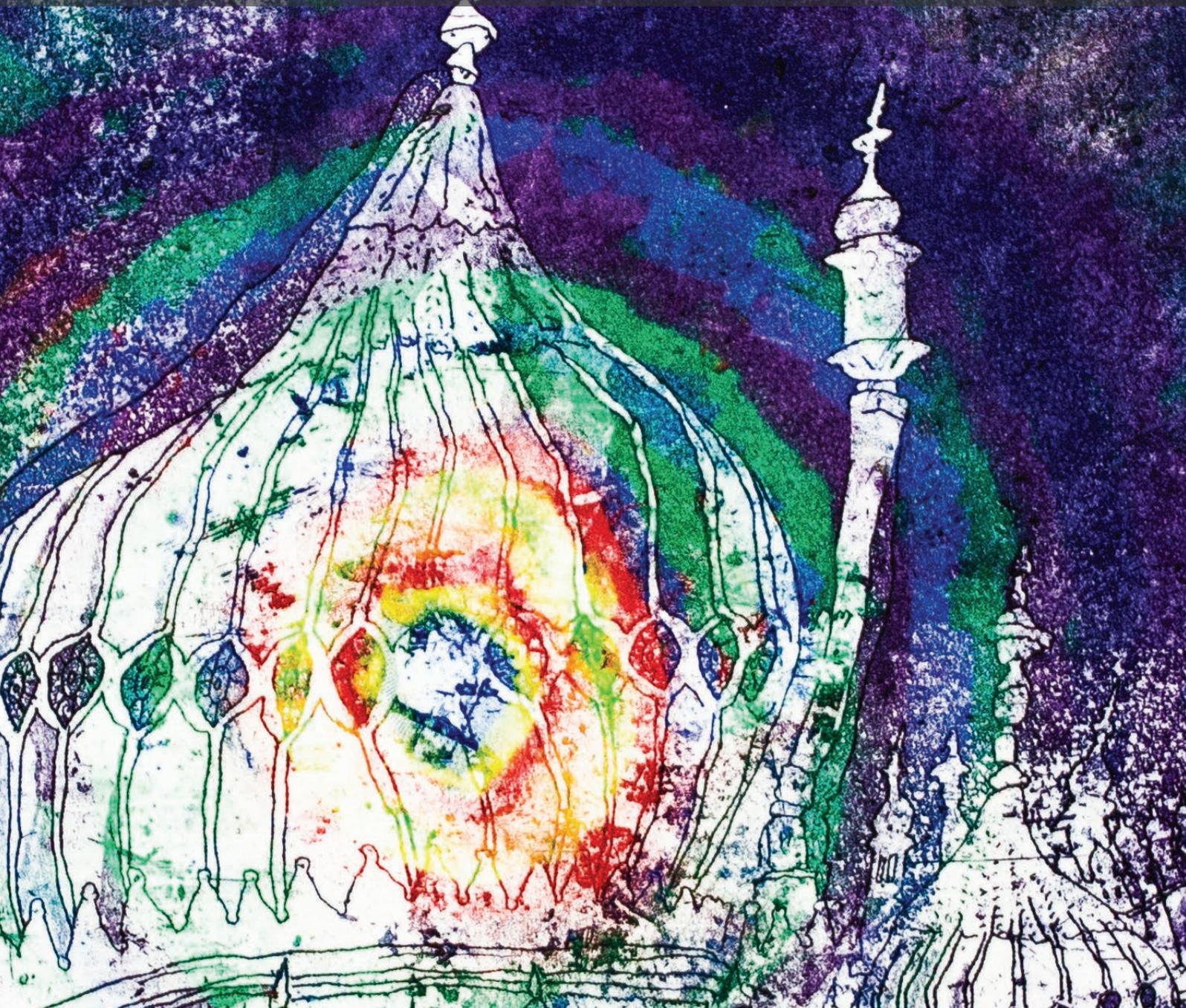


# EAST MEETS WEST: INNOVATION AND DISCOVERY

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## *Eastern Broadcasting Code for Western Content*

Darshan Ashwin Trivedi, MICA, India

The European Conference on the Social Sciences 2017  
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### **Abstract**

India is the second largest television Industry in the world, however private satellite television in India is as new as 26 years. The innovations in content has taken a lead in creating engaging programmes for the Indian consumers. India is a diverse television market, with 29 spoken languages, more than 800 dialects, 175 million television households spread across all regions, various social-religious-economic-cultural communities an audio visual medium like television has a large role to play. There have been studies implying potential impact of television on the minds of viewers. A study was undertaken to evaluate the potential impact of television in India from socio-legal perspective. The content on General Entertainment Television, especially reality shows are formatted from the western markets, however their cultural adaptation requires serious consideration from the social perspective. Private Satellite Television entered India through an illegal route. The first laws of television content regulations were brought into force five years after Private Satellite Television channels started beaming in India. India is suffering from offensive content, not so stringent content code, no provision for the watershed hours and most importantly profane content during the children viewing hours. The proposed paper looks at provisions of Ofcom Broadcasting Code and compares them with the Indian broadcasting code. The content complained were reviewed for this research, experts from the field of content creation, psychology, psychiatry, social science, journalism and media lawyers were interviewed to draw conclusions from this interdisciplinary study.

Keywords: Broadcasting Code, Cable Television Networks (Regulation) Act, 1995, Ofcom Broadcasting Code

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## **Introduction**

India is a multicultural country with diversity of languages, dialects, socio-cultural regions, castes, tribes, geographies, religions, lifestyles and socio economic groups. India has a population of 1.21 billion people (Census, 2011). With information revolution and disruption multiple avenues are available for an average Indian to get entertained. Television has proved to be one of the most formidable platforms of Media and Entertainment in the country. India is currently world's second largest television market, with 183 million television households in 2016 (Ficci Frames, 2017, p. 63) and 892 granted satellite television channels (MIB, 2017). The first Satellite Television experiment was undertaken by Indian Space Research Organization in the name of Satellite Instructional Television Experiment (SITE) (Kumar, 2013, pp. 297-298). SITE was the dream of Dr. Vikram Sarabhai, father of India's space programme to ensure that technology is used for the betterment of the society. The sole purpose of this experiment was to map the development of communities in specific areas. The satellite television was introduced to India for information, education and entertainment; however entertainment occupies the major chunk of television consumption in India today (Ficci Frames, 2017, p. 75).

With satellite television foreign content entered the Indian domain. Television channels license Reality shows formats from various western countries for broadcasting in India. Indian television system and the broadcasting regulations draw a lot from the British system. The scope of this paper is to conduct a comparative study of provisions of Ofcom broadcasting code with the broadcasting code of Cable Television Networks Regulation Act 1995. Besides the paper will also look into the content code of Indian broadcasting foundation.

## **Objectives**

1. To throw light on the social responsibility that a satellite TV channel adheres to vis-à-vis Broadcasting Code of Conduct; with reference to the Reality shows
2. To do a comparative analysis of Indian broadcasting code with Ofcom broadcasting code

## **Research Design:**

The secondary data was referred from various sources viz. books, magazines, articles, websites, journals, newspapers etc. The empirical data was used for understanding the statement of the problem. In order to strengthen the findings and arrive at a solution to the problem data was collected from primary sources. In depth interviews were conducted with various experts.

## **Sampling:**

Purposive sampling method was used. A sample of 55 experts was drawn. The experts belonged to the field of Social Science, Print Journalism, Video Journalism, Television Content Creation, Psychiatry, Psychology and Media Law as shown below.

Sr. No.	Field of Experts	Sample
1	Renowned Social Scientists	10
2	Newspaper Editors	10
3	Bureau Chiefs of TV News Channels	10
4	Entertainment Content Creators	10
5	Psychiatrists / Psychologists	10
6	Media Lawyers	5
<b>Total</b>		<b>55</b>

**Table 1: Table Showing the distribution of sample**

### **Criteria of Sample Selection:**

The experts belonged various fields. Since Reality shows have been criticized for having more offensive content, the Broadcasting code was observed from the Reality Shows' point of view.

### **Description of Tool:**

An interview schedule was designed to capture feedback of the experts. The interview schedule was divided into two parts; in part background information of the experts were included, whereas in part two specific information regarding reality shows, their influence, consumption pattern and adherence to broadcasting code were included.

### **Journey of Indian Broadcasting**

As described by McLuhan, television is a cool medium (McLuhan, 1994, pp. 22-25). The technological interface and the ability to produce visuals and sounds are heavily consumed by the not so literate country like India. India has seen a distinctive journey in terms of media ownership. Television is the first mass media platform that was introduced after independence. Television for the first few years was under the control of Government. Doordarshan the Public Broadcaster of India was the main source of television entertainment.

For the first few years the Indian television ran with monopolistic player i.e. Doordarshan. The initial days of Indian television were filled with content that was mainly development driven. *Hum Log* - the first Soap Opera launched on the Indian television also had a strong message pertaining to population explosion in lower middle class families, alcoholism and illiteracy (Kohli-Khandekar, 2010, pp. 67-73). This was also the time when Foreign Television Programmes were exposed to Indian Television. With the introduction of VCR technology, apartments, colonies and hotels of big cities were connected through Cable Television (Kohli-Khandekar, 2010, pp. 67-73). The content shown on cable television was pirated. Television series from various content markets like USA, UK and Pakistan were popular in this era. Foreign Television Programmes were gathering popularity in India. Introduction of cable television that was a new phenomenon became widespread across the country.

A big event happened in 1990-91, which changed the pattern of television viewing in India. The Gulf War broke out, CNN covered the war live and beamed it to India. Business enthusiasts considered this as an opportunity to develop the cable television business. The existing cable connections soon got converted into cable and satellite homes. Globalization was in the air, growth of cable television in India was one offshoot of the liberalization following new economic policy. The cable operators not only showed CNN, but also started using engaging content from across the world to keep the cable television consumers hooked on to their TV sets (Rodrigues U. M., 2010, pp. 181-205). It was the time for the local enterprises to mark their foray into broadcasting. Star TV launched its operations with foreign programming beamed into India. Zee group later launched joint venture operations with Star and launched Zee TV which was primarily launched to showcase Indian content. Regional channels, multi system operators, specialty television channels; in the next few years (Rodrigues U. M., 2010, pp. 181-205). Indian television market was poised to become one of the most prolific television markets in the world.

In the Cable television regime, the content producers and aggregators had a free hand. As the Cable TV Act was introduced much later, the Indian market was already spoiled with offensive content. On one hand regulatory measures were being implemented, on the other hand content was being infused through various channels.

### **Reality Shows and Foreign Content**

Today Indian television has prolific content flow with thousands of hours of content being created, aggregated, licensed and broadcast. The journey of Reality Shows started with Alan Funt creating his pioneering show called *Candid Camera* in 1948, on American Television (Priya, 2008, pp. 3-10). Interestingly the format he started with, is still prevalent in majority of Reality Shows of the world. With the evolution on satellite broadcasting in India there are various Reality Shows on the Indian Screen. Various types of Reality Shows that have been introduced to Indian television viz. elimination shows (*Bigg Boss*), competition shows (*Indian Idol*, *JhalakDikhalaJaa*, *Voice of India*, *Zee Cine Stars Ki Khoj*), dating shows (*Blind Date*), fear centric shows (*Fear Factor*, *Survivor*) and makeover shows (*The Biggest Loser*) (Priya, 2008, pp. 3-10). Whether it is a regional channel, a niche channel or Hindi General Entertainment channel, no programming strategy can be drafted without Reality Shows. The aspects of manipulation in Reality Shows, casting of participants, shows not shot in real time are designed for youth and preferred by advertisers (Priya, 2008, pp. 3-10). Reality Shows make for engaging viewing, they create a world of make believe; one of the reasons why they are popular amongst youth. Some of India's most popular music artistes have been products of Reality Shows.

As described by Hill the Reality Shows today represent three conventional ways of media productions namely tabloid journalism, documentary television and popular entertainment (Hill, 2005, p. 14). Such hybrid production style makes the Reality Shows popular amongst viewers. Another reason of popularity of Reality Shows as per Hill is their key characteristic of attracting the viewers (Hill, 2005, pp. 41-56). Bratich calls these Reality Shows as less about intervening reality and more about involving in it (Bratich, 2007, pp. 1-5). This explains subjective involvement of Reality Shows. Shows like *Big Brother* and *Survivor* have been criticised about the

controversial background of the participants and the amount of aggression they depict (Huff, 2006, pp. 3-14). The biggest gratification from this shows is hefty rewards that they get, besides the popularity. The journey that started with *Candid Camera* continued to contribute the same kind of shows, in a more aggressive fashion. Besides aggression gratification has increasingly become another factor for viewers to like such shows.

### **Ethics and Responsibility**

Ethics are the watchdog of any democracy. As per Christians the world of media is divided into metaethics (moral theory and relativism), normative ethics (social Justice, truth, nonviolence) and describing ethics (instrumentalism) (Christians, 2011, pp. 1-19). Thus one needs to look at the combination of all aspects to be able to talk about ethics in the modern time. He further explains that the larger aspect of ethics needs to give moral discernment and perspective on reality. Impact of television on youth is a subject that researchers are keenly observing ever since the platform has emerged. As the popular perception prevails, the content on television is designed based on the need of the consumers. Perebinossoff explains as to how the politics of media decides the content that should be shown on any platform like television (Perebinossoff, 2008, p. 90). Besides the politics of media, it is the profit motive that plays a role in deciding the content selection. As explained by Rao, media ethics theories need to have *Glocal* approach; an interaction between international, national, regional and local media practices (Rao, 2011, pp. 154-170). With privatisation, liberalisation and globalisation media content can travel across the borders. The technology has become a strong catalyst in making this a reality. Reality Shows which are considerably new phenomena to Indian television are being transported and translated to Indian terrain at a fast pace from across the world. The real media ethics approach in this context needs to look at the interaction between global and local cultural trends. As per Dighe it is the economics of media that have led broadcasters override all the rules of media ethics. Cultural heterogeneity is a product of cultural imperialism culminating from globalisation (Dighe, 2001, pp. 516-533). Dighe further explains here that the effects of globalisation has tempted broadcasters to dodge all the norms of broadcasting. According to her, self-regulatory mechanisms will be the right way forward for a country like India.

As per Gupta the impact of media influence could affect the psycho-social development of children and adolescents. This impact could be both positive and negative (Gupta, 2006, p. 182). Peddiboyina further establishes some relation between TV usage and mental ability of viewers (Peddiboyina, 2005, p. 31). The children who watched more television were more prone to violence. It further has a potential to affect the knowledge and intellectual development of younger viewers. While the foreign television programmes portray sex, vulgarity, violence, crime social stereotypes, western lifestyle; they also bring in positives like helping viewers bond with the family and increase knowledge (Peddiboyina, 2005, p. 31). This was observed in a research where television really helped families to control conflicts. About foreign television programmes Peddiboyina explains quoting a research that was conducted in 1964, that such programmes could bring about a behaviour change through the exposure (Peddiboyina, 2005, p. 39). Countries that belong to the mature television markets have been faced with problems like aggression, unsafe sex, substance abuse etc. (Prabhakar & Basu, 2007, p. 136). These social evils can

directly be linked with television exposures. For those who don't agree with the potential of television to impact individuals to be violent, should look at the reason why big companies spend millions of dollars on advertising (Prabhakar & Basu, 2007, pp. 203-204). The argument above explains the ability of television to influence individuals. About media violence and aggressive behaviour of children, Leveskque explains through a statement signed by the American Psychological Association, the American Academy of Paediatrics, the American Academy of Family Physicians, the American Psychiatric Association, the American Medical Association, and the American Academy of Child and Adolescent Psychiatry that aggressive behaviour in children is due to media violence (Levesque, 2007, pp. 21-23). Further this influence is not negative all the time.

As per the Social Responsibility Theory given by Wilbur Schramm, Siebert and Theodore Paterson; a judicial mix of self-regulation, state regulation and high professional standards were imperative (Siebert, Peterson, & Schramm, 1956, pp. 73-104). According to the theorists the free market approach had increased the power of press. The onus was on the media professionals to ensure that they create content with responsibility towards society. Wertham talked about stupendous quantity of violence in all the media (Laughey, 2008, pp. 12-14). He raised the concerns about how violence in comics and television could potential influence the children. Similarly George Garbner explained how long term TV viewing could impact the minds of the viewers, especially children (Laughey, 2008, pp. 21-22). Television viewing according to Garbner cultivates the minds of viewers over a long period of time. According to Uses and Gratifications theory given by Katz, Blumler, and Gurevitch, media audience uses media actively to satisfy their own uses, interests and motives (West & Turner, 2004, pp. 404-419). The heavy consumption of television is a result of choices that the audiences make themselves. The mass media theories indicate the potential impact of television on its viewers.

### **Broadcasting Code of India**

The first encounter of commercial Satellite television was illegal for India. The channels started beaming these channels to India from foreign soil (Rodrigues, 2010, pp. 246-268). The government ignored beaming of these illegal signals to Indian soil. It was a direct effect of liberalisation in India. The growth of Satellite Television in India was on a massive rise. The newly liberalised country was in no mood to regulate the same (Rodrigues, 2010, pp. 246-268).

Before India got its independence, the early media regulations were enacted to regulate the British voice in India. Article 19 (1)(a) of the Indian constitution grants all Indians the freedom of speech and expression. The freedom of speech and expression talks about restrictions which include; operation of any existing law, preventing the State from making any law, reasonable restrictions on the exercise of the right conferred in the interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence (Bakshi, 2013, pp. 42-43). The first mass media platform that launched in India after independence was television, in 1959 (Rodrigues, 2010, pp. 246-268). The freedom of press is covered under this Article 19(1); media doesn't enjoy an extraordinary power under the constitution of India (Divan, 2010, pp. 2-3). India saw

emergency in 1962, 1968, 1971 and 1975. All these years the freedom of speech and expression granted in the constitution of India were restricted (Divan, 2010, pp. 39-44).

Rao explains that there are four types of code of ethics viz. Self-regulated guidelines, Government guidelines, industry norms and international norms governed by the international bodies (Rao, 2011, pp. 154-176). In India the first three types of codes of ethics are practiced. In India the broadcasting code was originally drafted for public broadcasters. Since the public broadcasters were under the monopoly of Government, the broadcasting code mentioned all the positive aspects (MIB, 1990). It was in 1997 that the public broadcaster of India got its autonomy (Saxena, 2009, p. 31).

The Cable Television Networks (Regulation) Act, 1995, was mainly enacted to regularise the operations of the cable operators. There was a serious concern about the cultural invasion due to satellite television penetration in India. Thus besides the cable operators regularisation; the act also looked into the content related matters. There is a provision of two codes: Programme Code and Advertising Code in the Act, which talks about the content regulations. Under the Act there is provision of a government officer to seize cable operator's equipment if he/she found any discrepancies (Divan, 2010, pp. 251-256). The offenders are subject to punishment for non-adherence. There is a provision of imprisonment of upto two years or one thousand rupees fine or both for the first offence; every subsequent offence has a provision of up to five years of imprisonment and/or fine up to five thousand rupees (MIB, 1995). There is also a provision of an Electronic Media Monitoring Committee, which has been in the news for monitoring the representation of politicians instead of monitoring content (Raman, 2015).

Under Programme Code, content is forbidden if it shows indecency, criticism of friendly country, attack on religions of community, obscenity, defamation, deliberation, falsehood, innuendos, half-truths, incitement of violence, contempt of court, content against president or judiciary, offending integrity of nation, malign or slanders against individuals or groups, superstitions, denigrated women in any manner, denigrated children, slandered ethnic-regional-linguistic groups, contravened Cinematograph 1952, restricted for public exhibition, no film content that was for restricted exhibition under Central Board of Film Certification. Further Cable operators were advised to carry programmes that would; portray women in positive light, not offend the provisions of Copyright Act, 1957, contain bad language if they were made for children (MIB, 2009).

Under the advertising code Cable operators are refrained from showing any advertisement if it contained content that offended morality-decency-religions susceptibility; derided any race, caste, colour, creed, nationality; elements against provisions of constitution of India; violence or obscenity; incited people to commit crime or violence; criminality; exploitation of national emblem, person or leader; derogatory image of women; social evils; direct or indirect sales of tobacco or alcohol or prohibited products; milk substitutes for infants; religious or political content; content that hurts religious sentiments; prohibited items as mentioned under Consumer Protection Act, 1986; miraculous remedies; content that endangers safety of women or children; content that is Indecent, vulgar, suggestive, repulsive or

offensive themes; violates provisions of Advertising Standard Council of India or cannot be distinguished from programmes(MIB, 2009).

### **Broadcast Content Complaints Council (BCCC)**

Indian Broadcasting Foundation is the non-news channels representation dealing with broadcasters, advertisers, buying agencies, viewers, television producers and law makers to bring about holistic development in the sector(IBF, 2013). BCCC is a unique complaint redressal system that is set up for viewers through self-regulation(IBF, History & Vision, 2013).BCCC acts as the watchdog of self-regulation. It is a self-regulatory body to examine content related complaints against private non news satellite TV channels. The Council examines complaints from various stakeholders including viewers(IBF, Who We Are, 2013). The viewers refer to guidelines and make complaints. The guidelines include broad subjects viz. National Interest, Racial & Religious Harmony, Children & Generally Accessible Programmes, Social Values, Kissing, Sex & Nudity, Violence & Crime, Gambling, Horror & the Occult, Drugs, Smoking, Tobacco, Solvents & Alcohol, Libel, Slander & Defamation, Harm & Offence(IBF, Guidelines, 2013). The guidelines are differently explained for the broadcasters as well. Two aspects covered in these guidelines, which were not explained well in the Cable TV Act were, restricted access time, i.e. between 11:00 pm to 5:00 am; and provision to categorise the shows in General or Restrictive viewing categories(IBF, 2011). Though the complaints mechanism under BCCC has been made user friendly, the drawback of this system is that it has no strong law enforcement mechanism. BCCC can issue warnings, fines etc. When a legal action has to be taken the complaint is forwarded to the I&B ministry.

### **Complaints**

Between April 16, 2014 and December 31, 2016; total 20,377 complaints were received by BCCC out of which, total 5104 complaints were found specific to the purview of BCCC and decisions were taken on them (IBF, 2017). BCCC only accepts complaints of channels that are a part of Indian Broadcasting Foundation, the non-members' complaints are passed on to Ministry of Information and Broadcasting. Complaints regarding Quiz, Prize money, news and current affairs channels, films, music videos, film trailers, advertisements were found being transferred to other authorities. Thus BCCC looks into limited activities, which has a potential of leading complainants to dissatisfaction.

### **Highlights of Ofcom Broadcasting Code**

Ofcom is required and acts under the Communications Act 2003 and the Broadcasting Act 1996 to draw up a code for television and radio, covering standards in programmes, sponsorship, product placement, fairness and privacy(Ofcom, 2017, p. 2). This Code is known as the Ofcom Broadcasting Code. It has been drafted in the light of Human Rights Act 1998 and European Convention on Human rights(Ofcom, 2017, p. 2). It specifically mentions about right to freedom of expression, right to a person's private and family life, home and correspondence; right to freedom of thought, conscience and religion; and the right to enjoyment of human rights without discrimination on grounds such as sex, race and religion. The code has a provision of

putting statutory sanction against a broadcaster in an event of the broadcaster breaching the code; deliberately, seriously, repeatedly or recklessly(Ofcom, 2017, p. 4).

Ofcom, the regulator of communications industries of United Kingdom, deals with services including radio, television, on demand, postal, telecommunications and wireless (Ofcom, What is Ofcom, 2017). Accountable to Parliament, Ofcom sets and enforces regulatory rules for the sectors for which it has responsibility. Ofcom has powers to enforce competition law in those sectors, alongside the Competition and Markets Authority. Ofcom is funded by fees from industry for regulating broadcasting and communications networks, and grant-in-aid from the Government(Ofcom, What is Ofcom, 2017). Ofcom ensures the optimal use for wireless telegraphy of the electro-magnetic spectrum, availability of a wide range of electronic communications services, availability of a wide range of TV and radio services of high quality and wide appeal, maintenance of plurality in radio and television services, the application of standards that provide adequate protection to people against offensive, harmful content, unfair treatment and infringement of privacy (Archives, 2003). Thus Ofcom assumes a large role that aims at holistic development and fair distribution of resources to the people of UK. Ofcom works as a single agency for all communication related activities, unlike that of India where the scope is narrow. Interestingly Ofcom's duties and powers have closed the loop of passing the buck of decision making to a third party. Thus Ofcom has the power of licensing, monitoring, dealing with complaints and issuing sanctions.

Ofcom Broadcasting code is drafted in detail over ten sections viz. Protecting the Under Eighteen; Harm and Offense; Crime, Disorder, Hatred and Abuse; Religion; Due Impartiality and Due Accuracy and Undue Prominence of Views and Opinions; Elections and Referendums; Fairness; Privacy; Commercial References in Television Programming and Commercial Communications in Radio Programming(Ofcom, 2017, pp. 7-72). Watershed hours of broadcasting are clearly defined. Watershed is defined from 21:00 to 5:30 hours; this means content that is unsuitable for children cannot be shown during these hours(Ofcom, 2017, p. 8). Due care is taken to ensure that children below eighteen are protected under broadcasting. The list of things which include violence, drugs, smoking, alcohol, offensive language, sexual material, nudity is covered under the watershed hours(Ofcom, 2017, pp. 7-15).The code prescribed in Ofcom not only ensures the freedom of speech, but also ensures that larger interests of people of United Kingdom is taken care of. The key highlight of the Ofcom code with respect to protecting younger viewers are the provisions of watershed hours and detailed mention of offensive content. Nudity, paranormal and explicit content is prohibited in non- watershed hours, this also indicates the freedom of speech of content creators to show explicit content but in restricted hours. Ofcom is a good benchmark in terms of the details with which the codes of broadcasting have been defined, especially for protection of the under eighteen viewers.

Unlike the Indian code, Ofcom has provision of heavy punishment for those not adhering to the code. In most cases the maximum financial penalty for commercial television or radio licensees is £250,000 or 5% of the broadcaster's 'Qualifying Revenue', whichever is the greater (CLD, 2012). Thus Ofcom code is a good benchmark for content regulation. The code ensures freedom with restrictions prescribed by law and necessary in a democratic society.

## Views of the Experts

- All the experts believed that Reality shows were popular amongst the youth.
- All experts believed that television especially Reality Shows had strong potential of influencing the viewers. This belief confirms with the Cultivation Theory given by George Garbner (Laughey, 2008). Upon asking the psychologists, psychiatrists and social scientists shared that the influence of television viewing depends on the upbringing and exposure of the viewer; a viewer with positive surrounding may not get affected as much with negative visuals as compared to a viewer with negative surrounding.
- More than two third of the experts felt that the images and sounds shown on TV Reality Shows were obscene and vulgar. The experts indicated that these Reality Shows were not good for viewers under eighteen years of age. The experts questioned the Social Responsibility of makers and broadcasters for showing such content during the prime time viewing hours. Further the experts also believed that most of the Reality Shows shown in the country were either foreign television programmes (FTP) or were licensed from foreign countries.
- About the Broadcasting Code of Conduct, more than eighty percent experts mentioned that the Broadcasting Code of Conduct is not followed largely by the broadcasters in India.
- More than seventy percent newspaper editors, Television channel Bureau Chiefs felt that the content shown in television Reality Shows was not acceptable for younger viewers keeping the Indian sensibilities in mind. It was observed by more than one journalists, that while there were Broadcasting Codes existing in the country, they were not followed. As per the Bureau Chiefs, while Indian Broadcasting Code gave right to the broadcasters to exercise the freedom of speech, the broadcasters violated the broadcasting norms frequently, this according to them was highly immoral.
- According to all psychiatrists and psychologists the aggressive behaviour, foul language, consumption of alcohol, smoking, abusing, vulgarity shown on Indian television, especially the Reality Shows was not acceptable according to Indian social standards. The provocative content led younger viewers to imitate inappropriate things in their behaviour. The experts questioned Social Responsibility of Broadcasters.
- About fifty percent of the content creators either did not formally study Broadcasting Code or were not aware about the specific provisions of Broadcasting Code of Conduct. The content creators mentioned that they worked on shows that adhered to broadcasting code of conduct, however more than fifty percent content creators mentioned that there were many shows that did not adhere to the Broadcasting Code of Conduct. The content creators termed the Reality Shows having elements like obscenity, vulgarity, jarring images and sounds, bad words, exploiting human emotions, below the belt comedy etc. All these elements qualify for non-adherence of Broadcasting Code of Conduct as per the Indian legal system. Even the content creators questioned the Social Responsibility of the broadcasters. Few of the experts also shared that many a times they were pushed by the broadcasters to create offensive content. Further as per one of the experts, different channel would provide different interpretations of the Broadcasting Code of Conduct in the name of self-regulatory guidelines, to suit their programming demands.

- According to more than half of experts, youth has become more aggressive compared to the past. Television viewing, especially the Reality Shows were responsible for such aggression as per the experts.
- More than two third experts gave examples of action taken by youth after watching Reality Shows. Some of these actions taken were harmful and negative. This suggests the power of television as a medium.
- As per one of the media lawyers, Reality Shows in India largely followed Code of Conduct, however they were almost at the threshold point. One of the Media Lawyers mentioned, “most of the Reality Shows have passed the test of Ofcom and FCC as they are licensed from other countries, and tried and tested abroad. If they are accepted there, then they should be accepted here.” All the media lawyers found ambiguities in Broadcasting regulations of India. The challenges of Indian Broadcasting Code were poor definitions, no strong mention of watershed hours, multiple layers, lack of uniform voice between various government agencies and lack of government’s will about Broadcasting regulations. All the media lawyers unanimously mentioned about the Indian Broadcasting Foundation having less powers compared to Ofcom, for effective implementation of Broadcasting regulations. As per the lawyers Indian Broadcasting regulations are less strict, compared to that of the UK. They also have little provision to suggest punishment to the offenders. As per them the Indian Broadcasting Foundation runs a risk of operating as the voice of the industry as it has strong broadcasters’ representation.

## Conclusions

Reality Shows in India are western content, adapted by the Indian content creators. As observed by the experts, satellite television channels in India don’t adhere to the Broadcasting Code of Conduct prescribed by the Indian legal system (MIB, 2009). The Cable Television Regulation Act, 1995 was originally enacted to protect the Indian viewers from the Cultural invasion, the broadcasters of India continue to telecast offensive content despite having content regulations. The media monitoring committee which is supposed to monitor the content on Indian television, has shifted focus to monitor political coverage in Media. Though media assumes a role of social responsibility in democratic India, experts interviewed believed that the broadcasters don’t act in a responsible manner.

As far as Broadcasting Code goes, the Ofcom describes the code with great detail, compared to the Indian code. There is a strict provision for under eighteen viewers in Ofcom code including the watershed hours’ provisions(Ofcom, 2017, p. 8), whereas in the broadcasting code of India, just mentions about care to be taken at broadcaster’s end not to showcase programmes not suitable for children when larger number of children are viewing television. India is a diverse country with variety of ethnicity, language, culture, habit, socio-cultural insights. The Indian code lacks specific details to protect children under eighteen. While the Indian Broadcasting Foundation self-regulatory guidelines mention about scheduling of content not suitable for viewers under eighteen between 11 pm to 5 am, it has been criticized for not having direct authority to punish the offenders beyond asking them to pay nominal fine, issuing advisory or asking the broadcasters to run apology scroll. As per the Cable Television Regulation Act, 1995 there is a provision for two to five years imprisonment, as well as fine of Rupees one thousand to five thousand rupees(MIB, 1995). So far no

imprisonment has taken place for content on Indian television. The fine is way too less compared to the international standards. In UK the fine is up to £250000, or 5% of broadcaster's qualifying revenue whichever is higher (CLD, 2012). Thus the not so strict broadcast regulations motivate the broadcasters to walk away with showing content that is not permissible as per the law.

The above comments indicate that Indian television content doesn't adhere to the Broadcasting Code of Conduct prescribed by the Government of India. Reality shows use vulgar images and sound (offensive content) which are prohibited considering the existing statutory framework. The content that is suited for socio cultural set up of UK may not be appropriate for Indian market, considering the diversity that India has. Moreover, the Broadcasting Code is more lenient compared to the Ofcom Broadcasting Code. As a consequence, it can be concluded that the theory set for the investigation was largely accepted.

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***Property Rights vs. Right to Knowledge: The Multi-Faceted Dilemma  
(Case Study: Software Piracy in Developing Countries)***

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**Abstract**

Innovation is often described as key factors of competitiveness, as the driving force of the economy or as the basis of growth. This may be somewhat exaggerated, but it must be admitted that there cannot be any scientific advances without innovations, both are somewhat synonymous and correlated by a causal link. However, a paradox lies behind this reasoning: *property rights*, measures to protect innovation and creativity and aims to encourage more innovations and creativity. However, do these protective become a shovel that serves to deepen the know-how gap between the South and the North? It is widely known that, only, those who pay have the right to educate themselves, while the less fortunate remain held hostage and forced and obliged to follow in order to survive. Indeed, some of the arguments put forward above are pure sophistry, but are often used either by the adepts of the Robin's hood ideal or by the defenders of the sacrosanct right of property. This work aims to ascertain what, why and how not to respect the right to property, and notably software piracy, not to justify the practice, but to confront this phenomenon with the arguments of property rights and to demonstrate the selfishness and deception that lie behind the curtain of each camp, and subjecting them to the socio-cultural and economic realities of the developing countries, and demonstrate with concrete cases, that a consensus is possible.

Keywords: Knowledge, Human rights, Intellectual property, WIPO, Software piracy, Crackers, Robin hood effect.

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## **Introduction:**

Human creativity always plays a key role in the evolution of human society, and it is never wrong to highlight that the most creative nations are very often the most successful.

For a half of a century, technological revolution compared to industrial revolution, trembles the foundations of human societies. The spectacular development of Internet greatly alter the classic design trade and relations among men: any form of information flows among billions of users throughout the planet denying the notions of time and space. Despite this evolution and its impact, a digital divide between Northern and Southern countries was clearly noticed: it resulted into a certain inequality to access and use the some numeric knowledge and, especially the economy-based knowledge: In case where users cannot afford to pay, opposition appears between the collective good which consist of giving the means and methods to better process information and the interests of entrepreneurs to privatize most possible dissemination of knowledge in order to derive an added value (Arnaud, 2006). This situation and other factors push millions of users in rich and poor countries to use hacked softwares. Considering what was cited above, we sum up the problem of our research work in the following question: *“Does intellectual property laws, imposed on softwares and online resources, constitute an opposition to the right of people to learn and develop and hence to their fundamental rights?”*

## **1. Knowledge, Rights and Economy:**

### ***1.1. Human rights and knowledge rights:***

The universal declaration of human rights in articles 19, and 22, states the right to freedom of opinion and expression for everyone by seeking, receiving and impart information through any media and regardless of frontiers, and also, the right to social security whose cultural rights are a part. Last but not least, we find in art.26, the no less important *‘Right to education’*.

Furthermore, to promote good governance, the development of nations and the struggle against poverty ignorance and illiteracy, the international community, and at the end of a meeting held in 2002 in Sofia, established the day of 28<sup>th</sup> September of each year as *‘The International Right day to Know’*.

### ***1.2. Knowledge-based economy:***

If the 19<sup>th</sup> century was characterized by the rise of industrial economy in Western societies, the second part of the 20<sup>th</sup> century is considered as the era of *‘knowledge economy’* (Hargreaves & Shaw, 2006). Actually, the most suitable term is, *‘economy knowledge-based’*, and that means for each country, the sectors of production and services based on the intensive activities in knowledge (Foray, 2009).

Every man has the right to live with dignity and to flourish both economically and socially, but to thrive, and especially at this time, one has to acquire and use knowledge, since the term and according to the WTO, *‘knowledge-based economy’* results from a fuller recognition of the role of knowledge and technology in economic

growth (OECD, 1996). However, whatever the support that convey knowledge, material or immaterial, is especially when it comes to knowledge inferred from a basic knowledge (e.g. literary or artistic work and computer software, it is often 'protected' and falls within intellectual property schemes.

## **2. Intellectual Property Rights:**

### **2.1. Definition, evolutions and purposes:**

The intellectual property laws, allow the creator, or the owner or patentee, a brand or a protected work by the copyright to benefit from its work or its investment (WIPO, 2013), for a long time, and even after death of the original creator.

In 1970 was created the WIPO '*World Intellectual Property Organization*', even though copyright laws have existed since the seventeenth century, under the reign of the Queen *Anne of Great Britain* with the legislation called the '*Statute of Anne*' (Scammell, 2003). According the WIPO, without copyright protection consumers may not acquire, safely any products or service and it also dissuades counterfeiters and piracy. (WIPO, 2013).

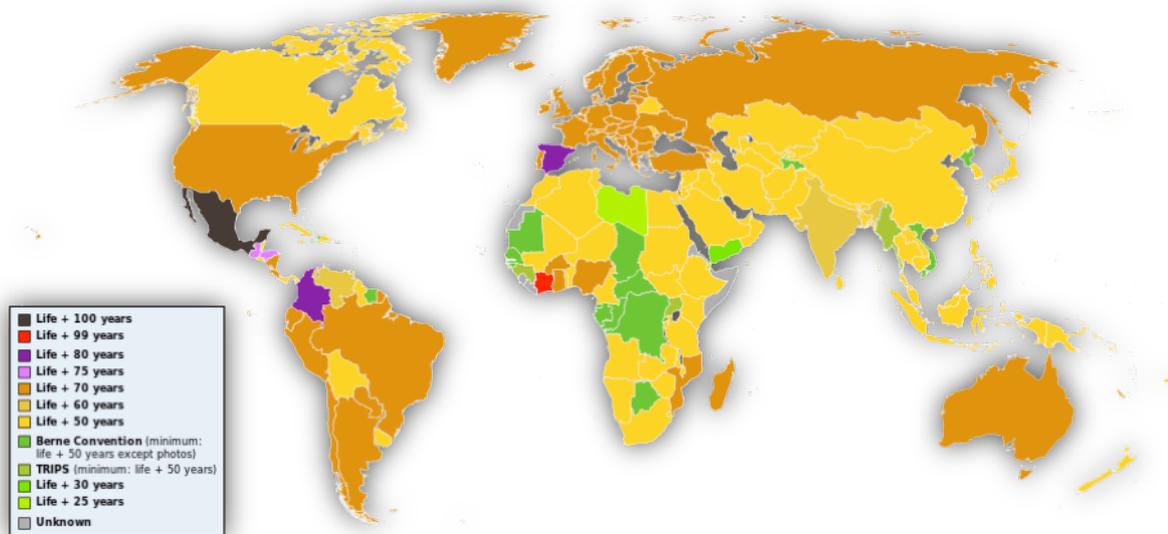
### **2.2. Types of Intellectual Property:**

There are different forms of intellectual property, e.g. '*Patents*'; '*Labels*';... (WIPO, 2013), but the most important in our case, is the '*Copyright*', which describe the rights of the creators on their works (artistic, cinematographic, computer programs, etc.). These rights confer an economic monopoly of exploitation on work during a certain time before they can be used freely.

### **2.3. Software rights regimes around the world:**

Art.10 of the TRIPS agreements stipulates that: "...*Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971)*".

However, it was only after a global consensus in the 80's, that softwares, computer programs and databases are assimilated to a mind works, protected by literary and artistic property, but if we consider the exponential evolution of computer sciences, in general, and of the internet in particular, the 80's are for the digital era, is what prehistory is in our present era! Then, it's foolish to adopt the traditional regimes to this sector. The following map represent the lengths of copyrights in different countries:

**Fig.1: "Map of countries by copyright lengths"**

Source: [https://en.wikipedia.org/wiki/List\\_of\\_countries%27\\_copyright\\_lengths](https://en.wikipedia.org/wiki/List_of_countries%27_copyright_lengths)

Two things challenge us:

- The duration of protection is as much important that the country is developed. This period varies between 25 and 50 years for the developing countries, according to the Berne Convention, and it is 70 years and more, in developed countries.
- Software creations benefit from the same regimes (duration of protection) in all countries what matter the artistic or intellectual creations.

To conclude, the international community, led by WIPO, did not ask so many questions and did not consider it necessary to adapt to digital era or to question the technological obsolescence.

### 3. Counterfeiting and software piracy: Forms, causes and prevalence

#### 3.1. Software piracy and its forms:

'Software piracy' is commonly defined as illegal copying, downloading, sharing, selling or installing of copyrighted software. The most common forms listed by SIIA<sup>1</sup> and BSA<sup>2</sup> are:

- **Internet piracy:** millions of sites propose softwares to downloading, and provide even 'Cracks' or a 'Key Generator'. This form of piracy increased considerably with the advent of high-speed connection and the proliferation of 'torrent clients' (like Utorrent) and websites proposing a torrent links to be exploited, who offer with or without a free inscription, millions of files to download in peer to peer.
- **Softlifting:** If a person has a single license, and if he download it on other machines or provides a copy of it to other person, it's regarded as an act of

<sup>1</sup> Software & Information Industry Association.

<sup>2</sup> The Business Software Alliance

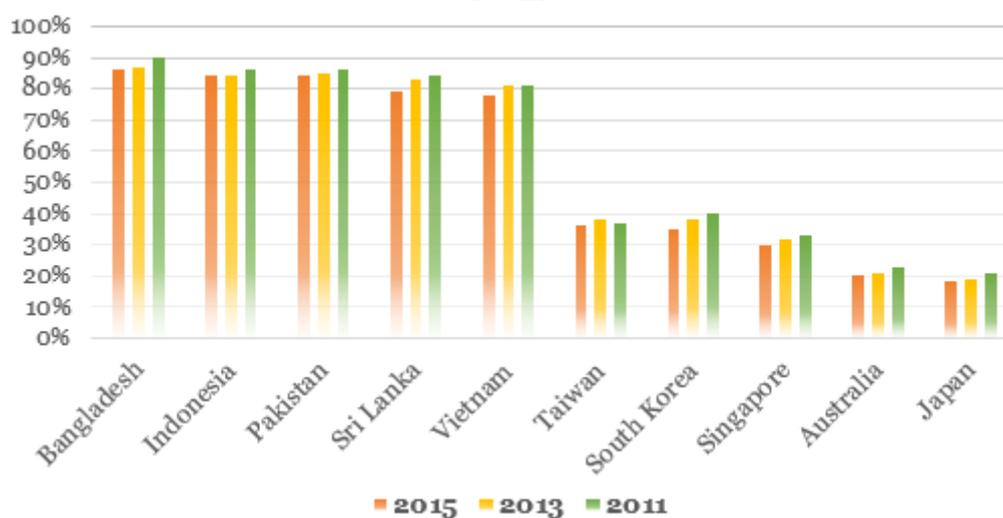
software piracy. That is the case which one encounters more within the organizations, which are often satisfied with the purchase of only one specimen of a software and duplicate it on other machines (Korhonen, 2015)

- ***Software counterfeiting:*** Or 'CD-R Piracy', which consists in selling illegal copying of softwares. At least 50% of the software are installed on the PC's in the United States by way of counterfeits (SIIA, 2008).

### 3.2. Worldwide software piracy prevalence:

The development of the classical counterfeit, is supported by licit or illicit spaces that promote international trade. Regarding the software piracy (except the CD-R piracy), for the counterfeiters, the matter is so easy: the virtual confrontation of supply and demand does not require a direct confrontation. According to a study carried out by the BSA, the following maps show the number of PC's which uses softwares without licenses (or 'warez'). We selected, for each area of the world, the 5 countries with the largest percentages of uses of unlicensed software, as well as the 5 countries the least affected:

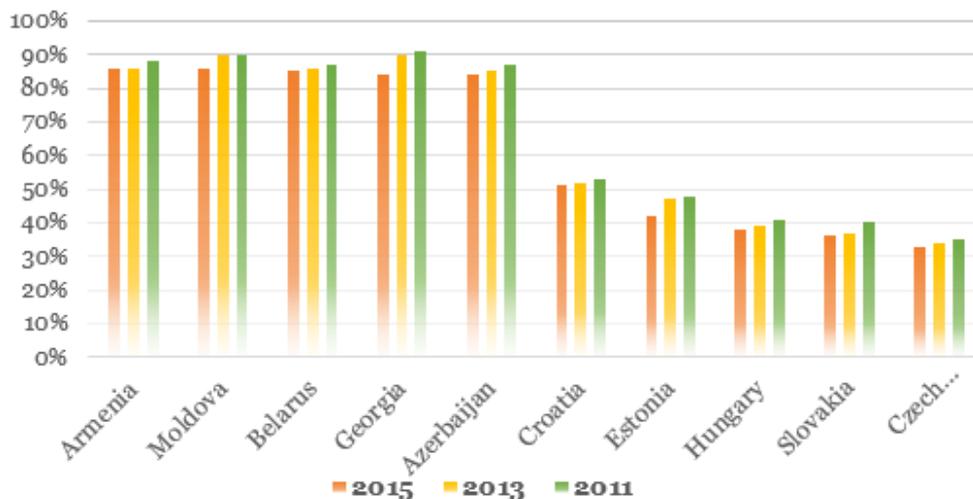
**Fig.2: "Rates of unlicensed software installation in some countries of Asia-Pacific"**



**Source:** Established by authors and based on BSA report: "*Seizing Opportunity Through License Compliance*", May 2016, p6.

This figure illustrates an interesting phenomenon. On the left countries where the prevalence of the unlicensed software is very important that are countries where GDP per capita is relatively low like Bangladesh (\$3,339.6), Pakistan (\$5,010.8), Indonesia (\$11,057.6), etc. The right side of the figure shows rich and technologically developed countries, where GDP per capita stretches between \$34,647 (South Korea) and \$85,382.3 (for Singapore). Whilst, China is not represented in Fig.2 (although it is considered as the Eldorado of the counterfeit), not because of a low rate of warez (around 70%), but because the high rates in others Asian countries relegate it further down the ranking.

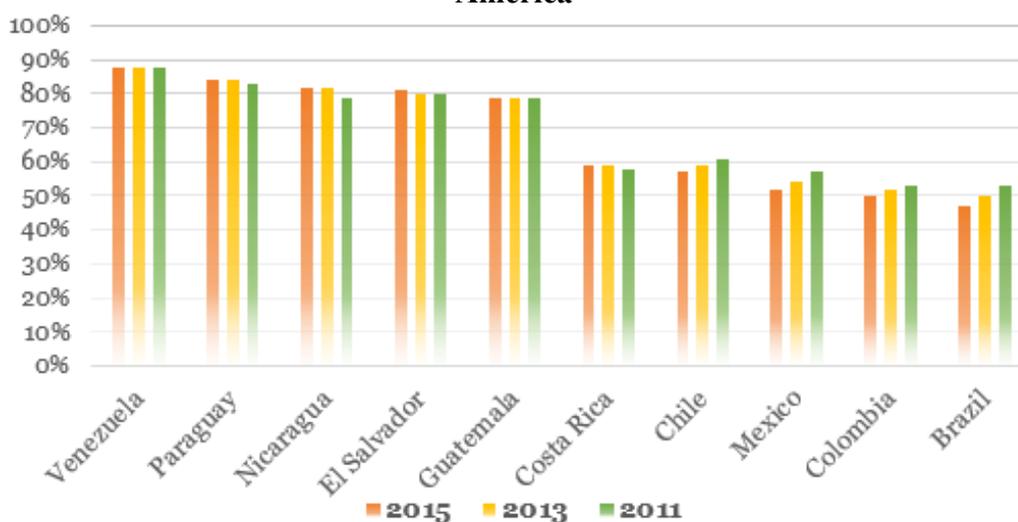
**Fig.3: "Rates of unlicensed software installation in some countries of Central and Eastern Europe"**



Source: Ibid.

Regarding Eastern Europe, the rates are also high; countries at the left of the figure often exceed 80% and those of the right side exceed 40%. Here, we notice again the relationship between GDP and the rates of installed warez: In the 5 countries above, the least affected countries are those where the average GDP per capita, in 2015, exceeds \$28,300 whereas countries on the left have a high rate of installed warez and their GDP per capita is less than \$11,800. Russia comes in the 20<sup>th</sup> position on a list which account 24 countries of Eastern Europe although this country is known for its very gifted and very active hackers and crackers (the rate in Russia, was of 64% in 2015.)

**Fig.4: "Rates of unlicensed software installation in some countries of Latin America"**

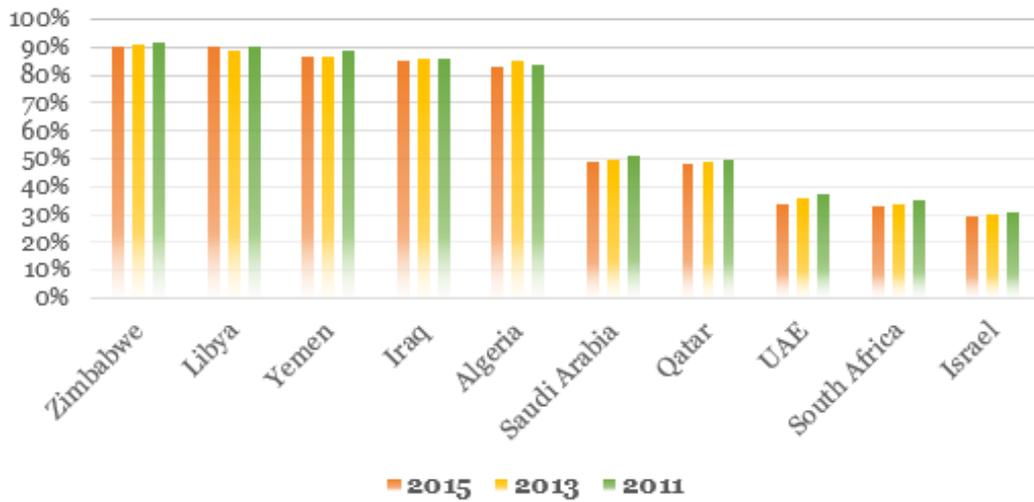


Source: Ibid.

In South America, the top of ranking is held by countries with rates approaching 80%. However, Venezuela which comes at the top with regard to the rate of unlicensed software installation, has a per capita GDP of \$15,000

(Venezuela), which is triple of Nicaragua (\$5,200) or the same in as that of Mexico (\$16,988) .

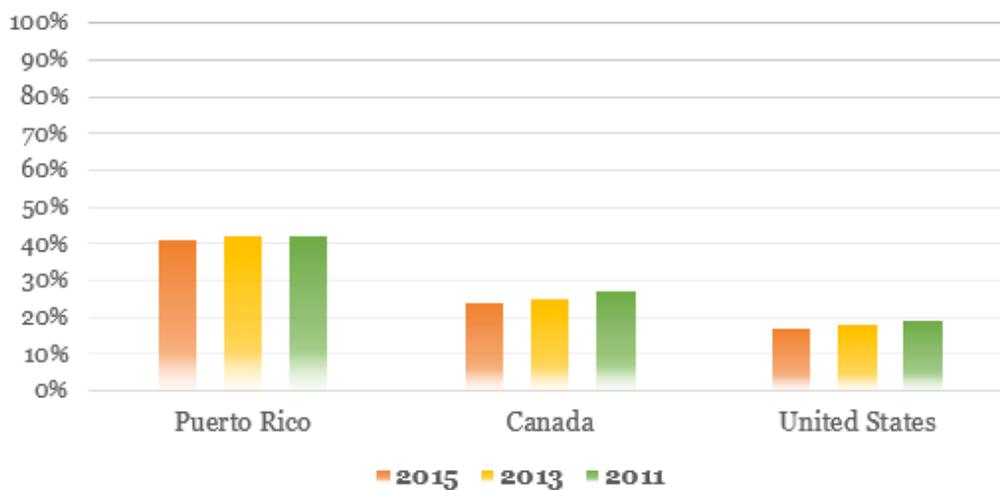
**Fig.5: "Rates of unlicensed software installation in some countries of Middle East and Africa"**



Source: Ibid, p7.

For Africa and the Middle, we notice two interesting aspects that are: first, we find at the right, countries with high rates but with a low per capita GDP like Zimbabwe (\$1,787) and Yemen (\$2,821), with others where per capita GDP are higher than \$14,000 like Iraq and Algeria. The second aspect, among the ‘lower’ affected countries, as Saudi Arabia and Qatar, which in spite of high GDP per capita (\$53,539 for the first one and \$141,543 for the second, the highest of the world), the rates are too high comparatively to the other ‘low rate countries’ in the other regions of the world: it’s approaching 50%, nearly 20 points higher than the least affected countries in the group (Israel and South Africa)

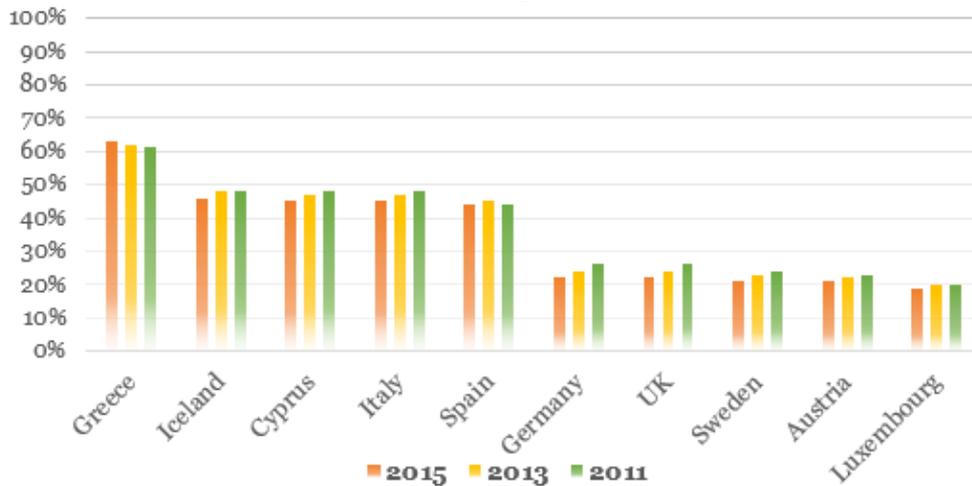
**Fig.6: "Rates of unlicensed software installation in some countries of North America"**



Source: Ibid.

In North America, the rates of unlicensed softwares are relatively very low, e.g. in the United States, the rate of installed warez was 17% in 2015, the lower rate of the world. The case of Puerto Rico (41%) is different: since this state, although attached to the USA, has economic, social, political, and even cultural conditions, rather different from those of USA.

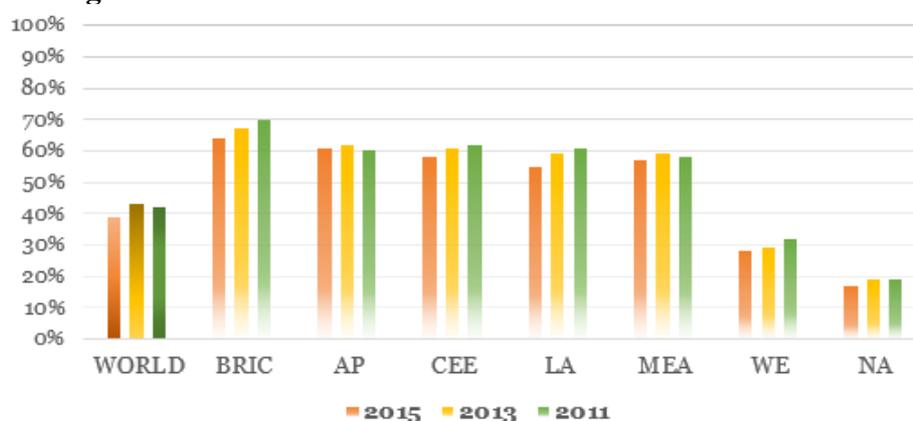
**Fig 7. "Rates of unlicensed software installation in some countries of Western Europe"**



Source: Ibid.

Western Europe know as well, a relatively weaker ratio of software piracy compared to other areas. The more affected countries are Greece (46%) and Iceland (23 %). This may be linked to the financial crises that these two countries underwent, and in particular in Iceland, where a distrust to the established order was identified and that translated (with other behaviours) by a resurgence of the use of warez (Stephens, 2017). Note that in left of the figure, we find Italy and Spain, which are far from being poor (respectively \$37,217 and \$34,727 \$ per capita GDP.) This is maybe related to cultural aspects, or to specifications of Mediterranean mentality. Other countries with low rates follow the trends observed above.

**Fig.8: "Rates of unlicensed software installation in the world"**



(BRIC= *Brazil, Russia, India, China*); (AP= *Asia-Pacific*); (CEE= *Central & Eastern Europe*); (LA= *Latin America*); ( MEA= *Middle East & Africa*); (WE= *Western Europe*); (NA= *North America*).

Source: Ibid.

More generally, the means of unlicensed softwares installation in the world was about 39% in 2015. However, and as mentioned above, even if there is a close relationship between GDP per capita and software piracy, it is not always obvious; and it's confirms the existence of factors other than economic or pecuniary ones.

### ***3.3. Main causes of the software piracy:***

Regarding the factors fostering the phenomenon, first, we have to separate the motivations that encourage some to cracking softwares (the offer), from the demand or factors that push peoples to use pirated softwares (the demand).

#### ***a. Factors favouring the offer:***

The typology used to distinguish different types of hackers, is actually based on the motivations that prompt them to act. Thus we find:

- ***The Script-Kiddie:*** lambda users who use tools created by others in order to harm peoples. They are very dangerous by their incompetence (ACC, 2012) and their mains motivations are often a search of belongingness and recognition.
- ***The Hackers:*** '*Passionates of networks*' (Dejour & Souville , 2006), which have a very high level in computing, wishing to understand the information systems functioning mechanisms in every details, in search of knowledge, but also to identify vulnerabilities and eventually exploit them. However, we find among the hackers some sub-types (e.g. *White, Grey and Black hats*). There a last kind of hackers, called '*Hactivists*', (e.g the group '*Anonymous*') whose objectives are political and ideological.

These categories of pirates, and even if they use any warez, they are not like the main creators or broadcasters. This is more the niche of *Crackers*.

- ***The Crackers*** : are computer specialists, working mainly in the breaking of the softwares protection, neutralizing or bypassing the protection measures of softwares by creating a '*Patch*' (or '*Crack*') or a '*Keys generator*'. Sometimes, the crackers act in groups, called into the piratosphere "*Warez Groups*", involved in creating and/or distributing warez. Their exploit is the breaking of the protections of games, like '*DENUVO*' protection (deemed infallible). Among the best known of these groups, we have '*DEVIANCE*', '*CPY*' and '*CODEX*', very appreciated by *gamers* around the world, they act more by altruism or by '*Robin Hood effect*'<sup>3</sup>. There exist also, the fact that the crackers, often, put the emphasis on the technical difficulty of their exploits, provide information on some of their major motivations: the challenge, the excitement that accompanies the transgression of the rules and the competition between developers of softwares and crackers or between warez groups to prove who the better are. Some other crackers are motivated by purely monetary considerations, and even more are those who take advantage of warez by offering compressed files to download for

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<sup>3</sup> It's exist an economic occurrence called "*The Robin Hood effect*", a phenomenon where the less well-off gain at the expense of the better-off, but the effect that we talked about here, concern another type of acts, which consist to give without waiting for anything in return, if not recognition.

free, but which require for their opening password to pay or that you can get only by overcharged SMS or after clicking on a number ad banners.

*b. Factors favouring the demand of warez:*

- **Price of legal softwares:** One of the mains arguments of the users of warez. In countries where the purchasing power is low or fluctuating because of inflation, users have everything to gain by downloading and using unlicensed softwares. Regarding inflation, a positive correlation was found between it and the rate of use of warez. , while the relation may be negative with income: generally speaking, economic development is negatively and significantly related to software piracy rates. According to some studies, a ten percent increase in per capita GDP is associated with nearly 3% decrease in software piracy rates.

The table below takes the average wages in some countries and prices of ‘Office Home and Student 2016’, sold on the ‘Microsoft store’, in June 2017:

**Table.1: “Comparison between wages and Office price countries”**

Country	Average Monthly Wage (in 2016)	Price of “Office Home & Student”, on Microsoft store (June 2017)	Share of Price from Average wage
United States	\$5,013	\$149.99	3.0%
Canada	\$4,034	\$149	3.7%
Germany	\$3,866	\$166.92	4.3%
France	\$3,583	\$166.87	4.7%
United Kingdom	\$3,570	\$152.73	4.3%
Italy	\$2,950	\$149	5.1%
Greece	\$2,094	\$149	7.1%
Mexico	\$1,276	\$94.19	7.4%
China	\$656	\$109.56	16.7%
Russia	\$549*	\$149	27.1%
Algeria	\$359	\$119.18	33.2%
Paraguay	\$356**	\$100.71	28.3%
Zimbabwe	\$353***	\$119.99	34.0%

\* In 2015

\*\*Mean from May 2016 to December 2016

\*\*\*In 2017

**Source:** Established by authors from different sources.

For example, in Algeria the GMI, is \$165 and the average salary \$359 per month, while the price of a legal version Of MS Office Home & Student 2016, costs about \$120, approximately 33% of the average wage or 72% of the GMI, so what about professional softwares such as *AutoCAD* or *Adobe After Effect*? It is clear that even

for those who earn double or triple the average wage, download a pirated version is more profitable. The behaviours are not different in rich nations: The 'free' has an irresistible attraction, in front of which fade many inhibitions!

- ***Laxness of the authorities and/or weaknesses of anti-counterfeiting legislation:*** In several countries, developers, sellers, distributors and even users of warez, are subject to quite severe fines and even imprisonment. Of course, it's too dissuasive actions: a negative correlation was found between IPR enforcement, piracy practices and uses. However, many countries have a whole arsenal of legislation protecting intellectual property, despite, the warez are present on almost every PC's in the country, even on computers of top executives of the state. As a result, if laxness there is in some countries, it is often not because of deficiencies in legislation, but because it suits everyone even to the State, which finds itself unloaded to offer payed services to the population, while they can serve themselves and free of charges.
- ***Ignorance of the concept of property rights:*** Several studies have shown that millions of users and during the process of installation of softwares, few are those who take the trouble to read pages and pages of terms of the license, and click the button "*I agree to terms*" mechanically. This ignorance or laziness, contributes widely to the increasement of the prevalence of warez use (Fang & Lee, 2016). Otherwise and in the case of warez, they do not even realize that by clicking on the *I agree* button, they are doing a perjure.
- ***Social and cultural factors:*** Refers to the prevailing social structure of a country and the attitudes shared by the members of that society and the collectivist-individualist aspects of the society affect the piracy rate in any country (Khadka, 2015, p. 7)

Finally, other studies have identified other factors, like the gender effect (Fang & Lee, 2016), the effect of the absence of legal softwares in local markets (Fossbytes, 2017)...etc. Otherwise, some authors proposed a behavioural model about the motivations of individuals and the use of warez (Peace, Galletta , & James , 2003).

### ***3.4. The impacts of software piracy:***

For warez vendors, the profit margin exceeds the 90%. For users, and despite the risks of infecting their machines with viruses and malware, for each illegal download, they saves the equivalent of the legal copy. But the profits of some are the losses of others:

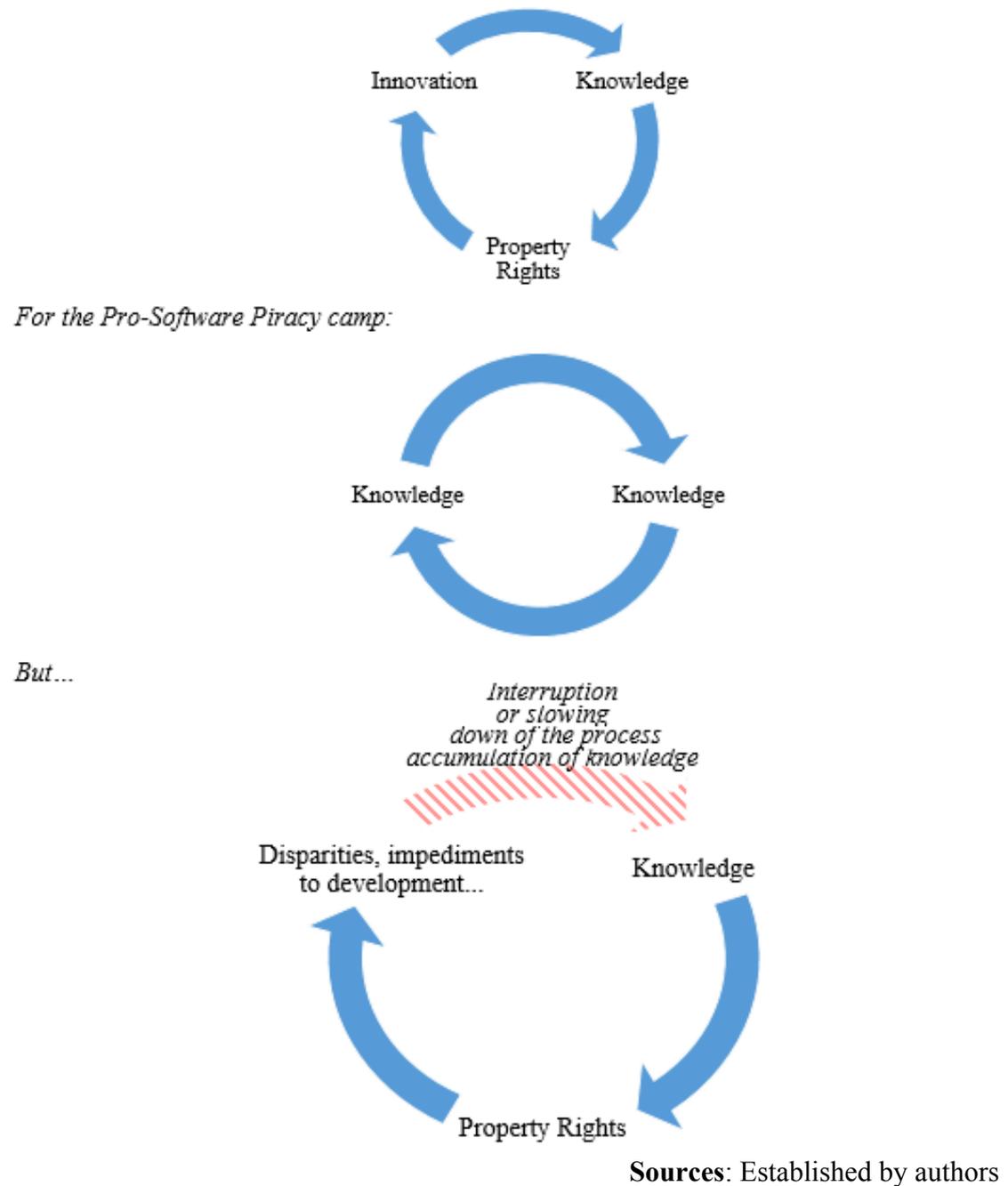
- ***A lack a win for companies and developers:*** Software piracy takes industries in direct competition with counterfeiters suffer a direct loss in sales. In 2015, if we calculate losses due to software piracy at the cost of used illegal softwares, we get by order descending the following losses: \$19 billion for the Asia-Pacific region; \$10 bn for Western Europe; \$10 bn in North America; \$5 bn for Latin America; \$3bn in Africa-Middle East and \$3bn for Central and Eastern Europe region. In total, the aggregate value is estimated at \$52 billion (BSA, 2016), so that the 'International Chamber of Commerce' (ICC) estimate the overall value of digital piracy in movies, music and softwares in 2015 to \$213 billion: \$160 bn in films, \$29 bn in music and \$24 bn in softwares (Frontier-Economics, 2017).

- ***The increase of the expenditures:*** related to the protection of rights property, additional costs which increase in parallel the prices of softwares, and the first sufferers are the purchasers of legal copies (OECD, 1998).
- ***The deterioration of the enterprise reputation:*** Often illegal copies have bugs and the users can wrongly believe that the malfunctions comes from the creators. This could be seriously harmful for the companies' reputation producing softwares, and may negatively overflows the future products.
- ***The slowdown in innovation:*** The proliferation of pirated softwares, discourages investment and therefore hinders innovation. This last is also hampered by the discouragement of the creators of softwares, who see much of their efforts transferred without consideration of any kind.
- ***A tax shortfall for States:*** counterfeiting in general represents a considerable tax shortfall through VAT, corporate excise tax and the income tax: it was estimated that if the software piracy rate declines by only 10%, for the period (2010-2014), and only in the United States, it is then \$7 trillion of tax revenue that could be recovered (UNIFAB & IRPI, 2010).
- ***Link between unlicensed softwares and cyber security threats:*** malware can be embedded in the softwares. The resulting costs are huge: In March 2013 it was estimated that during the year consumers would waste 1.5 billion hours dealing with malware from counterfeit softwares; direct costs to enterprises would amount to \$114 billion (Frontier-Economics, 2017, p. 35).

**4. Confrontation of the arguments of the pro and anti-piracy, and some propositions:**

In simple terms, the positions of the two group can be illustrated by these schemes:

**Fig.9: "Positions against property rights of pro and anti-software piracy"**



It is a paradoxical situation, as each of the two camps has more or less strong arguments, but justifying half-truths sometimes:

- For the anti-piracy software camp, it's the cause of losses close to \$24 billion, and the loss of thousands job opportunities, noting that it is a shortfall and not a loss. There is no guarantee that warez users will change their behaviours immediately and buy legal copies, in the unlikely event that a trick is found to

eliminate software piracy. But vendors of illegal copies are the most noxious: they do a handling of stolen goods.

Concerning the impact on employment: the big impact of software piracy, seems to be exaggerated. In 2016, there are 1,114,000 software developers employed in United States (estimating), with incomes evaluated at \$49,17 per hour or \$102,280 per year, and an increase of 186,000 jobs from 2014 to 2024 (BLS, 2015). These statistics proof that this sector is far from crisis.

- In addition, many people claim falsely that the use of warez is exclusive because of poor people without resources. Certainly, it is more common in less developed countries, but the statistics shows that no country is away from that. In developing countries, imposing outdated, inadequate and sometimes contradictory rules and setting prices of the softwares on these bases, lead to exorbitant prices and responsibility sharing of that, pushes many PC's users to the 'dark side' in other words, the remedy is partly the cause of evil.
- As to the negative impact of software piracy and the spread of warez on innovation, it is true that those who cry wolf do not hesitate hack and copy, not even to evolve knowledge, but for purposes purely mercantilist. *Samsung* the Korean giant, was in open conflict with Apple for several years for violating three patents. In 1988, Apple filed a historic lawsuit against *Microsoft*, because *Windows* used a parts too similar to those of *Apple IOS*. However, Bill Gates had stated at the time: "*We're saying that these graphic interface techniques, the ideas, are not copyrightable*"... trials brought by Steve jobs, then that he even claimed in a televised interview that "*Good artists copy; Great artists steal*" (Farber, 2014)...as the saying goes "*This is the pot calling the kettle black*".

Moreover, does this facts not proofs that the property rights that are supposed to encourage innovation, are sometimes an impediment to innovation? What to do to solve this dilemma? Here are some propositions:

- By means of the table data 1, it is shown that the software was generally sold at nearly the same in different countries. In the USA for example, the average income is 15 times higher than that in Bangladesh, but the price of the *MS Office* is just 1.25 more expensive in USA than in Bangladesh... it is thus a question of selling the software at more accessible prices and more or less in keeping with the purchasing power of each country. The pricing by using relative prices is perhaps an option to take into consideration :

To avoid complication due to the numbers of hours worked in each country, the numbers of days per month, the numbers of public holidays paid, etc., hence we use the following formula:

*Months of work necessary to acquire a good Z= (Price of Good Z/Monthly wage)*

To obtain the volume of work in hours, it is necessary to multiply the result by 24 (hours) and then by 30 (days). In the USA for example, we have:

$$\begin{aligned} 149.99/5013 &= 0.03 \text{ months} \\ &= 0.03 \times 24 \times 30 = 21.54H \end{aligned}$$

Then, it takes 21.54 work hours to buy *MS Office Home and Student Edition*. If we carry out calculations starting from the data of the tab.1, we will find that in the countries of G7 (except Russia), it is necessary to have between 21 and 36 work hours to acquire the product of *Microsoft*, that is to say 30 hours approximately on average or 4.17 percent of the Monthly wage. If we put this value of 30H as standard to evaluate the prices of the software in the developing countries. If we do it, we obtain more equitable prices:

**Table.2: "Prices of MS Office in some countries after Indexation"**

Country	Normal price of MS Office H&S	Indexed Price of MS Office H&S	Share of Indexed Price from Average wage
China	\$109.56	\$27.32	4.17% (=30h of work)
Russia	\$149	\$22.87	
Algeria	\$119.18	\$14.95	
Paraguay	\$100.71	\$14.83	
Zimbabwe	\$119.99	\$14.70	
Bangladesh	\$120.17	\$13.66	

**Source:** Established by authors

Maybe the values given above seems utopian, but the idea to establish prices of softwares according to the purchasing power; is realistic option.

- On another hand, to adopt industry business plans of the gaming on Android and iOS platforms seems a good track to reduce piracy and prevalence of warez. Let us take two examples, the *Free to Play* and the *Freemium* : For the *Free to Play (F2P)*, many applications on tablets are based on this principle, and they make it possible to their owner to earn millions of dollars, like *Candy Crush Saga* with his \$569 million sales turnover in 2015 (Takahashi, 2015) or *Angry Birds* and its owner, *Supercell*, that realized, in 2014, more than 2.4 million dollars incomes per day (Bonvin, 2014). Certain softwares adopts also this principle, like the *Avast antivirus*, which can be downloaded free in basic version, but which becomes paying if one wants to go to the *Premier* version. *Youtube* has adopted an alternative way: before October 2015, all the contents were free, but now advertisements often precede the videos you want to see, however, if you subscribe to *YoutubeRed* and pay \$9.99 dollars per month, the inopportune advertisings are removed. Concerning the *Freemium*, from *free* and *premium*, this a practice is found in *Sharewares*, however, the freemium softwares continuous to function after the fateful time, whereas the sharewares are blocked automatically.

Obviously it is not claimed that the these measures are the panacea to the software piracy, and it will always have vicious people who will try; and may be succeed to crack a freemium or free to play softwares, but at least, these businesses plans can reconcile the *Robins Hood*, defensors of the 'all free', and the *Kings John*, bugles of the 'all paid'.

**Conclusion:**

It is in the name of human rights to knowledge that pirates divert the labour of others, and it is with the name of copyrights and property rights where multinationals block the propagation of knowledge. For many warez groups, property rights on softwares, under their present form, are a shovel that further digs the digital divide and piracy another serves to bridge the gap.

So what to do? Continue with the actual regime of rights on softwares? Support pirates and the users of warez? Classical measures have their limits and software piracy has good days ahead. So, claiming to eradicate the phenomenon is purely fanciful but it's possible to be contained, by making an effort on prices and index them according to average purchasing power for example, or by the adoption of certain techniques like business plans used by many creators of games for tablets and smartphones; all we need to do, is a little more of will and a little less egotism from each part.

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***Key Indicators of Time Bank Participation: Using Transaction Data for Evaluation of “Banco de tempo – Florianópolis”***

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**Abstract**

Community currencies are growing worldwide and exist in a variety of forms. One interesting type of local currency is “time”. A time bank operates like a volunteer organization, with a member registering all member transactions. The principal characteristic of time banking is that the credit, that every member receives for a good or a service supplied, has the same value – one time credit per hour – regardless of type or quality of product or service provided. Even though time bank is diffused worldwide, being also considered by academic researches, the same diffusion can not be registered in Brazil and, consequently, Brazilian literature about this topic is poor. Therefore, the objective of this paper is contributing to the literature on this subject, doing an exploratory analysis of one of the first experiences of time bank developed in Brazil: “Banco de Tempo – Florianópolis” (BTF). BTF is a time bank developed and situated in Florianópolis, city in the Southern region of Brazil. BTF was created in mid-2016 and in few months, increases considerably the number of member, reaching approximately 1300 active members in March 2017. This paper shows, primarily, some basic indicators, secondly, it presents some evidences and knowledge about time banking in international literature, and finally utilizing a social network analysis software package, presents advanced indicators of time banking participation. The indicators on BTF show an increasing member participation and a creation of social capital at an early stage. The paper can be considered a starting point for further researches about time banking in Brazil.

Keywords: time banking, community currencies, social capital

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## Introduction

Community currencies are growing worldwide and exist in a variety of forms. Community currencies have a long and important history outside Brazil: generally, they raised in situations of economic recession when cash shortages hampered normal economic activity, but recently they have been implemented to achieve also social and environmental objectives as well as economic (Seyfang, 2000).

“Local exchange trading schemes” (LETS) are the most popular form of community currency. A LETS is a type of trading organisation in which members do not use cash in transaction of goods and services among themselves and it is usually managed by community volunteers. Instead of using money, participants utilize a “local currency”, which can be used and circulates only within the LETS, in contrast with footloose conventional money (Seyfang, 2001).

One interesting type of local currency that can be used in LETS is “time”. A time bank operates like a volunteer organization, with a member registering all member transactions. The principal characteristic of time banking is that the credit, that every member receives for a good or a service supplied, has the same value – one time credit per hour – regardless of type or quality of product or service provided. A member that helps another member, providing goods or services, earns credits, that afterwards will be spent by this member to receive help as well (Cahn, 2000).

Even though time bank is diffuse worldwide, becoming an important reality in UK, US and other regions of the world<sup>1</sup>, being also considered by academic researches, the same diffusion can not be registered in Brazil and, consequently, Brazilian literature about this topic is poor. Therefore, the objective of this paper is contributing to the literature on this subject, analysing one of the first experiences of time bank developed in Brazil: “Banco de Tempo – Florianópolis” (BTF).

BTF is a time bank developed and situated in Florianópolis, city in the Southern region of Brazil with a population of 477798<sup>2</sup>. BTF was created in mid-2016 and in few months, increases considerably the number of members, reaching approximately 1300 members in March 2017.

This paper aims to analyses economic transactions between BTF members, utilizing some indicators, with the objective of assessing the health of the network, evidencing the ways by which participation increases and analysing the presumed increase of social capital in the city.

The data used are about members and transaction furnished by the organization of BTF<sup>3</sup>.

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<sup>1</sup> In 2008, timebanking was celebrating its 10th anniversary in the UK, with 600,000 hours of mutual exchange and 109 active timebanks (Ryan Collins et al, 2008). Besides this, time banks have arisen in Mexico, Uruguay, Senegal, Thailand, Japan (Seyfang, 2011)

<sup>2</sup> Estimated inhabitant in 2016. Source: Brazilian Institute of Geography and Statistics (IBGE).

<sup>3</sup> I thank BTF administrators for the data supplied and the availability, in particular Ms Geovana Madeira Narcizo.

The essay is divided in three sections, excluding introduction and conclusion: in the first section, some operational information of BTF is presented; in the second section, the literature review puts into evidence the history, the experiences and the knowledge about timebanking in the international literature; in the third section, key indicators about BTF are analysed; and in the fourth section, advanced indicators about BTF are showed and analysed.

## **1. Banco de Tempo – Florianópolis**

Banco de Tempo – Florianópolis is based in the city of Florianópolis and accepts as members only inhabitant of this city. A person that wants to become a member has to apply and indicate the types and characteristics of goods and services that wants to supply.

In the website of BTF, it exists a list of all members specifying the goods and services supplied, so every member can check the list and find the needed good or service. In BTF the use of money is forbidden. The only means of payment is hours. Every member can buy (or sell) a good or a service using (or receiving) an amount of hours. The price, in hours, of goods or services is decided by mutual agreement between the seller and the buyer.

Every new member that enters BTF receives the 4 credits on loan, that can be used to make transactions in the system. Every new member that enters BTF generates 10 credits for bank: of these, 4 credits are lent to the new member and 6 credits are used for social project of BTF<sup>4</sup>. The movement of hours used is updated by the bank's administration virtually in the bank's own webpage: for this purpose, the buyer of a good or service must inform bank's administration about the type of good or services received, the time of the transaction and the hours that are exchanged.

## **2. Literature review**

Many researches [Gessel (1958); Keynes (1973); Douthwaite (1996); Robertson (1999); Jackson (2004)], most of time not directly linked to time bank, put into evidence some problems of current mainstream money system that can explain the emergence and the diffusion of LETS.

First of all, the fact that money has not only the function of medium of exchange, but also it is a store of value, incentives people to hoard money, withdrawing it from circulation and thus reducing the quantity available for transactions. In the modern economic system, the shortage of money leads to the fact that, on one side, there is people with skills and labour to offer, and, on the other, there is work that needs to be done or goods that are demanded, but there is not enough money to bring them together. So, the result is unemployment and needs that are not met.

Second, local economies normally suffer due to the possibility of money changing place without difficulty within a country. The mobility of money leads to 'capital

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<sup>4</sup> In this paper, social projects are not considered, given that its objective is focusing on transactions of goods and services.

flight' away from peripheral economic areas and in the direction of centres, so reducing the availability of means of exchange in some regions and communities.

Third, the current economic system gives a great value to some kinds of wealth and overvalues others. Environmental and social costs and benefits are not considered in economic prices, and so the economic process of decision-making does not consider these costs and benefits. This fact leads to economic behaviours which worsen social quality of life and the environment, but which are completely rational within the market context. (Seyfang, 2004)

Continuing the analysis of the literature, the work of Seyfang (2001) analyses the impact and potential of a LETS to contribute to sustainable local development (SLD). The author introduces two different and contrasting models for sustainable local development: a mainstream approach, focused on local regeneration, called 'local economic development' (LED) approach; and a radical 'green' or 'new economics' strategy, called 'sustainable local development' (SLD) approach.

The following table 1 illustrates the differences between the two approaches.

**Table 1. Characteristics of LED and SLD approach**

<b>According to LED view, local currencies..</b>	<b>According to SLD view, local currencies..</b>
Increase income of local economies	Local needs are met through informal economy
Incentive the formalization of economy	Work is redefined according to a new economy system
Help unemployed with "welfare" services	Promote localization
Offer training or work experiences	Change consumption and prioritize sharing and recycling
Increase social networks	Build "green" social networks
Rise self-esteem of people	

Source: Seyfang (2001)

Ryan Collins et al (2008) affirm that exist three types of timebanking model: person-to-person, person-to-agency and agency-to-agency.

The original model of timebanking, created by Edgar Cahn (1992), was the person-to-person (P2P) with time bank members can use time credits in exchange for goods and services managed by a central "time broker".

In person-to-agency approach (P2A), people can receive time credits in exchange for contribution to the objectives of an agency or community, normally public or third sector. In this case, the "bank" is the agency, which issues time credits for repaying time and effort received for their goals. The agency also offers a variety of choices for people to use these time credits.

The agency-to-agency approach (A2A) has several benefits. Through timebanking, organizations can share people and resources, without needing to use additional

resources. Most of the organisations, including commercial organisations, does not completely utilise the assets and staff capacity at their disposal. Therefore, organization can share, for example, empty meeting rooms, stationary mini-buses, wasted food and energy, old IT equipment (Ryan Collins et al, 2008).

According to this literature, we can affirm that BTF has characteristics for which it is person-to-person and person-to-agency organization at the same time. In fact, in BTF time bank members can earn time credits in exchange for goods and services (P2P) or can receive time credits in exchange for contribution to a social project (P2A).

Passing to the literature relative to timebanking, it can be affirmed that researches about this type of LETS have been predominately exploratory and descriptive, appropriate to a relatively new area of study in Brazil and internationally.

While surveys or interviews are necessary to study participation in printed community currencies where circulation is not able to be tracked, transaction records offer tremendous advantages for the study of time banks. There is very little published research on participation in time banks or LETS (Local Exchange and Trading Systems) that analyses official recorded transaction data.

An interesting topic of research about timebanking is the possibility of these organizations to reduce the suffering of poor people or to give some opportunities to unemployed people. Williams et al. (2001) evidence that 27.4 percent of transactions in British LETS are done with goods and services that otherwise would not have been bought, being a complement to regular income.

In Manchester time banks, 48.1 percent of the poor members and 44.4 percent of unemployed members declared that timebanking improved their life: more than one third of participants bought food in time bank, one third clothing, and 30 percent had done renovation and repair work via time bank. Considering traded goods and service, 52.5 percent of members would have bought them with traditional money if time banks hadn't existed (Williams, 1996).

Another important role of time banks is building social networks and social capital being an alternative to traditional family and community networks.

Most time bank participants say that the time bank helped them to build a network and solid friendships. In the research of Seyfang (2003), at Rushey Green Time Bank, situated in a deprived area of south London, 72 percent of the members affirmed that the project helped them to get to know more people, and 17% claimed to have acquired tight friendships.

### **3. Member participation: key indicators**

BTF was created in September 2015. During the first year, BTF did not grow and after a relaunch in August 2016, there was a boom in the number of members, which grows 1182% in six months, between September 2016 and March 2017.

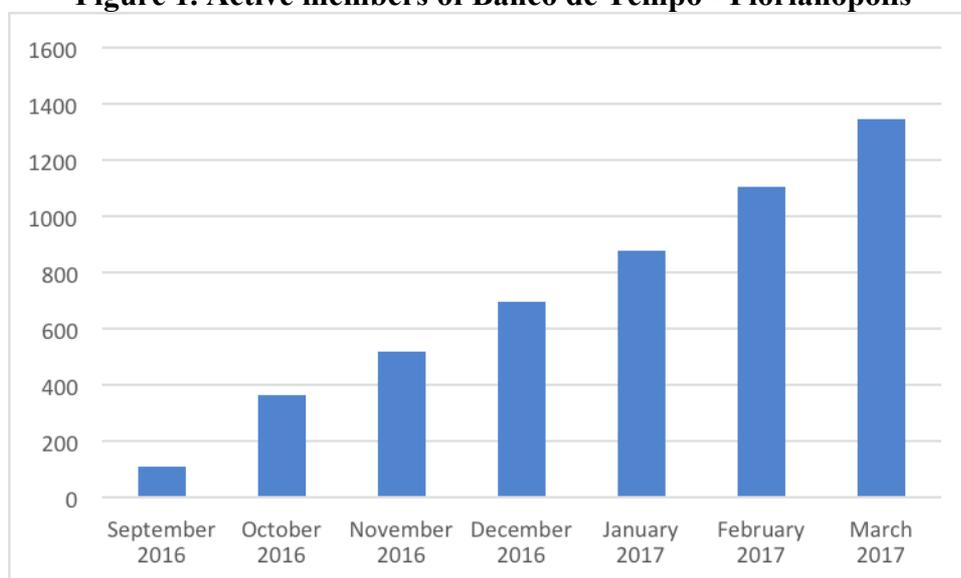
The first indicator about BTF that can be studied is member participation. Participation in voluntary organizations generally tends to vary greatly among

members of the organization. This is known in the literature as differential participation. On one hand, some people join organizations and never really contribute, on the other hand, other people is only rarely active, and, finally, there are those who are extremely involved (Collom, 2012).

Also in the case of BTF, there are persons that are interested in the organization but do not participate, in this case they can not be considered members of BTF; others that are members but transacted few times or never; finally, others that are very active in buying and selling goods and services. The last two categories are included in the group of active members of BTF.

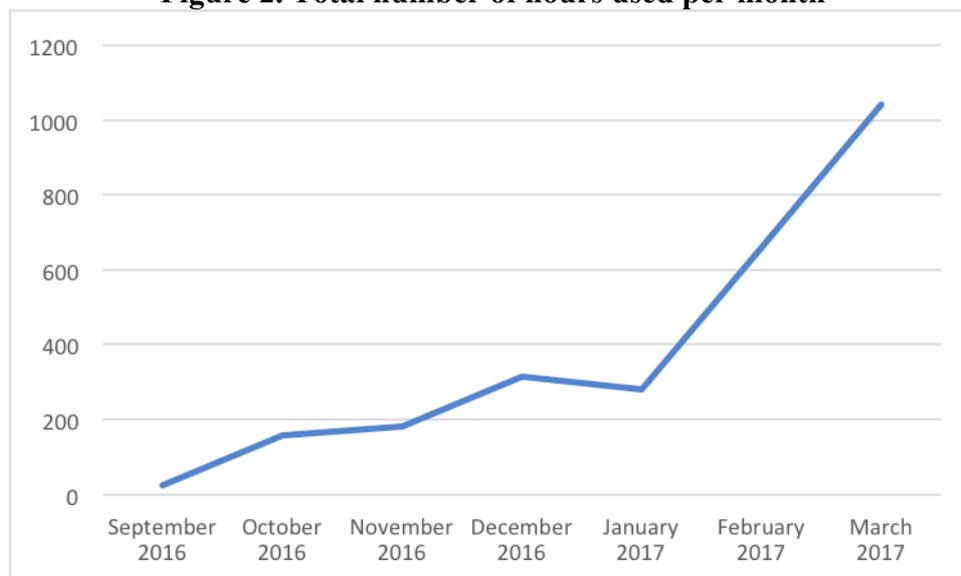
Data about active members are showed in Figure 1: the participation in BTF is increasing quickly and constantly in the few months since the relaunch in August 2016. The number of members that are registered as active has passed from 105 to 1347 between September 2016 and March 2017.

**Figure 1. Active members of Banco de Tempo - Florianópolis**



Source: Own elaboration – BTF data

The second key indicator is total number of hours used per month. This identifies turnover in the system, the number of hours used each month. Once the dataset is sorted by date of transaction and separated into month (as done for the computation of number of active members), one can easily sum the total hours used for transaction in each month and plot them in a graph as in following Figure 2. The total number of hours has become almost 12 times greater in three months, in the period from September 2016 until December 2016, passing from 26 to 316.5. There was a small decrease in the hours used in January 2017, succeeded by a high growth in the following months.

**Figure 2. Total number of hours used per month**

Source: Own elaboration – BTF transaction data

The increase of total number of hours used can be due to the growth in the number of active members, which rises constantly in the period (Figure 1), but also to the growth in the use of BTF by each member. Next indicators test this hypothesis.

Table 2 shows basic indicators about mean of hours used per member and mean of hours available per member.

**Table 2. Use and availability of hours in BTF**

Month	Mean of hours used per member	Mean of hours available per member
September 2016	0.25	4.01
October 2016	0.44	4.04
November 2016	0.35	4.06
December 2016	0.45	4.27
January 2017	0.32	4.41
February 2017	0.60	4.53
March 2017	0.77	4.61

Source: Own elaboration – BTF transaction data

In the second column of table 2, it can be observed the quantity of hours that each member spent on average each month. The figures indicate that there is not a trend in the expenditure of BTF members until January 2017. However, analysing the successive two month it can be affirmed that the growth in the use of BTF by each member contributed to the increase in total number of hours used. In the third column of table 2, it can be noted that the quantity of hours available for each member is

increasing constantly: this fact is due to the growth of social projects linked to BTF. At the beginning of BTF, each member had only the availability of four credits received to be a member. With the creation of social project, some credits allocated to social projects are used to pay members involved in these projects and, so, they enter in the bank time system.

Another basic indicator is gender, which is the only socio-economic characteristic that can be extracted from transaction data. Previous researches (Seyfang, 2001; Collom et al, 2012) evidenced that female participation normally is higher than male participation in timebanking.

One first explanation could be the revaluation of women in community currencies, respect the devaluation in formal economy. In fact, time banks are highly egalitarian: each member's hour has the same value regardless of the gender of the person.

A second explanation is the fact that normally women have had historically a larger participation in informal economy than men. Most of time, timebanking has characteristics similar to informal economy, and for this, women have a higher probability to be present.

A third explanation can be derived from the fact that participation in timebanking is normally linked to volunteering, in fact, various activities developed within a time bank has the objective to help community (Collom et al, 2012). Given that, Wilson (2000) evidenced that in the U.S. women are more likely to be volunteers than men. Considering members and transaction data of BTF, table 3 defines the percentages of women and men participation as members and their participation as members that transacted in the period from October 2016 to January 2017. We can see a large female participation in BTF: women are more than three-quarters of total members. This large female participation as members is also reflected in the transactions: women are 77.88% of total members that transacted in the four months considered.

**Table 3. Gender percentages in total members and transaction members.**

	<b>Total members</b>	<b>Transaction members</b>
<b>% men</b>	23.89	22.12
<b>% women</b>	76.11	77.88

Source: Own elaboration – BTF transaction data

Another basic indicator divides the hours into categories of goods and service transacted. Table 4 provides these broad categories, with some examples of goods and services transacted in each category. The category “not specified” was added because, in recorded transaction data of BTF, some transaction have not specified the type of transaction. This happens more frequently in the first months, reducing with the passage of time, and it is due to adaptation of the organization and the members in the initial period.

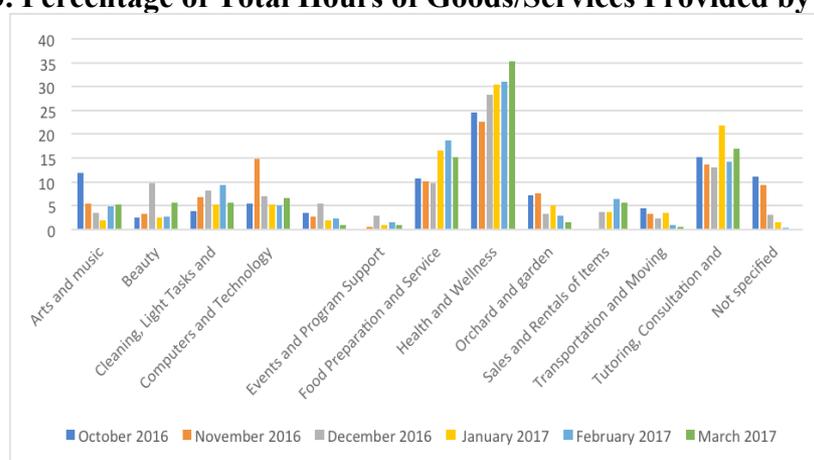
**Table 4. Good and service categories**

<b>Good and service category</b>	<b>Examples</b>
Arts and music	Artwork, musical instrument class
Beauty	Haircut, hairdresser, depilation
Cleaning, Light Tasks and Errands	House cleaning, dressmaking
Computers and Technology	Computer repair, audio/video production
Construction, Installation, Maintenance and Repair	House repair, electrician, plumber
Events and Program Support	Space rent, events
Food Preparation and Service	Cooking, catering, food
Health and Wellness	Medical and psychological consultation, massage, natural products, body therapies, sports
Orchard and garden	Orchard and garden maintenance, fertilizer and seedlings sale
Sales and Rentals of Items	Purchase of new and used goods
Transportation and Moving	Transportation, rides
Tutoring, Consultation and Personal Services	Lessons, tutoring, childcare, language classes
Not specified	Good or service is not specified in BTF data

Source: Collom, 2012

Next figure (Figure 3) puts into evidence the percentage of hours of each category respect total hours transacted in each month. The category that stands out is “Health and Wellness”: the percentage is between 22% and 35% in the six months considered. Disaggregating the data about “health and wellness” category, “massage” is a service that contributes the most to the high percentage of this category.

According Collom, et al (2012) and Seyfang (2003) time banks are often depicted as a way of having access to services that users otherwise cannot afford, so also BTF incentives most of time the demand of goods or services that normally in traditional monetary economy have not high demand.

**Figure 3. Percentage of Total Hours of Goods/Services Provided by Category**

Source: Own elaboration – BTF transaction data

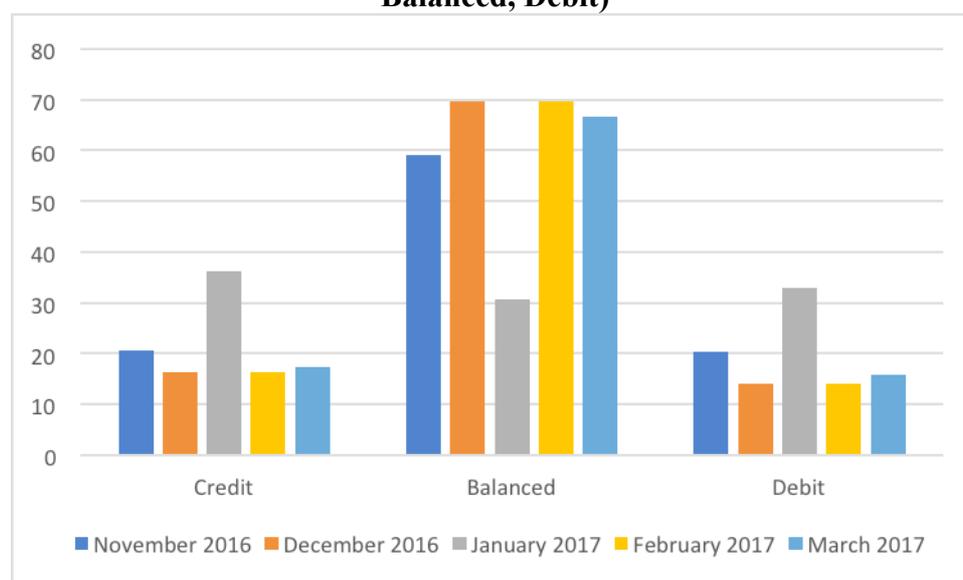
The second most used category of services is “Tutoring, Consultation and Personal Services” with a percentage between 13% and 21% in the months considered. Disaggregating the data about “Tutoring, Consultation and Personal Services” category, “professional consultations” are services that contribute the most to this category, with a great importance of graphic design and architecture.

The third category in order of importance is “Food Preparation and Service”. Disaggregating the data about all goods and services transacted in BTF, “selling and preparation of food” is the good/service most used by time bank members.

The category “not specified” passed from a percentage of 11.00% in October to 0.19% in March, demonstrating adaptation of the system to reduce the number of hours registered without a category.

Account balance is the next key indicator, which is simply the difference between hours or time money earned (credits) and spent (debits) by each member every month. Within BTF it is not allowed to enter in a negative balance position, that is a member can not make a loan to pay for a transaction because it does not have enough hours. Consequently, when a member has spent more than earn in a month, it means that this member has saved hours in the previous months.

**Figure 4. Percentage of Members in Account Balance Categories (Credit, Balanced, Debit)**



Source: Own elaboration – BTF transaction data

Figure 4 puts into evidence that the majority of members are in a balanced situation in BTF. Due to the prohibition of negative balances, it is more common have a credit situation than a debit situation.

#### 4. Advanced indicators of time bank participation

For obtaining the advanced indicators of BTF participation, it was used UCINET 6 (Borgatti et al., 2002), a software developed for social network analysis. The data considered are transaction data of the period from October 2016 to March 2017. In

this period, 635 BTF members purchased or sold goods or services, realizing 1660 transactions of sale (purchase) of goods and services.

The first indicator is “size” which provides each member’s number of trading partners. The value of this variable for each member can be a number between one (for a member who have only transacted with one other member) and the total number of active members of BTF (for a member who have transacted with every member in the system).

The variable size is an useful information for a bank time: the coordination could suggest to the members with few trading partners that it might be a better situation if they requested the service or good from different members. It is a new social opportunity that helps to integrate the new or inactive member into the system (Collom, 2012).

Considering the theory of social capital, it can be affirmed that a bank time with members transacting many times with few members is a system that is building “bonding” social capital. Bonding in social capital is referred to social networks between homogenous groups or individuals. In bonding social capital, individuals are normally connected to few others individuals and protect the group from external individuals or new members.

On the other hand, helping the entrance of new members in a group and facilitating the relations with different members increases the bridging social capital, which is referred to social networks between socially heterogeneous individuals.

At Banco de Tempo - Florianopolis, the number of trading partners ranges from 1 to 45 with 4.26 being the average. Nearly one third (37.01%) of all the members traded with only one other member. The median value is 2, as 18.43% traded with two other members. At the high end, 10.71% of members had bought goods and services with 10 or more different members.

To observe if “bonding” in social capital is only at the beginning or is already an established reality, it is important to analyse the reciprocated contacts in BTF.

When a member transacts with another from whom it has previously received a service or a good, the relationship becomes reciprocal. Reciprocation further develops a social relationship, represents a second stage of bonding social capital as these two participants have chosen to transact once more.

There are two approaches to calculate the number of reciprocated contacts: Dyad-based Reciprocity and Arc-Based Reciprocity.

Dyad based reciprocity is the number of reciprocated dyads divided by the number of adjacent dyads. A dyad, representing a pair of actors and the possible relational ties between them, is a (node-generated) subgraph consisting of a pair of nodes and the possible line between the nodes.

On the other hand, Arc-Based reciprocity is the number of reciprocated arcs divided by the total number of arcs.

At BTF, using dyad-based method, only three members (0.47%) had two reciprocated contacts, twenty members (3.15%) had one, and the large majority of the members (96.38%) did not have any reciprocated contacts. Thus, reciprocation was rare at Banco de Tempo – Florianópolis in the period considered.

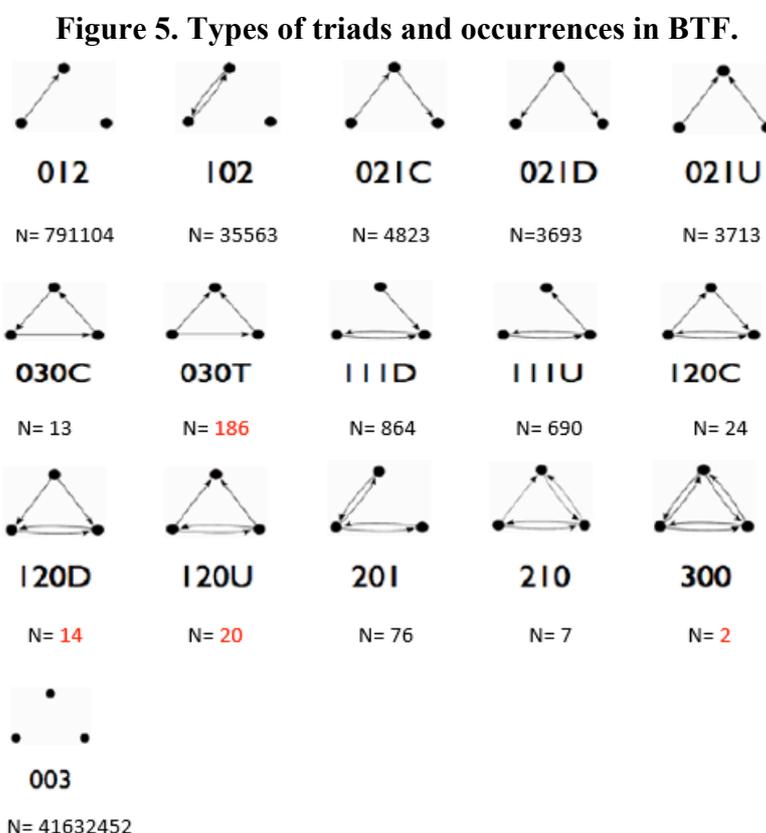
The next advanced indicator is transitivity. To derive this indicator, it should be done a triadic analysis. Triadic analysis considers all the different combinations of three individuals and examines the interactions between the three individuals. A total of 16 different triads can exist, each represented by 3 numbers and a letter (if present):

- the first number is the number of reciprocate dyads,
- the second is the number of no-reciprocate dyads
- the third is the number of null dyads.

A letter (if present after the triad) represents a state:

- “D” Down
- “U” Up
- “T” Transitive
- “C” Cyclic

Figure 5 shows all 16 triads that can exist and the number of occurrences of each type of triad in BTF in the period considered. The numbers evidenced with red character are triads that present transitivity in the interaction. Transitivity exists if actor  $i$  makes a transaction with actor  $j$ , and actor  $j$  in turn makes a transaction with actor  $k$ , then actor  $i$  will also make a transaction with actor  $k$  (Wasserman, Faust, 1994).



Source: Wasserman, Faust, 1994 and own elaboration – BTF transaction data

Considering transaction data of BTF, the triad transitivity is 3.3%, a low percentage. A low value of transitivity means that the group is disorganized: people might not know exactly how all their friends are connected (Wasserman, Faust, 1994)

Network density is the next advance indicator of individual participation in time banking.

Density is expressed as a percentage, where the extreme values are zero, when a member's trading partners have never transacted with one another, and 100, when all trading partners of a member have exchange with one another.

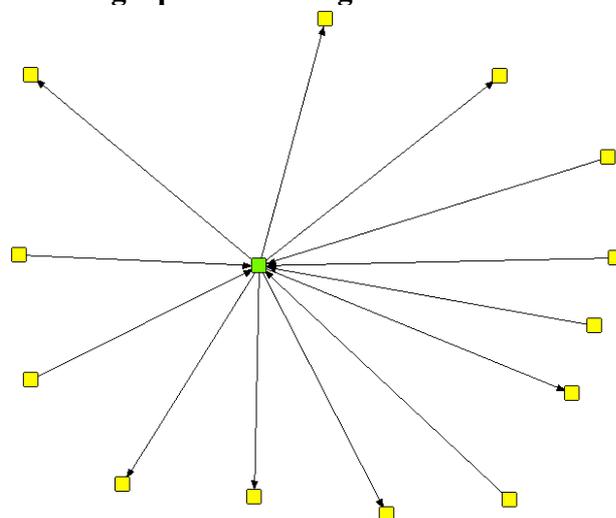
In this calculation of density, it is only considered the fact whether a tie exists between members, without considering the direction of the tie, buying or selling a good or service.

Density is important for a time bank: members during a transaction often talk about the network and other exchanges done in the past with other members. Thus, members living in well-connected areas of the network are expected to have greater information about the quality of good or services of other members within the time bank and so, have an higher probability to be more active. Referrals are an important mode of learning about services and goods supplied, given the fact that advertising is not normally present in time banking. Moreover, the information that is widespread in highly dense network generally can increase bonding social capital (Collom, 2012). The ego-network density indicator at BTF ranges from 0% to 100% with an average of 2.81%. A large number (72.13%) of the members have 0% density, no transaction connections among their alters.

To better understand and visualize the variable "density" it can be interesting to build graphs illustrating social network of some members of BTF.

The first graph (Figure 6) represents the social network of a BTF member that has many trading partners (13), but it has a density of 0%, in fact none of trading partners have exchange with one another over 156 possible pairs.

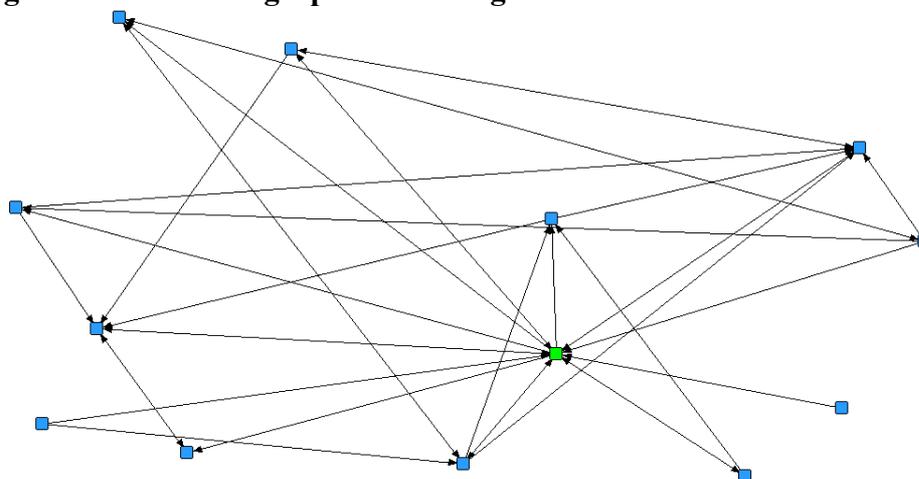
**Figure 6. Time bank graph illustrating member network size and density**



Source: Own elaboration – BTF transaction data

The following graph (Figure 7) represents the social network of a BTF member that has a number (12) of trading partners near to the number of previous graph, but a positive density (14.39%) and the presence of one reciprocate connection.

**Figure 7. Time bank graph illustrating member network size and density**



Source: Own elaboration – BTF transaction data

## Conclusions

This paper can be considered an exploratory analysis of timebanking in Brazil and, given poor Brazilian literature in this area, one of the first papers studying this topic in the country.

Since Banco de Tempo – Florianópolis is an organization in the early stages of life, the analysis of this paper is limited. In BTF, the creation of social capital is at an early stage: members are still "experimenting" time bank and are getting to know the other members. Moreover, the number of members has increased very quickly in few months, removing the possibility for older members to know all the new members. It can be supposed that with the passing of time, these evidences will be more robust, given the increasing member participation and the increased confidence of the members in making transactions within time bank.

Beside that, some limitation of this paper can be showed. As other researchers (Seyfang 2001; Lasker et al. 2011; Collom, 2012) have evidenced, the use of transaction data can lead to some problems. First, some members can not inform the organization about some of their transactions. When this fact happens, it means, most of times, that time bank works in a good way. For example, some members that are very linked each other can exchange some goods or services directly without reporting the transactions or they become friends and do not charge for credit.

Second, the bank organization can record the data about transaction with some errors. For example, some transactions can be recorded with a wrong number of credits or registered with a wrong type of good or service.

Finally, we can suggest the next steps of research on BTF. Considering the lack of further data, mainly sociodemographic, additional data will be collected applying a survey to BTF members. This survey will include variables such as gender, age, race,

education, income, marital status, etc. With this information, we could examine demographic differences in member participation, that is, if there exist some difference between BTF members and other people living in Florianópolis. Using the same tools of this paper, it could be also investigated the characteristics of trading partners.

Moreover, it can be studied whether BTF is contributing to build social capital in the areas where it is present and what type of social capital is created the most. Besides that, it is interesting to research whether BTF has a role of poverty relief and as an opportunity to unemployed people. Lastly, it could be calculated what would be the value of the hours spent for transactions in BTF, to estimate how much was spent in time bank rather than in the traditional economy or how much was spent that otherwise would not be spent on the traditional economy.

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## *Contested Spaces*

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### **Abstract**

One of the key roles of civil society is to provide a platform for like-minded individuals and groups to come together to put pressure on powerful decision makers in society; from site stake holders, decision makers to elected representatives. However, strategies to undermine the active civil sector (facilitated through the systematic implementation of a series of legislative acts which permeate social division); creates the current situation; where the responsive body of citizens is less active and effective than they have been in previous decades. The lack of political desire to challenge the cyclic fall-out imbedded within our current mode capitalism; means that citizens cannot rely on traditional political ideologies or parties to overt this modern phenomena and problematic global outcomes. Thus, the role of alternative practices, particularly that of protest actions which take place in the public realm; are a key arena in challenging the problems created by global capitalism. This paper aims to build on protest actions which took place in London between 2010 and 2012 in the aftermath of the Global Economic Crash of 2007/8. These actions often crystallise the imbedded social and political problems - and if allowed to gather momentum can become a forum that catalyse change. This paper will explore the way in which protest and other oppositional action can become a route to more sustained oppositional practices which can become institutionalised and inform the direction or the way in which we approach contemporary global challenges.

Keywords: Public space, protest, democracy, representation

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## Introduction

Public space and its role within contemporary neoliberal society is often perceived through a narrative where “public” and “private” spaces operate as oppositional constructs. Where public spaces are locations which are imbued with qualities such as openness, as places to gather, places of self-expression, places for “everybody”.

*By “public space” we mean the range of social locations offered by the street, the park, the media, the Internet, the shopping mall, the United Nations, national governments and local neighbourhoods. “Public space” envelops the palpable tension between place, experienced at all scales in daily life, and the seeming spacelessness of the internet, popular opinion and global institutions and economy.*

(Smith 2006)

The aim here is to unpack this reading of public space and engage in a dialectic which explores the possibilities of public space as an ever-changing platform. A place where rules of access, exchange and surveillance can be manipulated by its users, thus changing the nature of those locations.

If analysed in this way, public space can be seen as an active urban construct, instead of emerging simply as conduit or locations of accessible leisure for its inhabitants. If interpreted as a patchwork of locations which embed conflict over their designation, use and role within society; these conflicts, can be more effectively understood through analysis of the different types of spatial engagement that these locations facilitate.

Specifically, this paper will investigate the role that protest actions; which take place in public space; have in transforming our understanding of these locations and thus their role within society. The focus will be on well attended direct actions which took place in London between 2010 and 2012 in the aftermath of the Global Economic Crash of 2007/8 and the unpopular measures put in place by a coalition government. Through analysis of these actions, a different understanding of public space will emerge. In particular; how it facilitates spatial engagement across a wide range of socio-political needs (developing the idea that the act of protest operates as both a right and a tradition). This paper will consider the role of protest as a tool for change, a tool for knowledge transfer and a tool for non-commercial exchange (and the values therein). This will be used to construct a new understanding of the possibilities of urban space within contemporary urban society.

### What is public space?

It is first necessary to identify what we mean by public space, before pursuing a more in-depth explanation of how the act of protest can inform such locations. This paper takes a multidisciplinary approach to answering this question; informed by the evaluative approaches of anthropology and human geography we start with this quote...

*By “public space” we mean the range of social locations offered by the street, the park, the media, the Internet, the shopping mall, the United Nations, national governments and local neighbourhoods. “Public space” envelops the palpable*

*tension between place, experienced at all scales in daily life, and the seeming spacelessness of the internet, popular opinion and global institutions and economy.*

(Smith 2006)

This definition merges what I will unpack as three distinct notions of place and combines them into this familiar but non-distinct singularity. By focusing on each subcategory, I will develop an understanding in regard to social human interaction and how these spaces are utilised by different individuals within society.

### **Accessible Physical Locations**

The first definition embodies the notion of public space as a series of accessible physical locations. They are not consecutive or continuous, in fact to traverse a number of these spaces requires entering into others which will fall under different definitions (such as “private”). As such, these places form part of the matrix of the urban environment. One could equally define them as spaces which can be walked through or transgressed by pedestrians, and that under their standard daily operative state; **do not require any form of identification based checkpoint system as a prerequisite to enter or move through.** However, as with all environments, they are each subject to a code of conduct which if contradicted and this contradiction acted upon by the management or ownership body; inevitably triggers a different state of operation.

Of interest within this study are Trafalgar, Parliament and Paternoster Square. When looking at how the act of protest challenges this code of conduct; we see a plethora of different strategies used to counteract the effectiveness of their presence. As such, the The Student Tuition Fee Protests and Occupy LSX transform these spaces into the threshold at which a battle over the designation of space occurs.

### **Non-physical Platforms**

This second definition embraces the notion of a series of non-physical construct which operate primarily as information based resources which stimulate or provide a platform for communication between individuals who are separated by geography. These are constructs which are made available to the populous through conduits which may vary wildly but which do not necessitate a particular spatial singularity to facilitate them. In both the examples given by Low and Smith, “the media and the internet” these are industries whose services or products are owned and distributed by large private corporations (Google, Reddit, Amazon, Microsoft, Facebook and Twitter to name a few). Whether this distribution is through interpersonal communication or news/ information distribution cycles; they are simply a mechanism by which this subjective information reaches its intended target or market audience. However, what they facilitate, is an often-free platform for social communication and discourse which; broadly speaking is publicly accessible (although social barriers persist when considering realities such as poverty, gender and language).

These spaces are often used to facilitate acts of protest in physical public space. This facilitation is not a one-way relationship, as the attempts to mobilise are easily monitored and allowing the development of counteractive strategies by law enforcement officials. We see a prime example of this when those promoting acts of

criminal violence on social media outlets during the August Riots are later prosecuted. Similarly, the development of platforms such as Sukey<sup>1</sup>; allowing protesters to share real time information on the activities of law enforcement officials changes the balance of power of events developing in “accessible physical locations”.

### **Representative Spaces**

The third designation outlines a set of locations which house operations which are identified as representative to the citizens within a predefined terrain (district, borough, city or nation). This includes bodies such as The United Nations and national governments and can be extended to both democratic and nondemocratic/elective institutions. Thus, both The Houses of Parliament and The London Stock Exchange are both spaces which are within this categorisation. What binds these locations as a definable group is their **remit of operation**. These operations invariably take place on privately owned or managed land; and in stark contrast to the first definition of public space - do require (often elaborate) forms of identification and checkpoint systems for individuals to gain access. Here, the decisions made in these terrains have wide reaching ramifications for the general public (regardless of the processes utilised to reach them). Their effective remit is **the public**. This brings together a raft of operations include the deliberation over and the creation of policy, and a plethora of other life defining mechanisms.

Protesters often target these spaces as those operating within their corridors make decisions which they disagree with. As such, Paternoster Square (the location of the London Stock Exchange) is a target for Occupy LSX. Similarly, Parliament Square is the fulcrum for much of the activity instigated by The Student Tuition Fee Protesters, highlighting the importance of these spaces.

### **Evaluation**

Each of these categories (1) accessible physical locations, (2) Non-physical platforms and (3) Representative spaces; is critical in understanding the nature of representative activities in contemporary society space. Each is activated by popular protest during the Austerity protest bubble, however, it is the role of the first designation; the accessible physical locations which showcases the potential of public space to operate as platform to test and change the urban environment.

By defining public space as public(ly accessible) space, it starts to move our understanding away from those based in ownership and instead towards action. Instead of considering whether a location is owned by a private or publicly funded organisation, we can instead look at more specific indicators that contextualise the site; which are to do with how it operates.

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<sup>1</sup> “Sukey” provided live protest maps. Utilising the familiar Google maps format – providing additional detailed information as an integrated layer. Information includes the size, time and location of police Kettles. A similar level of information on mounted officers, police vans, dogs and helicopters. The idea was to share information between protesters and those using public(ly accessible) space – to counteract the monopoly on knowledge that the police have at the same time and in the same territory. Thereby reducing the advantage that law enforcement would have over those partaking in direct actions.

Looking at the Student Tuition Fee Protests, Off Duty Police Officer's March and Occupy LSX. Each takes place in a public(ly accessible) space which is in proximity to a "representative space"; The Houses of Parliament and The London Stock Exchange (respectively). The spatial relationships of the urban environment - means that these spaces were pivotal in providing a platform for spatial engagement to be used as a tool to raise awareness of their particular issues. Without this platform, the agenda that these participants wanted to raise would not have a mechanism to prompt politicians into a response. In each case; the mass of people protesting in public spaces showed the relevance in their agenda and thus a level of general public interest which incumbent politicians felt obliged to respond to. We see this in the statements that coalition politicians released questioning the validity and necessity for these actions.

However, protesters must use the tools that they have at their disposal. Institutional forms of opposition are more time consuming and dependent of activity cycles which participants cannot affect (such as voting, petitioning and union action – i.e.: the withdrawal of labour). Thus, there is a necessity for contestation to take place in a forum which is more immediate, in response to emerging socio-political concerns.

### **Contested Space**

Urban life inevitably embeds and creates moments of contestation. The representative nature of public space guarantees that different agents within the urban complex will want to shape the city according to their own ideals. This is an intrinsic part of the matrix of contemporary life and affects political, social and economic mechanisms of potential change.

*I propose a distinction between two forms of antagonism, antagonism proper – which takes place between enemies but between 'adversaries', adversaries being defined in a paradoxical way as 'friendly enemies', that is, persons who are friends because they share a common symbolic space but also enemies because they want to organize this common symbolic space in a different way."*

(Mouffe 2003, 13)

The act of protest is an intensification of the conflicts which persist at every level within society. Those participating in the act are highlighting agenda which is not considered or deliberated upon. Thus, the spatial platform is created to allow an agenda to gain **recognition** in the role of "friendly enemy". In this reading, "friendly enemy" is a rarefied position, where the act of protest is a concerted way to oppose an adversarial body. This is so that it can operate on a platform which can perhaps affect policy makers and others who operate as determinants of a location. This platform nonetheless normalises the idea that opposition is permitted but only once validated on one of these increasingly notional platforms. What the act of protest allows both activists and observers to do alike; is to challenge overarching urban constructs through the filter of direct action which undermines these predefined affiliations.

### **Social engagement**

When looking at the role that protest plays in contemporary neoliberal society; it is necessary to make a distinction between two approaches to protest. They can broadly

be categorised as reactionary and ideological. The first is aligned with the idea of antagonism (“persons who are friends because they share a common symbolic space but also enemies because they want to organize this common symbolic space in a different way.” - Mouffe) and the second; with the idea of right to the city (“it is a right to change ourselves by changing the city” - Harvey). There are three key protests which take place during the Austerity Protest bubble which exemplify the value and role of these two forms of protest. Although instigated by the reactionary, they also engage in the ideological.

### **Ideological**

Each year, regardless of the prevailing socio-political or economic conditions – there are a series of protests which will take place in public space. These are structured activities with the aim of raising the profile of a particular agenda. In the UK, many of these protests have a direct lineage which can be traced back to the “liberal” movements of the 1970s. Then, their aim was to oppose the political shift characterised by policies such as energy production and the approach to the natural environment (i.e.: missile construction and development), free market economics (i.e.: tax breaks for private building initiatives), expansion of travel networks (i.e.: the London Ring roads project) and the privatisation of industry (i.e.: characterised by the change in rules that define unions).

With the time period that we are looking at, the ideological protesters came together when government and other powerful institutions based in the capital (such as The Bank of England or The London Stock Exchange) implemented new initiatives which were unpopular. The significant example of this is Occupy LSX. Although the protest gathered much momentum for the multiplicity of their approach to protest; their initial stance was against free market and the ruthless pursuit of capitalist ideals.

As such, participants embody the idea that protest is a political requirement, and as such, the idea that antagonism is a required and permanent construct in the negotiation for political ideals, and a legitimate forum for this antagonism is public space.

### **Reactionary**

If ideological protests develop as part of a tradition; reactionary protests develop as the realisation of a right. Whether this is an understanding which develops instantly or over a period of time; it is a response to a specific issue. The “right to the city” attracts a different participant base as a result. Here, the Student Tuition Fee protests and the Off-Duty Police Officer’s March, particularly as their actions are timed to influence decisions being made by powerful officials (the vote on the raising of tuition fees by incumbent politicians, and the implementation of cuts to police spending). The significance of the different categories is that they provide arena for a diverse group of people to engage with public space.

### **Austerity Protest Bubble**

The Student Tuition Fee Protests (STFPs) at the beginning of the protest bubble, Occupy London Stock Exchange (LSX) which spanned a third of the two-year period, and the Off-Duty Police Officers March (O-DPOM) which materialises towards the

end. The STFPs takes the “tradition” of the linear march; and through successive actions (four marches) develop a series of techniques to target their desired territory. The Houses of Parliament, where an imminent decision on the whether to raise tuition fees was to be voted on. In this way; the STFPs utilised the tradition to attract a record number of participants (50,000+) a “representative” tool to show the level of discontent with the proposed bill.

Occupy LSX uses the “traditional” mechanism of the occupation to gather 100s of participants at Paternoster Square. Home to the London Stock exchange; who’s practices were seen as an active contributor to the culture which lead to the Global Economic Crash. When law enforcement officials undermined the validity of that tool (through the use of Kettling). The protesters responded tactically, shifting their target within public space and relocating their camp on and beside land owned by St Paul’s Cathedral. Here, they could test their “right” to occupy through continual negotiation with the Church of England and the Corporation of London. This lead to a nine-month occupation which in turn allowed a series of alternative practices to emerge and be tested within this terrain.

During the Austerity Protest Bubble; many unionised workforces explored a number of different mechanisms to show their distain with the strategies employed by government. In this light, the O-DPOM represents a break from these protest actions. Restricted from forming unions since 1919, for Officers to come together as a body, their protest had to take place when “off-duty”. Despite this restriction; the greatest number of officers attended the march (30,000). So, although they engaged in the “traditional” construct of the march to enter the platform of the public, this march takes place in the officer’s personal time; the “right” that is afforded other public-sector workers; is not open to them. So that right has to be gained through self-expression and social engagement, notably marked by the way that on-duty officer’s policing the route engaged with off-duty officers. Thus, the protest itself is an embodiment of the ability of protest within public space to operate as both a tradition and a right.

## **Relevance**

Protest actions are often wrongly judged on their success or failure to overturn the policies which they challenge. My contention is instead to analyse what protest creates whilst in existence, and how we can learn from these practices as a method to inform our possible futures – both within public space but also other spaces of contention.

All, the actions analysed, achieved three distinct outcomes. 1. Challenge existing mechanisms of political decision making. 2. Develop new forms of opposition. 3. Create spaces held in common

Recognising that contention is an intrinsic element within urban life; we can begin to extract the ways in which the three different protest actions highlighted start to transcend their temporal existence.

## Redefining the terrain

The STFPs are a clear example of the practice of protest developing through the implementation, repetition and expansion of a typology of direct action (the *dérivé*). Each of the four direct actions that define the micro-movement allow us to see the emergence and subsequent development of a particular approach to protest which takes place in public(ly accessible) space. This series of four direct actions are characterised by decisions made by activists whose actions are instantaneously disruptive to the structures of the existing spatial status quo which are prevalent in the areas in which they choose to operate.

These protests highlight the imbalance of power and knowledge that occurs around the nexus of protest action. During the STFPs, a virtual strategy of counter mapping<sup>ii</sup> developed to aid the landed protests. This went some way to reduce this discrepancy of power and knowledge that exists between the two adversaries. The most prominent example is “Sukey”, which gave protesters greater agency to move more freely during a direct action. Its use allowed protesters to have comparable information to that of the law enforcement officials operating in the same environs. Most importantly this reappraisal facilitated a more tactical response which among other things allow protesters to resist the pattern of activity which allows police to establish Kettles and other lines of containment. This early foray into the evasion of police tactics became something more fluid and rapid in later Student Tuition Fee Protests (which begin to utilise “cat and mouse” tactics).

This case study looks at two types of perimeter space. The first is not visible, it is a notional cartographic line of operation – it is the 1km zone protecting Parliament Square. However, the rules of operation either side of the line are different, this difference is utilised by the 1<sup>st</sup> protest. In the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, the perimeter space *becomes the field of action* as law enforcement officials systematically employ the tactic of implementing a continuous line of bodies which forms the boundary of a closed area or space. Here, activists operate on the perimeter of a boundary as a mechanism to undermine its integrity. By diverting focus away from the homogeneity of the boundary, access is gained to key spaces within the enclosed area – notably, Trafalgar Square itself. So, this action not only temporarily redefines the nature of public space, but also the tools used to activate it.

## Social Experimentation

Occupy LSX transforms the pre-existing condition achieving a transformative impact over a conglomerate of territories previously defined through ownership as either "private" or "public". The protesters projected a third category of designation, that of being public by changing the daily operation and thus designation of these territories, allowing them to act as a singular space (even though they were acting across several different territories of ownership). **They had transformed these disparate territories into one where the public is defined by the activities and citizen access to them.** Gifted through the luxury of time, Occupy LSX is singularly different from

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ii counter-mapping is a practice which looks specifically at mapping as a method to contradict established, hegemonic traits within accepted or established maps. Here, this technique has been used to challenge the designation of site, where it lies in direct opposition to the strategies of the law enforcement officials.

other forms of Occupy (occurring around the world at the time), it gave the activists the opportunity to adapt and develop tactical approaches to the manipulation of space.

The camp goes through a series of phases 1. The initial hiatus where a hedonism spreads across the camp with ideas forming about what is possible running high. 2. The development of a series of daily practices; those of negotiation and of daily living patterns. 3. Then the integration of a diverse population (noticeable a large homeless population), 4. and finally the resistance around the eviction; once those actions became inevitable.

As a result, the camp is in essence - a platform for discussion and debate which creates different forms of civic action and social integration on which no pre-determined identification or qualification are required to gain access or involvement with the processes within. This is achieved both 1. spatially; through the creation of places of (a) democracy (such as the general assembly), spaces of (b) knowledge exchange (such as The University tent) and (c) community and communal living (such as the kitchen tent). It is also achieved in relation to the practices which quickly become inherent, those of (d) equality of voice; (e) shared territories of action and (f) informal non-commercial exchanges. All of which contribute to the presence of a 2. practice of protest, which are dependent on mutualism and multiplicity. Such multiplicity which causes the development of the 27<sup>iii</sup> working groups; which create focused forum to discuss and debate specific issues (such as welfare, legality, outreach, faith liaison or sanitation) and their consensus proposals are aired in the arena of the general assembly. The church working group is of particular interest, as a mechanism of negotiating mutual dependence (as the camp is partially located on their land).

The co-dependence of Occupy LSX and St Paul's Cathedral, is not an expected one. On the face of it, there is little of interests which connects them. However, the implicit questions raised by the camp around morality and abuses of power; chime with the core interests of the Church of England. Although thrust upon them in an unceremonious way, the core values of the church meant that their response would always be different to that of The City of London (despite its categorisation as a public body).

What occupy allows us to readily engage in, is the antithesis to this argument, where large numbers of people informed themselves and acted in unison in condemnation of established yet deeply floored practices, and in doing so created a base for them to test the efficacy of alternatives. The actions would of course never hold all the solutions to the eroding reciprocal relationship between citizens and our representatives in the neo-liberal age, but they give an avenue into the notion of what is possible if dissent engages with notion of politicising public(ly accessible)spaces and that this is a lesson which can be brought forward and applied elsewhere.

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<sup>iii</sup> First Aid, Health & Safety, Sanitation, Environment, Kitchen, Waste & Recycling, Youth, Faith Liaison, Non-violence, Outreach, Welfare, Economics, Technical, Tranquillity, mediation Commission, Land Ownership, London Corporation, Politics, Legal, Direct Action, Media & press, Cinema, Web, University & Library, Information, Surplus and Active non-violence.

## Alternative practices

The O-DPOM is towards the end of the Austerity Protest Bubble, both in chronology and as a representation of the change in momentum and pessimism that develops over during the bubble. Most noticeably, this protest embodies the shift in the ideology of participants, their expectations, and their approach to claiming space. The protest itself raises many philosophical questions around the nature of policing and the rights that key service providers can or should expect in contemporary society. However, of particular importance to this paper is the way in which these participants are limited in the tools available to them in claiming space during their act of dissent due to their uniformity and standing in society.

Although is the least active, of the protests; the fact that it took place at all speaks of the importance of alternative practices, and their permanent ability to create a level of reciprocity for any in society who; perhaps un-expectantly, find that suddenly becomes their only outlet for collective representative action. Understanding protest as existing within the range of alternative practice allows us to understand how it has a permanent place within our complex urban environments.

## Conclusions

Protests which occur in public(ly accessible) space can be used as a signpost for better urban possibilities. Returning to the theories of Lefebvre looking at our relation to the spaces where protest occurs, and our ability to access these spaces and the potential for transformation which is embodied within these acts. For Lefebvre, 'the right to the city' is an approach to daily life which transgresses different fields of action (work, leisure and love) as experienced through the city. This is in tune with the idea of ideological social engagement.

One of the key perspectives which support this theory, is the idea that citizens have rights to spaces and mechanisms to change society without engaging in the role fulfilled by elected representatives exploring the potential to bypass existing social hierarchies. For both Harvey and Lefebvre; 'right', is about access and space to act in a non-prescriptive manner. In 'the right to the city' Lefebvre outlines a historical timeline of spatial production and later Harvey explores the mechanism by which citizens can access these systems. Lefebvre speaks of a transition from the early dwelling to the fully industrialized city of his time (1970/80s) taking us up to the initiation of global neo-liberal capitalism. For Lefebvre, the key phases that define the 'mode' of production and by implementation the pace and scale, are classified as Agricultural, Industrial, Urban and Global. By focusing on the difference between the modes, Lefebvre questions the assumption that the urbanised environment is part of a natural progression or inevitability. Instead seeing this trajectory as the product of certain mechanisms, which can be altered, or; we as a society can choose to engage with different modes of production.

Lefebvre identifies the lineage throughout history that links different forms of 'control' that are prevalent behind the various modes of production, which strongly suggests a hierarchical system of rule which is maintained through different institutionalised bodies. He asks serious questions on the 'finality' (or indeed the embedded ideology) of industrialised systems of production. For Lefebvre, it is the

notion of access; moving freely through different urban environs and locating oneself based on “desire” as opposed to following existing hierarchical constructs. This paves the way for citizens’ access to resources and to create systems of commoning and communality. For Harvey ‘rights to the city’ are more in line with identifying opportunities. Where citizens can gain control over the mechanisms of economic change, and that democracy can be created through the expanded use, bringing them under citizen control.

To maximize the potential of aligning theory with practice and to utilise these positions in a contemporary context; citizens need to take the opportunity to operate both as individuals, in small groups and to recognise their potential to operate as a global body, larger than that of the any of the systems or companies which limit them to a singular locality.

The act of protest shows us a method of developing a targeted response to a finite issue with temporal immediacy. If you accept that direct action is a key element of protests' validity - then this rapid mobilisation of existing resources would prove invaluable to small groups who can maximise their responsive flexibility. It is not the actions themselves which should be adopted but the galvanisation of available resources at short notice. This should serve as an adjunct to the regular scheduling of meetings to discuss a series of pre-set issues creating a principled approach - so that at short notice a meeting which includes the more loosely affiliated members can be called upon to meet and mobilise over a particular issue.

Protest can also inform the practice of larger alternative practice organisations; who could benefit from seeing themselves as (overtly or passively) political entities. This is because their aims require a level of socio-political engagement which means that they will be negotiating with others that are (by their very nature) politicised constructs with related but intrinsically different priorities and focuses. Essentially it is about a level of appropriate organisational structure and galvanisation at times which are not scheduled or regular but specific to your organisations' aims. On occasion, it will be necessary for a few key individuals to meet for a shorter and unscheduled period of time to catalyse a response to a key issue. This fluid responsiveness is key to any alternative practice to remain relevant and is applicable to a range of practices which can be considered alternative.

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***The Libyan-Italian Partnership: Attempts of Innovation in Solving the Migration Crisis***

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**Abstract**

Italy and Libya hold a close relationship, and the migrations flow across the Mediterranean only deepens it. In August 2008 both countries signed a Treaty on Friendship, Partnership and Cooperation. Among other things, it called for deeper cooperation to fight illegal immigration. However, the scenario of potential cooperation changed quite significantly in 2011, in the context of the Arab Spring. In 2011 Libya faced growing waves of denunciations that questioned the longevity of Muammar Gaddafi's regime and its deep sectarianism. This led to an end his 42-year-old government and put the country in a civil war situation. The authoritarian resilience was broken in Libya, so was the rigid control of its borders. Both countries are still looking for a way to deal with Libya's border porosity and Italy's difficulty to deal properly with those who come looking for aid. Bearing in mind the importance of these events, we should ask: how did the Libyan Spring impact The Treaty on Friendship, Partnership and Cooperation between Italy and Libya of 2008? In February 2017, Italy and Libya signed a Memorandum of Understanding (MoU) on cooperation that deals, along with other topics, with illegal immigration. The recently signed MoU signals for some negative impacts from the Libyan Arab Spring and civil war on its relations with Italy as well as for the migration flows across the Mediterranean. The methodology used to guide our analysis consists of a bibliographic and documentary study, using supporting data and statistics available on official sources.

Keywords: Italy; Libya; Cooperation; Migration; Crisis; Arab Spring.

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## Introduction

To say that Libya and Italy have a history together is the least: the two countries share a colonial past, commercial interests and a common problem that concerns illegal immigration. Over the 20<sup>th</sup> century, Italy moved from largely being a country of origin of many migrants all over the world to a destination of a large flow of people coming from other countries, particularly from North Africa and the Middle East (Paoletti, 2010). Italian foreign policy kept up with this change in pattern and as Paoletti's book (2010) suggests Italy has adopted increasingly restrictive policies to address illegal/undocumented migration over time – even though evidence shows there has been a quite significant difference between the political discourse and the de facto attitudes and policies towards the illegal migrants in the country. Also, as Mainwaring (2012) puts it, Mediterranean countries like Italy claim to bear the so-called migration 'burden' in Europe as a way of gaining both political leverage and financial and practical support within the European Union.

As for Libya, because of a pan-African open-door approach adopted by Muammar al-Gaddafi in the 90's, the country has increasingly become a destination country, especially for sub-Saharan African migrants. And, as Mainwaring (2012) puts it, Libya has also become an embarkation point for those who sought to flee the continent and go to Europe. This way, a complex dynamic emerged: on one hand both the flow to and through Libya were allowed; on the other hand, the introduction of new visa requirements in countries such as Italy was defined. And, despite the number of migrants that reached the other side of the Mediterranean, it is important to bear in mind that diplomatic incidents, as well as an increasing tension, were caused between Italy and Gaddafi's Libya.

The migrations' flow across the Mediterranean only deepens the relationship between Italy and Libya. In August 2008 both countries signed a Treaty on Friendship, Partnership and Cooperation, aimed to be a framework agreement. Among other things, it called for deeper cooperation to fight illegal immigration. However, the scenario of potential cooperation changed quite significantly in 2011, in the context of the Arab Spring.

In 2011 Libya faced growing waves of denunciations that questioned the longevity of Muammar Gaddafi's regime and its deep sectarianism. This led to an end his 42-year-old government and put the country in a civil war situation. The authoritarian resilience was broken in Libya and with that so was the rigid control of its borders. Italy's first reaction to the situation in Libya was to suspend the 2008 Treaty, but less than two months later it restored relations with the transitional government. Both countries are still looking for a way to deal with Libya's border porosity and Italy's difficulty to deal properly with those who come looking for aid.

Bearing in mind the importance of these events, we should ask: how did the Libyan Spring impact The Treaty on Friendship, Partnership and Cooperation between Italy and Libya of 2008? In February 2017, Italy and Libya signed a Memorandum of Understanding (MoU) on cooperation that deals, along with other topics, with illegal immigration. The recently signed MoU signals for some negative impacts from the Libyan Arab Spring and civil war on its relations with Italy as well as for the migration flows across the Mediterranean. The methodology used to guide our

analysis consists of a bibliographic and documentary study, using supporting data and statistics available on official sources.

## 1 Tracing back the relationship: from colonial to postcolonial ties

### 1.1 From colony to independent State

Italy and Libya hold a close relationship that dates back well before the agreements that have been taking place in the 21<sup>st</sup> century. The long-term ties between these two countries are due to a colonial relation in which Italy tried to establish itself as a power alongside its European counterparts. In order to understand this situation, it is important to bear in mind that when compared to other European Powers and because of its ‘late’ unification in 1881, Italy failed to establish a powerful and competitive colonial enterprise.

However, this scenario did not restrain the formulation of an ambitious Italian foreign policy that would turn its attention to a North African territory today known as Libya. Such an ambition was translated into reality in the beginning of the 20<sup>th</sup> century, amid a colonial structure that was made possible because of Italy’s geographical proximity to the African Continent (Figure 1). Also, besides the proximity, at that moment Italy saw on Libya’s territory – that at that time was part of the Ottoman Empire – a strategical place to guarantee its aspirations at the Mediterranean Sea (Paoletti, 2010; Visentini, 2010).

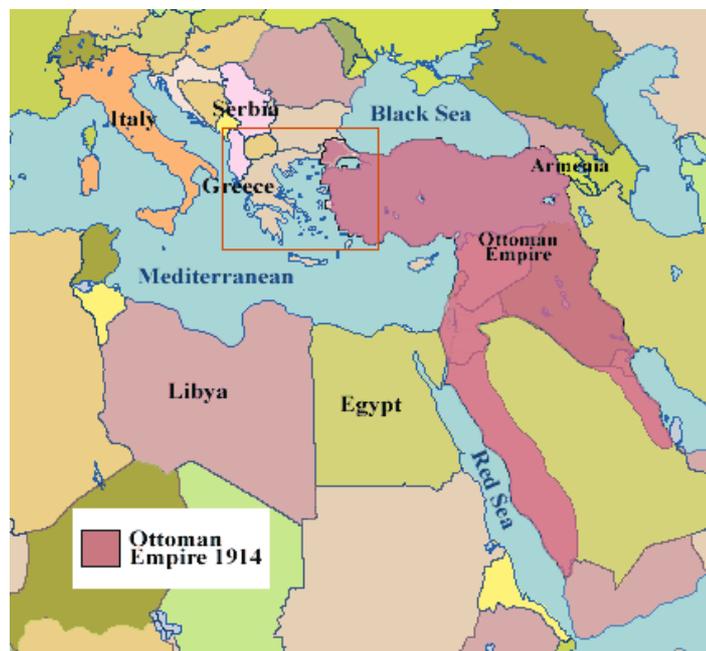


Figure 1: Libya’s location in the Mediterranean Source: UK National Archives

This way, by a process historically known as “peaceful penetration”, Italy established in Tripoli – today’s Libya capital city – a commercial insertion which proved to be unsuccessful. Accordingly, Italy’s action towards Tripoli turned into armed conquest – a conquest that happened in the name of Libyan’s “liberation” of Istanbul’s rule. Thus, it seems that Italy was taking the last shot in order to prove its will to become a colonial power. (Paoletti, 2010).

It is important to emphasize that afterward a series of complex events would occur gradually. According to Visentini (2010), by 1911 Libya's territory had already been occupied by Italy. Up to 1927, what is known today as Libya, was called Italian North Africa – and just in 1934, Italy gave Libya its current name. But, beyond this simplified timeline, and as Paoletti (2010) and many historians put it, during the first half of the 20<sup>th</sup> century a dark colonial chapter was written in Libya. A complex scenario that up to the beginning of the 21<sup>st</sup> century still represented a taboo.

Labanca (2010) emphasizes that during Italy's occupation military excesses were perpetrated. In this scenario, Italy created concentration camps in Libya and deported Libyans to Italy. All these actions, Labanca (2010) puts it, took place in order to establish and maintain Italy's dominating *status* and, by doing that, to face Libya's resistance, especially in its eastern region, Cyrenaica.

Further on, a different chapter between Italy and Libya was written in 1951, when Libya, amid the international decolonization waves, went on a successful independence process declaring itself as the United Kingdom of Libya – a constitutional monarchy under the rule of King Idris. At the same decade, in 1956, Italy and Libya reached an agreement to compensate the colonial past (Paoletti, 2010). However, a new growing tension took place from 1969, after a *coup d'état* in which Colonel Muammar al-Gaddafi and a group of military officers abolished the kingdom and established the so-called “Great Socialist People's Libyan Arab Jamahiriya”<sup>1</sup>.

As Paoletti shows in her detailed study, after the *coup*, “some 14,000 Italians living in Libya were forced to return to Italy [...] The Italian companies operating in Libya were forced to terminate their commercial activities, and their properties were confiscated”. (Paoletti, 2010, p. 112). From this moment on, periods of dialogue and confrontation took an intense place.

Briefly, we can see that during the 20<sup>th</sup> century, Italy-Libya connections were defined by a hierarchical relationship that went back and forth repeatedly, even after Libya's independence. Nonetheless, in the 21<sup>st</sup> century, another phase of conversations was established and a new chapter was glimpsed. In order to renew the dialogue between these two countries, some agreements were reached, with special emphasis to the 2008's Treaty on Friendship, Partnership and Cooperation – as it will be explained in the next section. However, as history shows us, year after year, and even with the establishment of continuous dialogues, growing tensions did not go away. It is quite the opposite: there's still a long road to go.

## 1.2 A new chapter in Libyan-Italian Relations

Libya and Italy's colonial heritage has for long conditioned their relationship, limiting potential commercial enterprises, growth and periodically triggering tensions across the Mediterranean. The commercial relations between the two parties has been going through the ups and downs of their political relationship since Libya's independence. Libya is a large oil exporter, with reserves that accounted for 48.36 billion barrels at the end of 2016 (OPEC, 2017). Oil discoveries in the country date back to 1957 and, as Ronzitti (2009) stresses it, the Italian oil and gas company Ente Nazionale

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<sup>1</sup> According to Visentini (2010), Jamahiriya is a neologism that means State of the Masses. (p.3)

Idrocarburi (ENI) has been present in Libya even during the years of international terrorism and sanctions on the country.

Despite Libya's diplomatic isolationism, according to Pisano (1982) the economic cooperation between them can be traced back to the 70's and 80's, and was based on Libyan control over Italy's energy needs: at the beginning of the 80's Italy relied on Libya to supply for 15 to 17 percent of this needs. However, trade between the two countries covered more than just oil, with Libya being a significant market for the Italian products and services likewise the arms and construction industries (Pisano, 1982). Also, there has been Libyan investments in Italian firms, like Fiat, which would only benefit from a framework agreement between the two countries (Pisano, 1982; Ronzitti, 2009).

On 30 August 2008 the Treaty on Friendship, Partnership and Cooperation between Italy and Libya was signed in Benghazi, concluding a long and complicated negotiating process that had its roots in the Memorandum of Intent (2000) on terrorism and was accelerated in Berlusconi's administration. As Paoletti (2010) mentions, the Italian prime minister Silvio Berlusconi welcomed the treaty as a way of guaranteeing 'more oil and less migrants'.

The treaty was aimed at putting an end to the disputes and disagreements relating to the colonial heritage that for long had conditioned the relations between Italy and Libya, and limited the fruitfulness of this relationship. As Ronzitti (2009) signs, it is worth mentioning that before the 2008 Treaty there had been a number of bilateral agreements between the two countries, but none of them were as large or touched as many key topics as the Treaty on Friendship, Partnership and Cooperation. Considered a framework agreement, the treaty addresses matters as the damages related to colonialism, trade, investment and business to business relations, and the delicate issue of illegal immigration – which was regulated by an agreement on the fight against terrorism, organized crime and illegal immigration signed in 2000, that entered into force two years later, and two Protocols of 29 December 2007 implemented at the beginning of 2009 (Paoletti, 2010; Ronzitti, 2009).

Structurally, the Treaty of Benghazi is divided into three parts: general principles; closing with the past and ending the disputes; partnership. The first part largely repeats and reiterates the norms from international customary law and the United Nations Charter on seven articles: respect for international legality; respect for sovereign equality; prohibition of the threat or use of force; noninterference in internal affairs; peaceful settlement of disputes; respect for human rights and fundamental freedoms; dialog and understanding between cultures and civilizations (Gazzeta Ufficiale, 2009). The second part of the treaty refers to their mutual past and the reckoning of old disagreements. As Ronzitti (2009) mentions, this is the most onerous part of the treaty since it comprises a commitment to build basic infrastructure in Libya funded by Italy that sums up a total of \$5 billion.

As for the third part, partnership, it is considered to be the most ambitious of the three. It envisages cooperation in different sectors such as culture, science, economy, industry, energy, defense, non-proliferation and disarmament, the fight against terrorism and illegal immigration – which is of main concern for this research. There had been previous common efforts to mitigate the illegal immigration problem in the

early 2000's, both bilaterally and at the regional level (Paoletti, 2010). However, none of them intended to be as extensive as the Treaty of Benghazi.

On the issue of illegal immigration, Ronzitti (2009) highlights that, on the one hand, Article 19 calls for the implementation of previous agreements and protocols on immigration, in particular, the ones agreed on in 2007 and the patrolling of the almost 200km of Libyan coast by mixed crews on patrol boats provided by Italy. On the other hand, Libyan land borders would be controlled by a satellite detection system jointly financed by Italy and the European Union (Gazzeta Ufficiale, 2009; Ronzitti, 2009). Illegal immigration by sea was the most urgent kind to be solved.

The treaty entered into force in the first months of 2009 and initially the bilateral relations showed significant improvements. As Paoletti (2010) stresses, economically there was a sharp growth in Libyan investments in Italy, and as of 2010 Italian commercial relations and investments with Libya had expanded relatively to other Mediterranean countries (Paoletti, 2010, pp.136). Regarding illegal immigration the collaboration also deepened, having new measures to tackle the problem been implemented since 2008. Less than two years after entering into force the treaty was said to have reduced illegal immigration by 90 percent (Camera, 2010; Paoletti, 2010). But the events of 2011 would change the course of this ongoing prosperity in the Italian-Libyan partnership, requiring further political and diplomatic efforts to address the migration issue.

## **2 Libya's Arab Spring and Gaddafi's Fall**

During 2011, Magreb (North Africa) and the Machrek (the Middle East) were surrounded by demands of economic, political and social change. At the same time, the longevity, as well as the deep sectarianism of their governments were being questioned. This way, a substantial movement emerged from this scenario, one that sought the end of a long winter and the start of a promising spring: the Arab Spring.

In this way, just as the fall of the Berlin Wall symbolically represents the end of the Cold War, the self-immolation of Tunisian youth in Mohammed Bouazizi in December 2010 denounced the social despair that has taken on not only Tunisian society but also neighboring countries with similar stories and structures. Associated with a scenario of corruption, repression, and incompetence, a growing wave of empathy engulfed populations and, from a process of politicization of empathy, increasing demands that governed the dominant governments and elites to promote a free political system and a developed economy emerged (Dodge, 2012).

Based on Wimmen's (2014) analysis, it may be said that the dynamics of the Arab Spring, even if limited, led to attempts of overcoming the barriers between sectors of society through narratives of (re)conciliation in favor of national unity. In other words, although briefly massive popular demands for social justice and political oppression seemed to grow up hand in hand. Thus, in countries like Egypt and Tunisia, the regimes of Hosni Mubarak and Zine El Abidine Ben Ali were overthrown. In addition, the dominant elites found themselves pressed to deal with the demands of the population.

At this very moment, Libya was in the middle of a civil war. Here in this paper, it is sustained that this civil war that belonged to the bigger picture of the Arab Spring. In this context, the 42-year rule of Muammar Gaddafi came to an end. This way, not only Libya's long-term leader was overthrown, he has also been killed. There was no turning back. There was not the "Great Socialist People's Libyan Arab Jamahiriya" anymore. Instead, the State of Libya was established (or so they thought).

Within a few days after Gaddafi's fall, anti-government forces took control of Libya's second largest city, Benghazi. This way during the months that followed the end of Muammar Gaddafi's rule, and as an alternative to the previous regime, Libya started to be governed by the National Transitional Council (NTC). However, the NTC was dissolved in 2012. (Khader, 2012; Varvelli, 2012)

As it can be observed and despite the wave of optimism during the Libyan Arab Spring, the post-Gaddafi Libya saw an internal problematic transition. Toaldo (2012) writes that the state's security apparatus vanished. This way, it was replaced by a confusing and highly disorganized system that was composed of the so-called revolutionary brigades (also known as militias).

And as Toaldo (2012) also shows, this scenario was intimately linked to the hybrid security system that emerged after the Arab Spring. This way, government institutions became weak and ineffective and gradually collapsed. From this moment on the management of migration control to and through Libya became even more complex.

### **3 Changes in Libya and Italy's response**

Briefly, we can see that from the moment that the authoritarian resilience was broken in Libya, so was the rigid control of its borders. In this way, the movements started in 2011 were soon in deep crisis, making their initial goals disappear and opening space for sectors of society to return to even deeper conflicts. In this sense, after Gaddafi, politics became the extension of the security sector, with politicians and government officials often representing the interests of local militias in the absence of real national political actors.

This way, besides the intention and the conquests of the Arab Spring movement in Libya, it is important to bear in mind that another phenomenon took place in there: new migratory flows. On one hand, Mainwaring (2012) says, there were those migrants, asylum-seekers, and refugees who were lucky enough to secure their migration out of the region, especially by air travels. On the other hand, in a larger amount and in order to flee the conflict, others were forced to seek shelter in neighboring African countries by land or to make their way across the Mediterranean to Europe. (Mainwaring, 2012, Paoletti, 2014).

It is important to notice that according to Mainwaring (2012), despite the volume of irregular migrants, we need to keep in mind that the European Union, and especially its southern member states, like Italy, overreacted to the volume of immigration. But, even with this so-called overreaction, a considerable flow of people arrived at countries like Italy. As Figure 2 shows, the number of boat arrivals in Italy that had been decreasing since 2008 sharply rose in 2011, and again in 2014. That was an unexpected flow due to the political instability in Libya that, as it will be explored in

this section, demanded attention from both countries and the rearrangement and deepening of an already established cooperation.

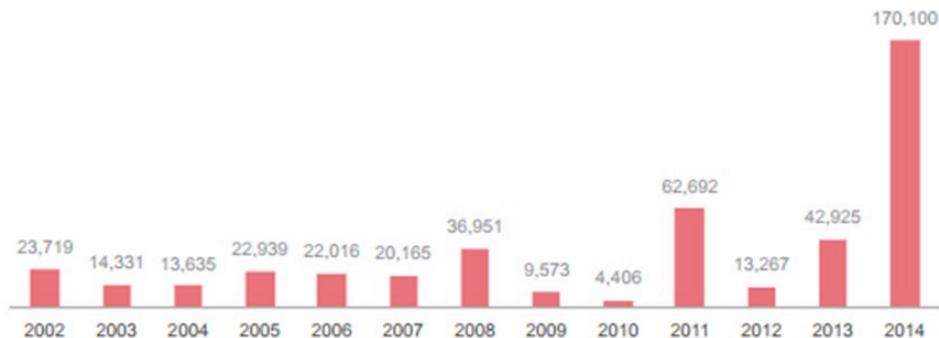


Figure 2: Number of boat arrivals in Italy (2002-2014) Source: Italian Ministry of the Interior; extracted from IOM Report (2015)

Attir (2012) provides an interesting taxonomy of illegal immigrants in Libya after 2011. According to him, they can be classified into four categories: 1) those who planned to remain in other countries for an extended duration; 2) those who planned to work temporarily in order to raise money and send it back home; 3) those who saw in Libya a transitional place; and 4) those who had already the necessary amount of money to be paid in order to assure access to a Europe and just stay in Libya to reach smugglers and board on boats. This taxonomy highlights the porosity of Libyan borders and how the country was seen as an in-between place. Figure 3 shows the proportion of the main country of departure of irregular boat arrivals in Italy, where Libya leads by far the numbers.

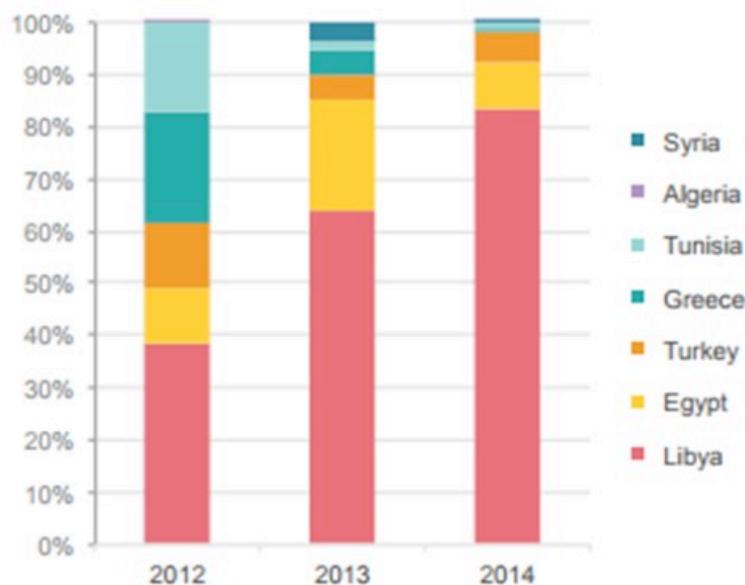


Figure 3: Proportion Country of Departure of Irregular boat arrivals to Italy (2012-2014) Source: Italian Ministry of the Interior; extracted from IOM Report (2015)

In response to the changes in Libya, the Italian government suspended the 2008 Treaty on 26 February 2011. However, over a month later, on 4 April, Italy recognized the NTC and restored relations with Libya. Paoletti (2012) argues that this

was due to the fact that both countries' goals concerning migration remained unaltered, despite political differences. In line with that, Italy signed a Memorandum of Understanding (MoU) with the NTC regarding measures to mitigate illegal migration, which included the exchange of information on migration flow, the engagement in mutual assistance to combat irregular migration (Frenzen, 2011). This MoU referred to four previous agreements signed by the two parties, and by the end of 2011, both countries had already declared their willingness to restore bilateral cooperation.

Their relationship gradually improved once again and the restoration of bilateral cooperation started with technical and vocational training. In 2012 the Italian prime minister Mario Monti and his Libyan counterpart Abdurrahim El-Keib met and discussed the possibility of collaboration on borders control and signed the Declaration of Tripoli which reaffirmed the main provisions of the 2008 Treaty (Paoletti, 2012). Also, in April 2012 Italy's and Libya's cooperation on migration was reinforced with an agreement on training programs, the detention of migrants, and voluntary return programs (Migration Policy Centre Team, 2013). As Paoletti (2012) stresses, the training was aimed at the Libyan police force as a means of ensuring the country's control over its coastal borders.

On October 2013, the Italian government launched a military and humanitarian operation called 'Mare Nostrum Operation'. It aimed at tackling the urgent situation in which the south of Italy was found due to the great increase in migration flows, as Figure 2 previously showed. The operation's goal was to safeguard human life at sea and bring into justice human traffickers and smugglers. However, it was seen by some analysts as supporting this dangerous crossing from Libya. The operation ended on 31 October 2014 and according to the IOM report (2015) the number of migrants on boat departures from the Libyan coast has increased by more than 25% in a 12-months comparison (May 2014 - May 2015).

At the beginning of 2017, a new move both on the relationship between Italy and Libya and their fight against illegal immigration was taken with the signature of a new MoU. Signed in February, this MoU is on cooperation in the development sector, combat illegal immigration, human trafficking and contraband and on reinforcing the border security between the Libya State and the Italian Republic. This time, the understanding was mainly concerned in solving the massive inflow of illegal migrants in Italy coming mainly from Libya. The internal division brought up by the Arab Spring in Libya is not completely healed and the porosity of its borders persists.

The recently signed MoU signals for some negative impacts from the Libyan Arab Spring and civil war on its relations with Italy as well as for the migration flows across the Mediterranean. Its assertiveness on trying to solve the illegal immigration problem across the Mediterranean was interpreted by analysts and human rights defenders as unconstitutional under Italian law. Regardless of its legality, the MoU clearly signals that the Arab Spring in Libya had a negative impact on the relationship between that country and Italy, a relationship that historically has had many ups and downs that finally seemed to be over with the Treaty on Friendship, Partnership and Cooperation.

## Conclusions

Over this paper, it was possible to notice how Italy and Libya's long-term ties were permeated by ups and downs. After Libya's independence, in 1951, their relationship was no longer restricted to a colonial past. Quite the opposite: both countries showed increasing commercial interests, as well as diplomatic deadlocks concerning the illegal migration phenomenon. This paper also demonstrated that both Italy and Libya share a common tradition as destinations to those who seek to start a new life and/or to run away from difficult situations. And, by sharing this tradition, both countries indicated in numerous episodes a will to deal with the increasing flow that was being originated in the African Continent, crossed the Mediterranean and was reaching Europe.

We gave special emphasis to the 2008's Treaty on Friendship, Partnership and Cooperation which for some time glimpsed an atmosphere of substantial success. We also observed that 2011's Libyan Arab Spring represented a movement that not only impacted North Africa but also reached Italy and Libya's diplomatic concerns. Analyzing this scenario, we asked: how did the Libyan Spring impact The Treaty on Friendship, Partnership and Cooperation between Italy and Libya of 2008?

Looking at the facts presented in this paper we can say that the Libyan Spring certainly affected negatively the accomplishments that were being made since the entering into force of the 2008's Treaty. Furthermore, if we focus on the issue of illegal immigration, it can be said that the impact was even worse. As we have mentioned, the political instability in the country and porosity of Libyan borders made it the primary sight for immigrants to cross the Mediterranean – to the point that Libya represented the country of departure of over 80% of the illegal boat arrivals in Italy in 2014. Also, the initiative to sign a new MoU in 2017 can be considered an indicator for the consequences of the Arab Spring in the Libyan-Italian relations.

The analysis of the agreements between the two countries in the past decade and of specialized documents like those by IOM only corroborate to the view of this paper that the Libyan Arab Spring impacted negatively in the improving relations between Italy and Libya. On the other hand, what had been accomplished during the first years of the 2008's Treaty signals for benefits from cooperation between them, which only supports the view that the two countries should continue to keep a communication channel open and try once again to face this common challenge together.

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*Analysis and Improvement of Distribution Routes and the Associated Vehicle Fleet  
- Application to a Real Case in Portugal*

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Fernanda Maria de Almeida Santos Mendes, European University/Laureate  
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**Abstract**

Logistics management plays a key role in improving business efficiency, since it is the part of supply chain management that plans, implements and controls the flow of goods, services and information between the point of origin and the point of consumption. Customers are more demanding and want the right products, in the right place, at the right time and in the right quantity. Consequently, logistics plays a fundamental role because it allows adding value to the product, and is always seeking to minimize the total costs. In the field of supply chain management, the use of vehicles to deliver products to customers is one of the largest operations. However, before delivering the products it is necessary to optimize the routes of the vehicles, in order to provide an efficient and low cost service. This study intends to analyze and propose improvements in the distribution network of ABC, a Portuguese company dedicated to the commercialization and distribution of home decoration products. The main objective of this work is to provide a model that allows the company to optimize the distribution routes and the associated fleet, in order to minimize the total costs of the distribution, maintaining the level of service provided to the customer. Finally, a model was developed that allows the definition of optimal routes for the various delivery points, resulting in a reduction in the number of vehicles to be used, the total distance traveled and the time of the journeys, leading to a real reduction in logistics costs.

Keywords: Logistics, delivery points, distribution route optimization, total costs reduction.

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## Introduction

Nowadays, business management has been forced to implement new strategies and to innovate to ensure competitive advantages and profitability. We can say that logistics plays a key role in improving the efficiency within companies, as it is the part of supply chain management that plans, implements and controls the flow of goods (in the direct and inverse sense), services and information between the point of origin and the point of consumption, in order to meet the customers' needs (Grant, Lambert, Stock & Ellram, 2006).

To help optimize the supply chain, shippers are becoming less concerned about the mode of transportation, and instead are opting for the most efficient means of moving products (Capgemini & Langley, Jr., 2016).

Customers are increasingly demanding and want the right products, in the right place, at the right time and in the right quantity. In this sense, logistics reveals a fundamental role, since it allows adding value to the product, creating time and site utility, always seeking to minimize total costs (Ho, Ho, Ji & Lau, 2008).

In the field of logistics management, the use of vehicles to deliver products from suppliers to customers is one of the largest operations. Before delivering the products it is necessary to optimize the routes of the vehicles in order to provide an efficient and low cost service (Ho et al., 2008).

Sometimes, in some products, transportation represents the largest share of the final price charged to the consumer. In this way, transportation is considered a priority in supply chain management, so optimization can increase the competitiveness of a company. The management of the distribution fleet is also fundamental for the correct allocation of resources to needs (Mester, Bräysy & Dullaert, 2007).

The present work intends to study the improvement of the distribution network of ABC, a Portuguese company dedicated to selling and distributing home decoration products. The main objective is to provide a mathematical model that allows the company to optimize the distribution routes and the associated fleet, in order to minimize the total costs of distribution, having into account the maintenance of the level of service provided to the customer.

In the context of the problem under study, the main objectives of this work are:

- Construction of a mathematical model that adapts to the problem, with the necessary simplifications to reduce the associated complexity;
- Study of the feasibility of implementing the company's routes, through a comparative analysis with the current solution;
- Provide solutions that enable a significant improvement in the company's distribution network.

## Literature review and research questions

According to Eilon, Watson-Gandy and Christofides (1971), logistics can be defined as the provision of goods and services from the point of supply to the point of demand.

For Carvalho (2017), logistics can be divided into two types of activities: principal and secondary. The former include transportation, stock keeping and order processing, while the latter include warehousing, material handling, packaging, purchasing, product programming and information systems operations.

Strategic planning consists of determining the number and location of a set of facilities such as factories, warehouses, and distribution centers in order to minimize the costs of meeting a given demand, and maintaining a high level of service. According to Simchi-Levi, Chen and Bramel (2014), these decisions are a crucial determinant for materials and products to flow efficiently throughout the distribution system.

Vehicle Routing Problems (VRPs) are considered the central part of many decision support systems for actual situations of distribution problems. In VRP, a set of routes with the lowest total cost for a given number of resources (the fleet of vehicles) located at one or more points (distribution centers, warehouses) should be determined in order to efficiently serve a number of demand or supply points (Mester et al., 2007).

The study of VRP problems is considered very important as the efficient definition of vehicle routes becomes increasingly important as markets become more open, and if this efficiency is achieved, the economic benefits will be quite substantial. (Bianchi, Birattari, Chiarandini, Manfrin, Mastrolilli, Paquete & et al., 2006).

Given the importance of logistics operations for organizations, VRP has been extensively studied because of its great applicability in real situations. For example, Eksioglu, Vural and Reisman (2007), who studied VRP's whole domain, accomplish an all-encompassing taxonomy for the VRP literature, and delineate all of VRP's facets in a parsimonious and discriminating manner.

The models and algorithms proposed for the VRP solution can be used not only to solve delivery problems, but also to collect products (Toth & Vigo, 2002).

The most studied VRP is the Traveling Salesman Problem (TSP), in which the Traveling Salesman has to visit a set of cities and return to the city where he started, minimizing the total distance traveled (Larsen & Madsen, 2000).

The VRP is a generalization of the TSP (Figure 1), which consists of finding an optimal solution in the definition of goods' delivery routes from one or several distribution centers, to a certain number of clients dispersed geographically in a given region. All customer demands must be met, all operational constraints must be met, and overall transport costs minimized (Larsen & Madsen, 2000).

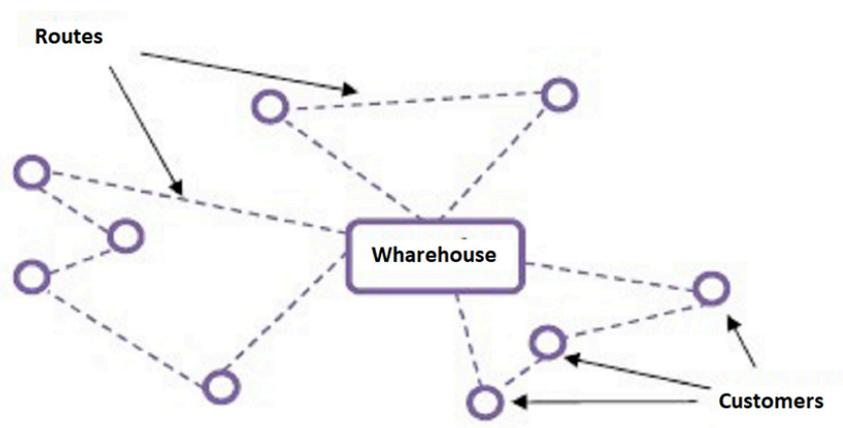


Figure 1: Graphic representation of a VRP  
Source: Authors

Problems of route planning can be of different types depending on the characteristics of the problem to be solved. According to Berbeglia, Cordeau, Gribkovskaia and Laporte (2007), some of the most important problems identified in the literature are as follows:

- Capacitate Vehicle Routing Problem (CVRP);
- Vehicle Routing Problem Time Window (VRPTW);
- Vehicle Routing Problem with Pick-Up and Delivering (VRPPD);
- Dynamic Vehicle Routing Problem (DVRP);
- Split Delivery Vehicle Routing Problem (VRPSD);
- Dial-a-Ride Problem (DARP).

### **Capacitate Vehicle Routing Problem (CVRP)**

The CVRP represent situations where the delivery charge is fixed, and all delivery vehicles have a uniform and limited capacity.

The CVRP was proposed in 1959 by Dantzig and Ramser (Dantzig & Ramser, 1959), and consists of finding a set of exactly  $K$  routes (one route for each vehicle available) with minimum cost, defined by the sum of the costs of each edge belonging to the routes such that:

- Each route begins and ends in the warehouse;
- Each client is visited by exactly one route;
- The sum of demands corresponding to the vertices visited by a route does not exceed the carrying capacity of the vehicle.

### **Vehicle Routing Problem Time Window (VRPTW)**

VRPTW is another extension of the classic VRP, often used to decide the distribution of goods and services, with the additional constraint that each client has to be visited at a specific time interval  $[a_i, b_i]$ , a so called time window.

The objective is to minimize the vehicle fleet, time spent on the journeys, and the waiting times required to serve all customers within their time requirements, without violating the capacity and travel time allowed to the vehicles, and the time windows established by customers (Kallehauge, 2007).

There are two types of formulations in a VRPTW. In the first one, with inflexible time windows, the vehicle has to wait if it reaches the customer before he is ready for service, and can never arrive after the required time. In the second, with flexible time window, temporal window violation is allowed, but has an additional cost associated (Kallehauge, 2007).

### **Vehicle Routing Problem with Pick-Up and Delivering (VRPPD)**

The VRPPD is a VRP where the possibility of simultaneous deliveries and collects at the client are modeled. Thus, there are two quantities involved in the operation:

- $D_i$ , which represents the quantity that must be delivered to the customer;
- $Q_i$ , which represents the amount that must be collected at the customer.

In a problem of this kind it is therefore necessary to ensure that the goods (or persons) collected at the customer do not exceed the carrying capacity of the delivery vehicle. This constraint makes the planning problem more difficult, sometimes leading to poor utilization of transportation capacities, therefore increasing travel distances, or creating a greater need for available transportation vehicles (Cordeau, Laporte & Røpke, 2008).

For this reason, there is often only one point of departure and arrival of merchandise, with no exchange of goods between customers. In this way, all delivery requests depart from a warehouse, and all the collections are brought back to that same warehouse.

Finally, the problem can be further simplified by considering that each vehicle must make all deliveries before starting the collection. The objective is, in general, to minimize the fleet of vehicles and the sum of travel time, taking into account the restrictions concerning the transportation capacity of vehicles (Cordeau et al., 2008).

### **Dynamic Vehicle Routing Problem (DVRP)**

DVRP is a problem of dynamic planning of vehicles' routes. Thus, unlike the static problems mentioned above, the relevant information for the planning process, such as the geographical location of customers, the time of service at the place of delivery/collection, the demand of each customer, or the travel times of vehicles between customers, is not fully known when the operation begins.

In most DVRP there are two types of requests:

- Anticipated request, which concerns static customers, whose orders are made before the operation is started;
- Immediate request, which refers to dynamic clients, whose orders occur in real-time during the operation (Larsen & Madsen, 2000).

Figure 2 shows a possible example of a DVRP, where there are 7 pre-orders and 2 immediate orders.

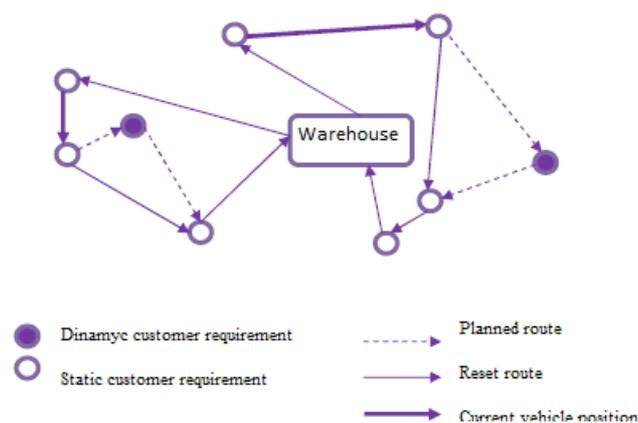


Figure 2: Representative scheme of a DVRP

Source: Authors

### Split Delivery Vehicle Routing Problem (VRPSD)

In SDVRP, unlike the other problems described above, different vehicles can serve the same customer if this brings cost savings. The objective is to minimize the vehicle fleet and the total travel time required to serve all customers (Archetti, Speranza & Savelsbergh, 2008).

### Dial-a-Ride Problem

The DARP is a generalization of the VRPPD (Pick-up and Delivery) and TSPTW (Traveling Salesman Problem with Time Windows) problems. This problem of route planning was introduced by Psaraftis (1980, 1988). In these first theoretical studies, an exact algorithm for the case of a single vehicle was developed in dynamic programming. Later, Desrosiers, Dumas and Soumis (1986) proposed an improvement to the previous algorithm, which was able to solve problems where there are more than 40 users.

Most algorithms known today, for multiple vehicle cases, are heuristics or metaheuristics, and the study by Jaw, Odoni, Psaraftis and Wilson (1986) is the first method capable of dealing with large-scale cases. Although this problem is common, it is relatively understudied due to its high complexity (Mauri & Lorena, 2009).

What makes the DARP different, and somewhat more difficult than most other route planning problems, is that the cost and travel time of the user have to be weighed against each other in the definition of a route (Lois & Ziliaskopoulos, 2017).

### Research questions

This study aims to answer two research questions:

- Will the use of a mathematical model of route determination improve the distribution network of ABC?
- Which of the following ABC company variables (distance traveled, number of vehicles used, travel time, total cost) can be improved through the use of a mathematical model of route elaboration?

### Methodology

Taking into account all the idiosyncrasies of the actual case under study, it was decided to apply a mathematical model of the type VRPPD with heterogeneous fleet to the problem under analysis. This model consists in a problem of route planning for a heterogeneous vehicle fleet, which begins and ends at the distribution center. Customers to visit may have associated a quantity of product to be delivered and another quantity to be collected. As they can only be visited once, delivery and collection takes place at a given time, and by a single vehicle.

The problem solving methodology chosen was to first divide the problem into smaller problems, then develop an optimization model through a mathematical programming language in the *Mathematics* software, and then apply it to each sub-problem obtained.

The ABC company has a fleet of commercial vehicles that are destined to the distribution of the requested orders, at any moment, being this an important requirement for its clients. Currently, there is a distribution network consisting of a warehouse, located in the industrial park of Seixal (near Lisbon), and customers are distributed throughout several areas of the country, according to Figure 3.



Figure 3: Location of the distribution center and customers  
Source: Authors

The reception of the decoration material takes place at a weekly or biweekly pace, depending on the time of year. The decoration material comes from China, and the ordering is based on customer needs, Chinese production, and time of year. In order to understand the quantity of material for storage, please refer to Table 1, which refers to the number of pallets shipped per month for each region of the country in the year 20XX (for reasons of confidentiality, we cannot indicate the Year of the data collected).

20XX	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
North	35	31	26	34	34	32	30	26	33	56	69	50
Centre	39	34	32	32	37	31	34	27	39	60	79	62
South	27	32	24	24	31	28	32	21	31	51	60	45
<b>Total</b>	<b>66</b>	<b>66</b>	<b>56</b>	<b>56</b>	<b>68</b>	<b>59</b>	<b>66</b>	<b>48</b>	<b>70</b>	<b>111</b>	<b>139</b>	<b>107</b>

Table 1: Quantity of pallets issued monthly  
Source: Authors

The transportation to the clients is carried out with the company own fleet, that carries all the material to the North, Center and South of Portugal. Figure 4 presents a simplified scheme of the distribution structure.

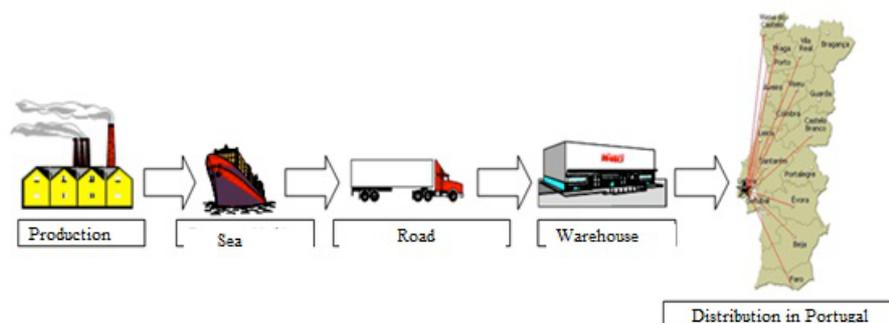


Figure 4: Scheme of the distribution structure  
Source: Authors

Routes are organized on a daily basis by geographical area, and each route is associated with a specific driver and the vehicle assigned to him.

In order to define routes, three different groups of customers are established, depending on the frequency of orders placed (in S - when weekly orders are made, in Q - when they are made each 15 days, and in M - when they correspond to monthly orders). It is in these modes that orders are planned, checking the sales forecast for specific weeks with each salesperson.

**Distribution in Lisbon**

The distribution is governed by the opening hours of the distribution center, from 9:00 am to 6:00 pm, interrupting deliveries from 1:00 p.m. to 2:00 p.m., which corresponds to the lunchtime of the vehicle driver. The company's fleet is heterogeneous, since it includes vehicles with different transport capacities.

In the Seixal warehouse, the fleet consists of seventeen vehicles, four of which provide the Great Lisbon area. The products are very different, since their weight can vary from 5kgs to 35kgs, although on average it is considered that a box weighs between 10 and 25kg.

Another aspect to keep in mind is to avoid that the weight of the loads transported exceeds the weight accepted by law. Regardless the number of pallets transported by the vehicle, the maximum gross weight must be within the limits imposed by law.

The relationship between the type of vehicle operating in the Lisbon Area and the number of boxes it can carry is described in Table 2.

<b>Car model</b>	<b>Car Weight (kg)</b>	<b>Carrying capacity (kg)</b>	<b>Gross weight (kg)</b>	<b>Average number of boxes</b>
<b>Fiat Dobló</b>	1280	740	2020	35
<b>Fiat Dobló</b>	1280	740	2020	35
<b>Fiat Dobló</b>	1280	740	2020	35
<b>Citroen Jumper</b>	1624	1559	3183	90

Table 2: Characterization of the Lisbon fleet  
Source: Authors

From the year 20X-2 to 20XX the number of customers has been growing. In Figure 5, we can see a graph illustrating this positive evolution.

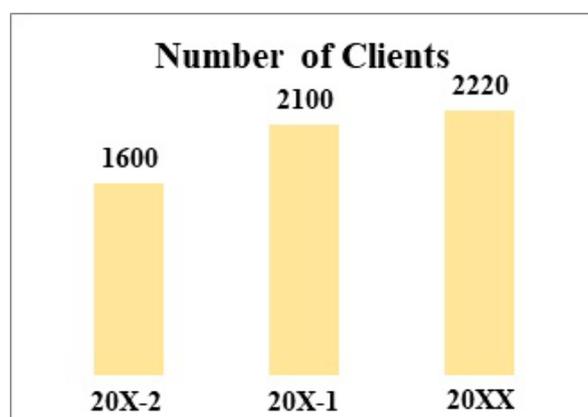


Figure 5: Evolution of the number of customers  
Source: Authors

### **Problem Restrictions**

The activity developed by the company presents some restrictions that have to be taken into account in order to guarantee the reality of the model and the proposed solution. The distribution constraints to be considered are:

- Demand must always be met, regardless the number of products involved. There are no minimum order quantities. Demand should be fulfilled, ideally, up to a maximum of 24 hours;
- It is necessary to respect the maximum load capacities imposed by law for each vehicle. When loading, each vehicle must have a number of boxes not exceeding the maximum load capacity;
- Each customer can only be visited once a day, and by a single vehicle;
- Usually, the distribution starts at 9:00 a.m., has a break from 1:00 p.m. to 2:00 p.m. for the driver's lunch, and ends at around 6:00 p.m., not existing a fixed timetable;
- Each route begins and ends at the distribution center;
- Each distributor must visit a number of customers that does not exceed his capacity to respond to orders. The sum of the quantities to be delivered and received from each customer cannot exceed the maximum capacity of the vehicle;
- Distribution vehicles only carry out distribution and collection tasks;

### **Results analysis and discussion**

After identifying the problem, an optimization model was developed for the establishment of the optimal set of routes, and the number of vehicles necessary to execute them.

### **Fleet**

It is necessary to characterize the type of vehicle (brand and model) used by the company, and its maximum capacity. These were already reported in Table 2.

### **Clients**

Although the sample focuses on 1200 customers, the amount of material ordered over a year varies greatly.

For this reason the month of November of 20XX was chosen, since it was during this period that a greater demand was observed, and also during which the number of delivery points varied daily.

Table 3 presents the number of customers served on each day of the distribution, and the respective aggregation in number of parishes (clusters) to visit.

Day	Number of clients	Number of clusters	Boxes delivered	Boxes collected
1	60	30	126	0
2	74	21	98	0
3	55	25	88	0
4	62	20	99	5
5	45	24	100	10
8	55	15	70	0
9	74	20	83	2
10	45	27	88	0
11	61	20	93	8
12	73	26	85	0
15	72	25	89	0
16	60	27	74	0
17	73	24	89	0
18	60	25	91	0
19	30	21	97	5
22	49	28	83	2
23	18	24	78	1
24	55	24	75	0
25	20	20	84	0
26	46	24	88	0
29	30	27	65	5
30	30	25	78	0

Table 3: Number of clients and clusters to visit, number of boxes delivered/collected  
Source: Authors

The aggregation by parishes is related to the fact that customers are close to each other. In this way, clients were grouped in a single area, the center of this same parish. Although aggregated in parishes, the amount of data to be treated is still high, which leads to the application of the p-median model (which allows to divide the problem into smaller sub-problems), grouping the points of visit in a certain number of desired aggregates, with the objective of reducing the total distance to be traveled.

The application of this model groups the parishes logically, as it intends to minimize the distances to be traveled, thus reducing transportation costs.

Google Maps was used to determine the distance and the travel time between the various points of delivery, and from the warehouse to those points, by demonstrating the best routes between the two points, and the approximate values of the distance and travel times.

### Visiting times

The time spent in each cluster to deliver the new material, and to collect the damaged material, is divided into two distinct components:

- $t_f$  - The fixed time needed to handle administrative issues on a daily basis, which is assumed to take approximately ten minutes;
- $t_v$  - The variable time in each cluster depends on the reason the visit was made. The time to unload and load at each delivery point depends on the number of boxes to deliver and defective products to collect.

### Costs

The costs related to vehicle maintenance are as follows:

- Fiat Dobló → cost of 365 € / month;
- Citroen Jumper → Cost of 465 € / month.

The costs concerning fuel consumption for the period from 01/11/20XX to 30/11/20XX, depend on the type of vehicle. For the Citroen Jumper, the costs are summarized in Table 4, while the costs for Fiat Dobló are shown in Table 5.

	Liters	Price (€/L)	Value (€)	Kilometers	Kms travelled
<b>Refuelling 1</b>	68.04	1.18	80.29	62245	
<b>Refuelling 2</b>	70.01	1.18	82.61	62885	640
<b>Refuelling 3</b>	65.03	1.18	76.74	63485	600
<b>Refuelling 4</b>	68.02	1.18	80.26	64111	626
<b>Total</b>	271.1		319.90		1866

Table 4: Costs per km for the vehicle Citroen Jumper  
Source: Authors

	Liters	Price (€/L)	Value (€)	Kilometers	Kms travelled
<b>Refuelling 1</b>	53.12	1.18	62.68	38489	
<b>Refuelling 2</b>	55.00	1.18	64.90	39169	730
<b>Refuelling 3</b>	51.67	1.18	60.97	39849	680
<b>Total</b>	159.79		188.55		1410

Table 5: Costs per km for the vehicle Fiat Dobló  
Source: Authors

It is now possible to calculate the cost of running each Km ( $C_{distCitroen}$  and  $C_{distFIAT}$ ), taking into account the fuel costs and the maintenance of the two vehicles:

- $C_{distCitroen} = (319,90+465,00)/1866 \text{ Kms} = 0,43\text{€} / \text{Km}$
- $C_{distFIAT} = (188,55+365,00)/1410 \text{ Kms} = 0,39\text{€}/\text{Km}$

## Mathematical formulation of the problem

We now present a mathematical definition of the simple VRP, based on Marinakis, Marinaki and Dounias (2010), and Secui (2015).

### Indexes

i - Location visited

j - Place to visit

v - Vehicle

### Parameters

- $q_i$  - Quantity of boxes to be delivered to location i.
- $r_i$  - Amount of defective material to be collected at location i.
- $maqri$  - Maximum value between boxes to be delivered and defective material to be collected in each parish.
- $capvv$  - Maximum capacity of vehicle v, measured in number of boxes it can carry.
- $c_{distv}$  - Unit cost to cover one km for each vehicle, in €/Km.
- $t_{vi}$  - Variable delivery time of boxes and collection of defective material, in location i, in minutes.
- $d_{viagemij}$  - Distance between location i and location j, in Km.
- $t_{viagemij}$  - Travel time between points i and j in minutes.
- $t_f$  - Fixed time to handle administrative issues in a distribution operation, in minutes.
- $total$  - Daily time available for the distribution operation, in minutes.

### Variables

Decision Variables:

- $x_{ijv}$  - It is a binary variable that takes the value 1 if vehicle v visits cluster i and then moves on to cluster j, otherwise it will take value 0.
- $v_fv$  - is a binary variable that takes the value 1 if the vehicle makes a route, and the value 0 otherwise.

Free Variable:

Z - Variable only present in the objective function, assumes the value of the minimum cost found.

Positive Variables:

- $d_{totalv}$  - This variable is required to store the value of the total distance traveled by each vehicle.
- $t_{totalv}$  - It is a variable that saves the total time required to make the distribution plan calculated for each vehicle.

### Objective function

$$MIN \sum_v^m \sum_i^n \sum_j^n x_{ijv} \cdot d_{viagen_{ij}} \cdot c_{dist_v} \quad (4.1)$$

### Restrictions

Equation 4.2 ensures that all routes, if any, start at the distribution center.

$$\sum_{i>1} x_{jiv} = v_f, j = \text{Centro de Distribuição} \quad \forall v \quad (4.2)$$

Equation 4.3 ensures that all routes, if any, end up in the distribution center.

$$\sum_{i>1} x_{ijv} = v_f, j = \text{Centro de Distribuição} \quad \forall v \quad (4.3)$$

Equation 4.4 ensures that a single vehicle arrives to each customer.

$$\sum_{i \neq j} \sum_v x_{ijv} = 1, \forall i > 1 \quad (4.4)$$

Equation 4.5 ensures that a single vehicle departs from each customer. Thus, equations 4.4 and 4.5 define that for all routes, each customer will only be visited once.

$$\sum_{i \neq j} \sum_v x_{jiv} = 1, \forall i > 1 \quad (4.5)$$

Equation 4.6 ensures the movement of the vehicles within their route, that is, when a vehicle arrives at a point of delivery, must mandatorily leave this point and go to the next one.

$$\sum_j x_{jiv} = \sum_j ijv, \forall i > \forall v \quad (4.6)$$

Equation 4.7 ensures that the vehicle making a certain route can handle all customers, and that no vehicle visits more customers than its capacity allows.

$$\sum_{i>1} \sum_{j=1} maq_i \cdot x_{ijv} \leq cap_v, \forall v \quad (4.7)$$

Equation 4.8 defines whether a vehicle is required for the distribution operation. If the vehicle leaves the warehouse, it can only make one route.

$$x_{ijv} \leq vf_v, \forall i > \forall j < \forall v \quad (4.8)$$

Equation 4.9 ensures that the time in transit between the points i and j, given by the variable  $t\_viagem_{ij}$ , and the time required for the entire distribution operation for each vehicle at location i, do not exceed the available time per day for the distribution operation for each driver, represented by the variable  $ttotal$ , which is 8 hours a day, that is 480 minutes.

$$\sum_{i>1} \sum_{j>1} (t\_viajem_{ij} + tv_i + tf) \leq ttotal, \forall v \quad (4.9)$$

Equation 4.10 eliminates the creation of sub-routes, being S a subset of clients.

$$\sum_{v \in S} \sum_{j \in S} x_{ijv} \leq |S| - 1, \quad \forall S \subseteq V \setminus \{0\}; S \neq \emptyset; v = 1, \dots, m \quad (4.10)$$

Equation 4.11 allows calculating the total distance traveled by each vehicle.

$$distotal_v = \sum_i \sum_j (x_{ijv} \cdot d\_viagem_{ij}), \quad \forall v \quad (4.11)$$

Equation 4.12 calculates the total time required by each vehicle to make the distribution plan obtained with the model.

$$tetotal_v = \sum_i \sum_j [x_{ijv} \cdot (t\_viagem_{ij} + tv_i + tv)], \quad \forall v \quad (4.12)$$

After the mathematical formulation of the model was carried out, its implementation was done using the software *Mathematics*, which uses mixed integer optimization to find the optimal solution.

The model refers to the 22 days of November 20XX, which are grouped into 44 segregations, in total. This calculation was achieved by initially aggregating clients in their parishes and, in a second step, by using the p-median model.

Thus, we obtain groups of no more than 12 parishes, being possible to apply the model in a total of 44 times for each situation, equivalent to the number of groups obtained.

In this study the real model is compared with the VRPPD, during the month of November of 20XX.

**Real Scenario vs VRPPD**

Figure 6 presents the comparative analysis of the distance traveled between the Real Scenario and the VRPPD.

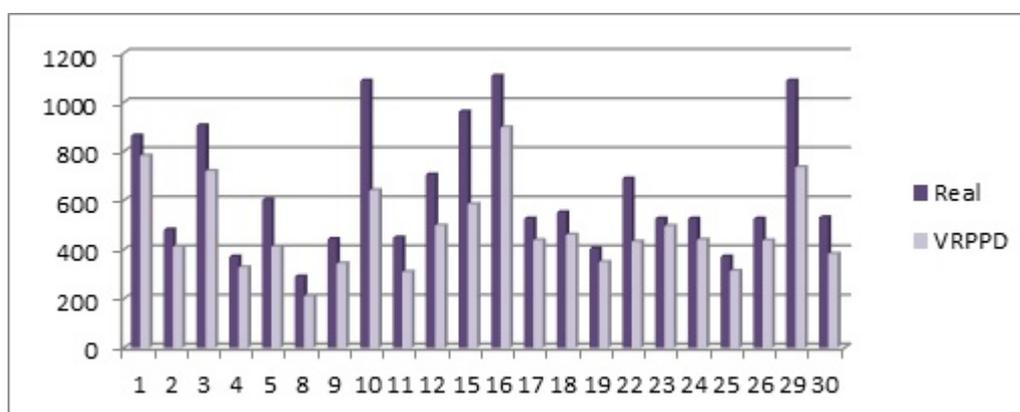


Figure 6: Comparative analysis of the distances traveled for the two scenarios  
Source: Authors

Table 6 presents a summary table with the total distance and the average daily distance traveled in the month of November 20XX.

	Actual distance traveled (Kms)	VRPPD distance traveled (Kms)
Daily average	636.30	457.90
Total	14000	10470

Table 6: Summary of Actual Distance vs VRPPD Distance (Kms), November 20XX  
Source: Authors

From the comparison we can verify that there is a significant monthly reduction of 3529 km, in average 160 km per day, which represents a very significant improvement of the results.

In Figure 7 we can observe the comparative analysis of the number of vehicles used between the Real Scenario and the VRPPD model.

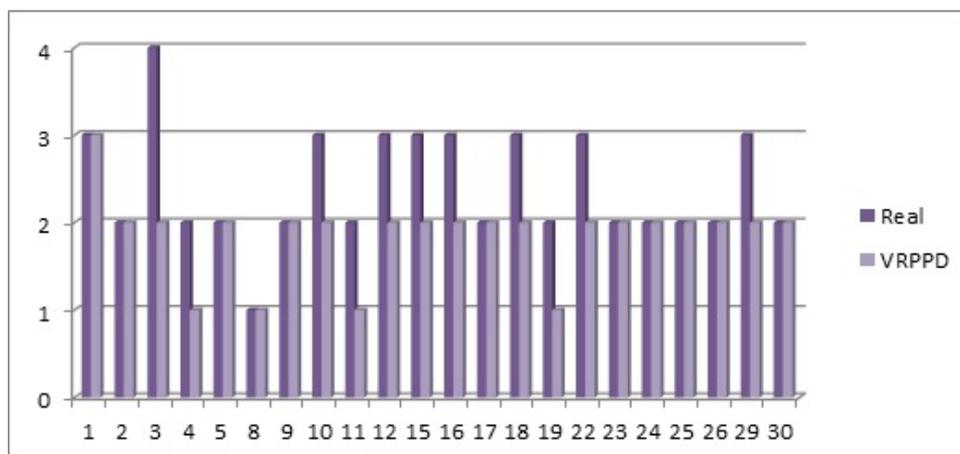


Figure 7: Comparative analysis of the number of vehicles used  
Source: Authors

Table 7 presents a summary table with the number of vehicles used and the average daily number of vehicles for November of 20XX.

	Actual number of vehicles used	VRPPD number of vehicles used
Daily average	3	2
Total	53	41

Table 7: Summary of the number of vehicles used, November 20XX  
Source: Authors

From the comparison, the Real Scenario shows the need for 53 vehicles to carry out the distribution operation for the entire month of November 20XX, while the VRPPD scenario only needs 41, which represents a decrease of 12 vehicles during that month.

Figure 8 shows the comparison between the Real Scenario and the result of the VRPPD scenario concerning the time required to perform daily operations.

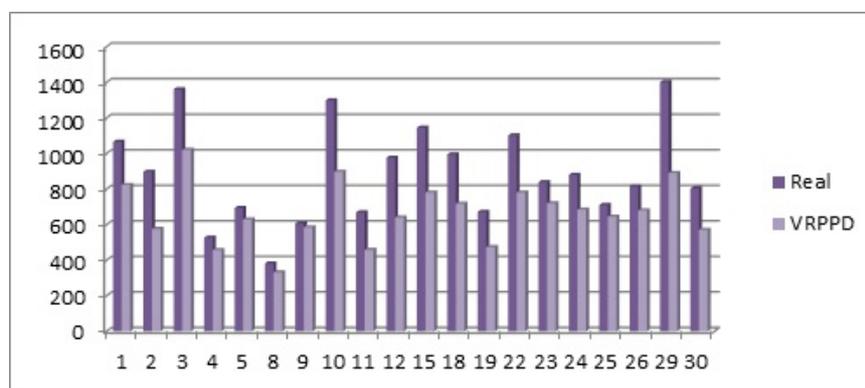


Figure 8: Comparative analysis of route duration  
Source: Authors

Table 8 presents a summary table with the total and average daily duration of the routes, for the month of November 20XX.

	Duration of the actual route (minutes)	Duration of the VRPPD route (minutes)
Average	902	682
Total	19833	15004

Table 8: Summary of route duration, November 20XX  
Source: Authors

Comparing the results obtained in the Real Scenario with the results of the VRPPD model, there is a considerable reduction (4829 minutes) in the total duration of the routes, approximately 80 hours in a month, representing a daily reduction of 220 minutes.

In Figure 9, the costs of the distribution operation can be compared between the Real Scenario and the VRPPD scenario.

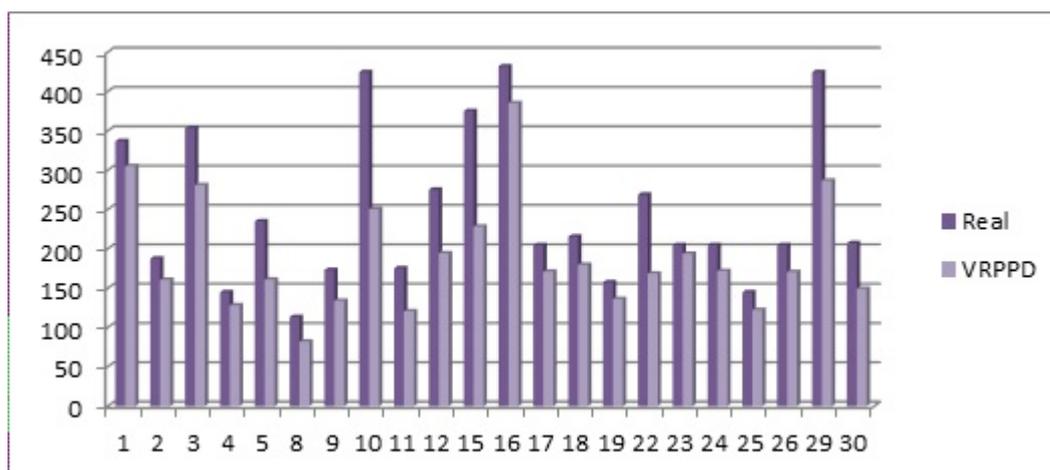


Figure 9: Comparative analysis of distribution costs  
Source: Authors

Table 9 shows the average value involved, as well as the total cost of the operation for November 20XX.

	Actual costs (€)	VRPPD costs (€)
Average	248,00	187,00
Total	5460,00	4119,00

Table 9: Summary of distribution costs, November 20XX  
Source: Authors

Comparing the results obtained there is a significant reduction of costs for the VRPPD model, showing a reduction of 1341 euros monthly compared to the costs incurred in the Real Scenario, which translates into a daily average reduction of 61 euros.

## **Conclusions and recommendations**

In this study it was intended to optimize the routes and fleet of the company ABC, promoting the achievement of its economic efficiency, and preserving the quality of the services it provides.

A mathematical model was developed to define optimal routes that allowed total costs to be minimized, respecting the capacity of each vehicle. This model allowed defining routes by vehicle, as well as the time and distance covered in the distribution by the several points of delivery, minimizing the logistics costs.

The study focused on the Lisbon area, and took place during the month of November 20XX, as it was at this time of the year that there was a greater demand for material.

The thousands of Lisbon customers were aggregated in the parishes to which they belong, considerably reducing the number of search points. The p-median model was then applied, dividing the clusters into smaller groups, so that the VRPPD model could provide optimal data in acceptable computational time. Once this process was completed, the VRRPD model was finally applied to all the groups defined for each distribution day, with the conclusion that there were improvements when comparing the model with the company's reality.

Regarding the first research question, it is concluded that the use of a mathematical model of route determination, improves the performance of the distribution network of ABC company.

In relation to the second research question, we can conclude that the use of a mathematical model of route determination will improve all variables studied, whether the distance traveled, the number of vehicles used, the travel time or the total cost. The study showed that all these variables will improve if the ABC company uses a mathematical model in the elaboration of the routes of its distribution vehicles.

With the use of the VRPPD model, we observe a reduction in the distance traveled, the number of vehicles used, the average time of each distribution route, and the total costs of operations compared to the reality of ABC. The application of the model also has the advantage of establishing optimal routes so that the needs of the customers are promptly fulfilled.

As a main recommendation for the future, we can highlight the application of the same model to other geographical areas of Portugal, ensuring a greater reduction of the logistics costs of the ABC company, and maintaining the satisfaction of its customers at a national level.

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***What Makes Boards Effective? Moving beyond Non-Executive Directors' Independence***

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**Abstract**

This paper addresses the question of what makes boards effective by exploring governance attributes that go beyond board independence. Academic literature has predominantly focused on the independence of non-executive directors in board effectiveness and performance. However, there has been insufficient literature on the capability of non-executive directors in performing their roles and improving board effectiveness. Having considered evidence from agency and upper echelons theories, we propose that non-executive directors' experience and diversity of age are more suitable proxies of board effectiveness. This theoretical paper contributes to the growing body of corporate governance research on board effectiveness by integrating the two theories with the purpose of creating a more holistic theoretical perspective.

Keywords: Board effectiveness, Non-executive directors, Experience, Age Diversity

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## 1. Introduction

Academic literature has predominantly focused on the independence of non-executive directors in board effectiveness and performance. However, there has been insufficient literature on the capability of NEDs in performing their roles and improving board effectiveness. This paper seeks to contribute to the existing literature on board effectiveness by moving beyond non-executive directors' (NEDs) independence as the conventional proxy of effectiveness. Specifically, we aim to integrate agency and upper echelons theories as the theoretical framework from which other proxies of board effectiveness can be derived. From this discussion, we argue that directors' experience and diversity of age are more suitable proxies of board effectiveness. The structure of this paper is as follows: First, we discuss the roles of and, importance of having NEDs on the board of directors. Second, we discuss key findings and identify the gaps in academic literature on board effectiveness. Third, we provide an overview of agency and upper echelons theories as the theoretical framework behind our propositions. Finally, we discuss our conclusions and end the paper with implications for future research.

The last two decades have seen various changes and developments of corporate governance practices, processes and structures. One of the catalysts of these changes has been numerous corporate failures, scandals and misconduct of directors, which exposed a high level of mismanagement and incompetence (Zalewska, 2014). As a result, corporate governance research has increasingly focused on boards of directors and in particular, the presence of independent NEDs. Corporate governance researchers show that NEDs in general play multiple roles on boards, which include a strategic role, a monitoring role and a resource provision role (Hillman, Withers & Collins, 2009; Pye & Camm, 2003). The approaches adopted in many countries, including the UK, are centred on NEDs having an ex-ante rather than an ex post monitoring role. Ex-ante monitoring refers to influencing and controlling projects, strategies and implementation plans that are consistent with the shareholders' objectives (Zalewska, 2014). However, in order for ex ante monitoring to be effective Zalewska (2014) notes that there has to be a strong board with the required level of expertise. Further to this, Solomon (2013) states that for NEDs to effectively play a monitoring role, they need to be independent. Other researchers have shown that the presence of NEDs on boards provides an independent element that benefits the board in performing all of its roles (Ben-Amar & Zegal, 2011; Carter & Lorsch, 2013). Nicholson and Kiel (2004) state that a board has a capability set that enables it to perform its role to varying degrees. However, academic literature has predominantly focused on the independence of NEDs in board effectiveness and performance. Consequently, there has been scarce literature on the capability of NEDs in performing their monitoring and strategic duties and, improving board effectiveness. Therefore, this paper will contribute to literature by proposing alternative proxies for board effectiveness that capture the capability of NEDs in performing their roles.

## 2. Literature Review

The majority of corporate governance studies have focused on NEDs independence rather than their capabilities in effectively performing their roles. Azlan Annuar (2014) notes that maintaining independence means more than just being independent of related parties and extends to the capability of maintaining integrity and objectivity

in the midst of mounting pressure. Independent NEDs are widely recognised to have a preventative capacity. However, there have been many instances, such as the Enron scandal, where there have been blatant corporate failures in the presence of numerous independent NEDs. There is still an apparent presumption amongst corporate governance researchers that independent NEDs are able to act in a preventative capacity through monitoring the actions of executive directors and protecting investor confidence (Uadiale, 2010; Zattoni & Cuomo, 2010). Given that the majority of problems of corporate governance are due to information asymmetries between agents and principals, policy makers have directed their efforts towards creating better conditions for effective ex ante monitoring (Zalewska, 2014). A study by Haniffa and Hudaib (2006) concludes that the negative correlation between board independence and performance identified in literature can be attributed to NEDs lacking real independence or business knowledge to be truly effective. Management literature suggests that NEDs with both functional and firm-specific knowledge and skills should be more effective in their strategic decision-making (Zattoni & Cuomo, 2010). This line of research emphasizes a wider issue beyond independence where NEDs should possess relevant skills, attributes and experiences that enable them to effectively exercise control and monitor management. While there is a growing body of literature looking at board structures, there remains little understanding of the optimal structure and attributes of an effective board. Therefore, our paper aims to address this gap in understanding by exploring two key theories from which such attributes can be derived.

## **2.1 Board effectiveness and Firm Performance**

Prior literature has often related board effectiveness to director independence, board size, existence of board committees and directors' attendance at board meetings (Ben-Amar & McIlkenny, 2015). However, Zona and Zattoni (2007) describe board effectiveness as the extent to which boards perform actions in order to achieve their monitoring and strategic duties. The strategic and monitoring actions of a board are important determinants of board effectiveness (Brennan, 2006; Duchin, Matsusaka & Ozbas, 2010). Laoworapong, Supattarakul and Swierczek (2015) note that academic debates on board effectiveness have neglected the importance of defining how to measure effectiveness. According to Nicholson and Kiel (2004), understanding board effectiveness requires an understanding of boards' contribution to corporate outputs and board outputs. The desired corporate outputs in profit making organisations is firm performance. Board outputs relate to the functioning of a board as a group as group dynamics have a strong effect on a board's effectiveness (Nicholson & Kiel, 2004). This is consistent with Schmidt and Brauer (2006) who suggested that the group dynamics and behaviour of a board in strategic decision-making are better indicators of effectiveness.

Prior studies on board effectiveness have produced insufficient empirical results to fully establish a causal relationship between board effectiveness and firm performance (Schmidt & Brauer, 2006). However, Brennan (2006) and Laoworapong et al. (2015) found that firms with better corporate governance characteristics and high board effectiveness had better financial performance. Therefore, figure 1 below displays our empirical model reflecting the conceptual framework of this study.

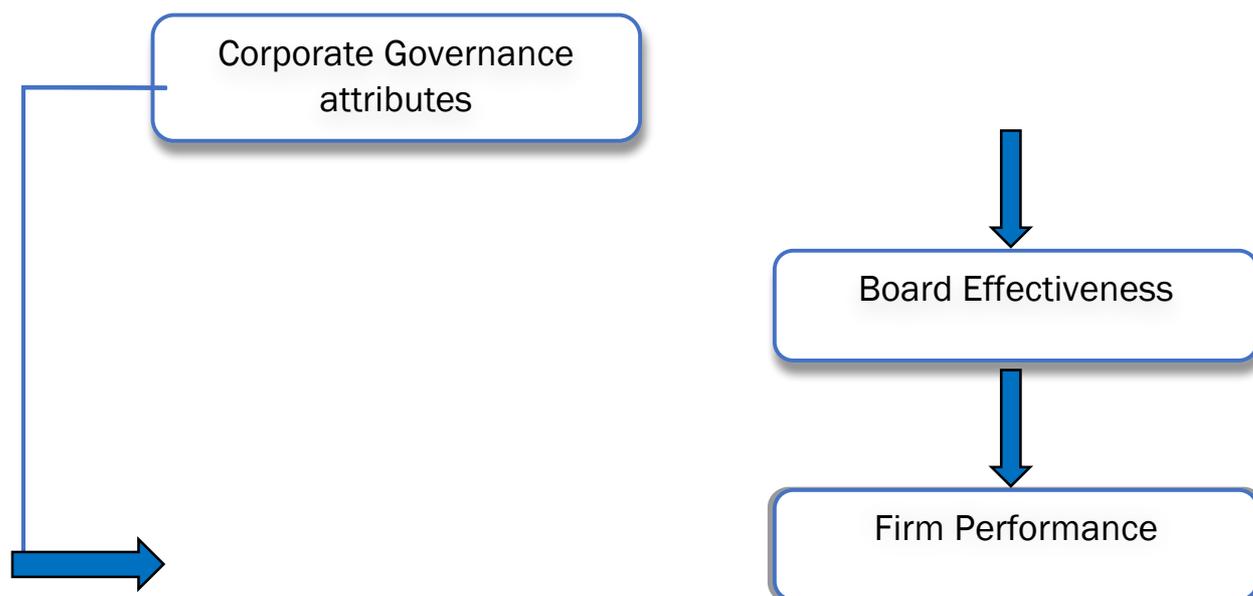


Figure 1: Conceptual Framework, Adapted from Laoworapong et al. (2015)

Corporate governance attributes, which in this case are the NEDs characteristics, should have a direct effect on firm performance. Likewise the determinants of board effectiveness, group dynamics and board behaviour, directly have an impact on firm performance. Therefore, by enhancing board effectiveness, corporate governance attributes will also have a positive impact on firm performance (Laoworapong et al., 2015). Khanna, Jones and Boivie (2014) suggest that firm performance is best represented in accounting based measures such as return on assets (ROA) and return on equity (ROE). This is because accounting based measures indicate the effectiveness of the governance of a firm whilst market based measures are based on investors' perceptions (Khanna et al., 2014). Therefore, we propose that firm performance should be measured using ROA, ROE and Tobin's Q.

### 3. Theoretical Framework

An effective board of directors is central to agency theory's prescription for solving the problems that arise from the separation of ownership and control in organizations (Laoworapong et al., 2015). Agency theory focuses on incentivisation and the monitoring role of directors. However, the biggest limitation of agency theory is it does not focus on the attributes of individuals that improve the board's effectiveness and monitoring capabilities. Therefore, we integrate upper echelons theory, which is centred on the notion that the attributes of individuals can strongly enhance strategic decision-making and effectiveness.

Similarly, Fabel (2004) acknowledges that even when directors have the correct links, incentives and power to implement their decisions, they make good or bad decisions because they differ in their capabilities. Therefore, our theoretical framework identifies the attributes that enable NEDs to be effective in their roles and resource provision.

### 3.1 Agency Theory

Agency theory is arguably, the foundation of many corporate governance frameworks, practices and regulatory initiatives. A major concern in corporate governance and transparency development is about corporate control. In the modern world the “...separation between ownership and control of corporations characterises the existence of a firm...” (Bonazzi & Islam, 2007, p.7). Agency theory identifies a principal-agent relationship in firms, where directors work as agents on behalf of shareholders. This separation of ownership from control not only brings about a conflict of interest, but also results in information asymmetry, as shareholders are not involved in the daily running of the firm (Leung et al., 2014). Agency theory assumes a firm’s actions are compelled by individuals’ pursuit of self-interest, with contracts overseeing relationships between management, shareholders and employees (Mihret, 2014). Therefore, agency theory offers shareholders the pre-eminent position in organizations, not just as the owners, but also as the residual risk takers (Clarke, 2004). Agency theorists propose that the directors themselves must also be monitored in order to minimise abuse of power. Bonazzi and Islam (2007) state that this can be done through the use of external auditing on financial reports and through employing independent NEDs. In this separation of ownership from control, agency theorists assume that inside directors are more inclined to side with managers’ interests whilst NEDs are better suited to represent and protect shareholders’ interests (Hillman, Cannella & Paetzold, 2000). Therefore, the key role of independent NEDs is to monitor management on behalf of shareholders, as effective monitoring can reduce agency costs and improve performance (Hillman & Dalziel, 2003).

Agency theory offers a major theoretical contribution to organizational literature by regarding information as a commodity that has a cost and can be purchased (Clarke, 2004). This implies that organizations can invest in information systems, such as boards of directors and auditors, to control agent opportunism. However, a major limitation of agency theory is that agency theorists have not openly considered that boards may vary in their ability to monitor (Carpenter & Westphal, 2001). Wiseman, Rodriguez and Mejia (2012) argue that although agency problems are universal, their manifestation and the solutions in which they should be dealt with may vary depending on the institutional context. As a result, Clarke (2004) recommends that, although agency theory presents a valid view of organizations, additional theoretical perspectives can help capture the greater complexity of organizations. This paper takes into account Clarke’s (2004) recommendations and adds to existing literature by integrating upper echelons theory to offer an additional theoretical perspective that focuses on NEDs monitoring capabilities in improving board effectiveness.

### 3.2 Upper Echelons Theory

The central idea of upper echelons theory is that because senior executives view the world through lenses of their personal values, experiences, personalities and backgrounds, these characteristics can be used to predict executives’ strategic choices and organizational outcomes (Cannella & Pettigrew, 2001). In addition, Hambrick and Mason (1984), suggest that the choices of top managers are influenced by their cognitive base and their values and, since such psychological constructs are not easily observable, they suggest the demographic characteristics of top managers are suitable and reliable proxies for their cognitive base and values. The values and cognitive

bases of executives are said to be a function of their observable individualities such as education, experience, age, gender and nationality, which provide a basis for studying team dynamics by demographic proxy (Carpenter, Geletkanycz & Sanders, 2004).

*“If we want to understand why organizations do the things they do, or why they perform the way they do, we need to understand the people at the top”* (Hambrick, 2005, p.111). From an upper echelons perspective, the study of top managers and executives is of utmost importance because they are a highly visible embodiment of organizations including its strategic direction, credibility and values (Hiebl, 2013). Upper echelons literature examines the top management team of organizations as being the people at the top. Wong, Ormiston and Tetlock (2011) describe a firm’s top management team as the CEO, top managers and senior executives of a firm that are involved in making strategic decisions. Undoubtedly, the upper echelons body of literature is a flourishing one. While empirical evidence exists to suggest that executives matter to firms, the results of empirical research are not wholly consistent. Research on top management team heterogeneity has produced inconsistent findings, which may be due to this research neglecting the influence of power and status within a team (Jackson, Joshi & Erhardt, 2003). In addition, Carpenter et al. (2004) observe that another major limitation of upper echelons framework is its focus on the top management team only, whereas there are other individuals, such as the board of directors, whom should be pivotal to the upper echelons model. This paper will refer to the top management team as the board of directors of a firm. Zattoni and Van Ees (2012) found that the majority of studies in corporate governance research used a single theoretical framework, and highlighted that the combination of two or more theoretical frameworks was a promising avenue for future governance research. Consistent with this, we formulate our theoretical framework by integrating agency and upper echelons theories in the next section.

### **3.3 Synthesis of Agency and Upper Echelons Theories**

Upper echelons theory proposes that in order to understand why organizations perform the way they do, researchers must consider the biases and dispositions of their top executives, whom Hambrick (2007) described as an organization’s most powerful actors. Although the definition of the top management team differs among studies, the upper echelons stream generally refers to senior executives of companies and assumes these to be the individuals with the ultimate decision making power in firm. However, this assumption omits a broader set of position holders, the board of directors, who are arguably the most powerful actors in the firm (Nielsen, 2010). Bhagat and Bolton (2008) state that the board of directors is a key corporate governance mechanism that is ultimately responsible for the success and performance of a firm. Scholars who invoke the upper echelons perspective typically argue that senior executives should be of interest because individuals at higher levels in the organizations are expected to exert greater influence on strategic decisions (Carpenter et al., 2004).

If this is the case, then consistent with agency theorists’ propositions, it can be assumed that board of directors, who are at a higher level than senior managers, should exert even greater influence on strategic choices and organisational outcomes.

After the initial development of the upper echelons framework, Hambrick (2005) later suggested a moderator of the relationship between managerial characteristics and organizational outcomes, namely, managerial discretion. Managerial discretion is based on the idea that the importance of senior executives is dependent on the level of discretion or latitude of action they possess in making strategic choices (Hiebl, 2013). The implications of managerial discretion in the upper echelons framework are that upper echelons provide great predictions of organizational outcomes in direct proportion to the level of managerial discretion. Further to this, Peterson et al. (2003) found that the CEO's personality can impact the dynamics of a top management team and such differences in power and status produce dynamics that affect upper echelons relationships. This implies that the upper echelons of senior executives, or directors, will be poor predictors of performance because the CEO will have the greatest power and influence on the decision making process (Hambrick, 2007). On the other hand, agency theory addresses managerial discretion by highlighting the importance of board independence and CEO duality, stating that the role of the CEO and chairman should remain separate so that no one individual should have 'unfettered powers of decision' (Financial Reporting Council, 2014). Therefore, by integrating upper echelons and agency theories, upper echelons characteristics will provide great predictions of organisational outcomes when there is no CEO duality and when at least half of the board of directors consists of independent NEDs. This eliminates issues of power and status, and proposes that the organisational outcomes such as board effectiveness and firm performance can be determined by the collective and individual behaviours of all the directors (Reyner, 2010). Hillman et al. (2000) state that the most visible differences amongst directors are in their occupational attributes which include age and expertise. Further to this, Nielsen and Nielsen (2013) observe that inconsistent findings in upper echelons literature may be due to the omission of important contextual variables. Therefore, our study explores this gap in literature by combining agency and upper echelons theories to propose that NEDs experience and NEDs age can be used as appropriate proxies of and, prerequisites of board effectiveness. This is discussed in more detail in the following sections.

## **4. Propositions**

### **4.1 Non-Executive Director's Age**

Hambrick and Mason's (1984) upper echelons perspective proposes that age is one of the demographic variables that can be used as a proxy of senior executives' psychological attributes that influence decision-making and performance. Furthermore, Mudambi and Treichel (2005) state that age can also be viewed as a proxy for experience, as older directors are assumed to have greater experience than younger directors. The age of directors on a board is also seen as an important factor of board composition and Gilpatrick (2000) argues that the ideal NEDs to have on a board are older and mature retired executives who tend to have more experience. However, Mahadeo, Soobaroyen and Hanuman (2012) state a more effective board should be diverse in terms of age for the following reasons:

- older directors provide greater expertise, experience and potentially have a bigger network
- middle-aged directors are more suitable for the day to day running of the firm and the major executive duties

- younger directors can bring new, creative and innovative ideas.

Age as a variable can represent differences in skills, attitudes, personalities, values and traits of individuals (Ferrero-Ferrero, Fernandez-Izquierdo & Munoz-Torres, 2015). Scholars argue that these differences can be categorized into generations because the social and historical experiences from a given generation have influenced the individuals' behaviours (Sullivan et al. 2009; Twenge et al. 2010). The general consensus amongst scholars about the four major generations of the 20th century is as follows: The Greatest Generation (born 1922-1945), Boomers (born 1946-1964), Xers (born 1965-1983) and Generation Y (born 1984-2002) (Sullivan et al. 2009; Twenge et al. 2010; Ferrero-Ferrero et al. 2015).

Twenge et al. (2010) argue that members of the greatest generation age group are self-disciplined and extremely loyal employees who believe in traditional values. The boomers believe that hard work leads to success; they value independent thinking and have extrinsic measures of career success (Twenge et al. 2010). Xers are said to be influenced by financial, family and societal insecurities that dominated their childhoods and although they lack solid traditions, they are more flexible and highly accustomed to rapid change (Ferrero-Ferrero et al. 2015). Twenge et al. (2010) state that the characteristics of Generation Y members are less clear but because they grew up with the internet, they are innovative and are more accustomed to gaining access to information quickly. The growth of technological and social change over the past several decades means that the generations currently in the workplace have had different life experiences, beliefs and values (Pitt-Catsouphes, Mirvis & Berzin, 2013). Kang, Cheng and Gray (2007) state that there is an active promotion of age diversity in boards because the experiences, skills and knowledge of different age groups can improve the overall knowledge and effectiveness of the board. Age related differences in teams could also benefit companies by providing a greater diversity of skills and multiple perspectives (Hertel et al., 2013). Mudambi and Treichel (2005) state that younger directors are assumed to have better understanding on key aspects of today's economy such as technology, markets and business metrics. Research by Barker and Mueller (2002) found CEO age was positively associated with research and development spending in firms. They further conclude younger CEOs tend to be more risk seeking and increase spending on research and development costs because their career and financial security concerns have a longer time horizon (Barker & Mueller, 2002).

Hambrick and Mason (1984) state that one of the most enduring findings about senior executives' age is that older managers or executives tend to be more conservative, follow lower growth strategies and are more risk averse. This is consistent with the work of Zhihua (2010) who observes that older directors tend to be more conservative making them more risk averse than younger managers, and more likely to comply with all the rules and routines of the firm. Therefore, older directors are expected to resist major changes in their organizations in order to maintain the status quo and a study by Frosch (2011) showed a positive relationship between the average age of employees and innovation. An earlier study by Child (1974) suggests older executives may have greater difficulty in grasping new ideas because they have fewer physical attributes needed to implement organizational changes.

In addition, Barker and Mueller (2002) argue older CEOs and executives tend to focus more on goals that benefit them in the short term, as they would soon be reaching retirement age. Older directors are generally at a point in life where financial security and career security are of greater importance, therefore any risky actions which may have an adverse effect on their security are avoided (Zhihua, 2010). This view is consistent with agency theory that proposes that agents do not always act in the best interests of shareholders but rather seek to maximise their own wealth (Hillman & Dalziel, 2003).

Over the past years, researchers have examined age by looking at older workers and generational differences in the workplace; however, the results have been inconclusive, as many empirical studies have only considered age as a control variable (Hertel et al., 2013; de Lange et al., 2010). In addition, Shore et al. (2009) state research on age diversity is much less developed than research on race and gender, suggesting that the potential effects of age diversity on performance have not yet been fully established. Mahadeo et al. (2012) found positive effects of age diversity on firm performance whilst, Zimmerman (2008) found no significant effects. Kilduff, Angelmar and Mehra (2000) examined 35 simulated firms with a total of 159 managers and found significant evidence to suggest that age diversity of team members positively affects firm performance. The arguments for age heterogeneity and homogeneity on boards are inconclusive as issues on generational gaps can also impact board effectiveness, hence further research must be conducted (Kang et al. 2007). However, Harrison and Klein (2007) argue that age variety or diversity broadens the cognitive and behavioural repertoire of the board, which leads to better decision-making, effectiveness and ultimately improves performance. Consequently, we propose the following:

**Proposition:** *The age diversity of Non-executive directors enhances board effectiveness and is positively associated with firm performance*

## 4.2 Non-Executive Directors' Experience

Carpenter and Westphal (2001) suggest that research on corporate governance and board effectiveness can be advanced by going beyond an emphasis on the board's propensity to exercise control over decision-making. They suggest this line of research should have a broader scope and examine whether directors possess relevant skills and experiences that enable them to effectively exercise control and monitor management. In line with this, Kroll, Walters and Wright (2008) propose that board effectiveness can be explained in part through the possession of suitable knowledge gained from directors' experience. Therefore, boards of directors who do not have relevant experience may be incapable of fully contributing to the strategic decision making of a firm (Kroll et al., 2008). From an agency theory perspective, directors with suitable knowledge gained through experience will not only be better monitors, but will also be useful advisors to top managers (Hillman & Dalziel, 2003). Furthermore, upper echelons scholars suggest that senior executives carry essential and unique skills that are displayed through their perceptions and beliefs, and these perceptions and beliefs are ultimately based on their experiences (Nielsen & Nielsen, 2013).

Although agency and upper echelons theories all emphasize the importance of experience in board effectiveness and decision-making, existing studies on the impact of director experience and performance have produced mixed results. Previous studies in management literature have examined the impact of director experience on different aspects of firm performance. For instance, a study by Fich (2005) revealed that shareholders react positively to the appointment of NEDs with past CEO experience in other firms. Whereas Gray and Nowland (2013) found that both the depth and breadth of directors' prior experience is valued by the market at the time of the directors' appointment. Hillman and Dalziel (2003) propose that greater experience can enhance a director's ability to monitor firm performance and provide advice to the organization. In agreement with this notion, a study by Westphal and Milton (2000) found that directors with professional experience were able to understand business situations more effectively and made better acquisition decisions. Gray and Nowland (2013) recognise that experience and expertise are essential for an effective board because directors are required to perform numerous complex tasks that need skill and expertise. Although prior business experience and expertise in areas such as accounting, finance and law help directors in effectively performing their duties, Gray and Nowland (2013) argue that prior experience as a director is the most relevant experience that directors can possess. Various scholars have argued that an individual's previous career experiences shape and influence their decision making process through the knowledge gained from their experiences (Sorensen, 1999; Beckman, 2006). Therefore, director's professional knowledge in industry and management should be beneficial to the quality of their decision-making and contribute to corporate competitive advantage, which ultimately leads to increased performance and effectiveness (Gray & Nowland, 2013).

An interesting proposition was brought forward by Li and Ang (2000), who suggested directors with specialized skills or those with good reputations are needed to provide advice when the board has to make major decisions. Such directors do not need to attend to all routine business decisions but add value in special situations. This is evident in the case of Kroll et al. (2008) who found that directors with prior experience made better acquisition decisions and exerted more influence on the board. This notion differs from that of Nielsen and Nielsen (2013) who found that industry experience of executives had no effect on decision-making and financial performance. However, Thorsell and Isaksson (2014) note that previous research may have produced mixed findings on the influence of directors' experience on firm performance due to issues of measurability and a shortage of available data. Kroll et al. (2008) defined director experience as the number of years a director has been a manager or board member of a firm within the same industry; whilst Certo et al. (2001) define director experience as the number of cross directorships a board member has held. Other scholars such as Kang et al. (2007) and Bodnaruk et al. (2008) used age as a proxy for director experience suggesting that older directors should have more experience than younger directors. For that reason, it is important to define the term director experience when providing experience, expertise and skills as a proxy for board effectiveness.

The prior experience of directors is useful for learning and developing skills of how to be a director and furthermore, developing an appreciation of the role (Westphal & Milton, 2000). The role of a director goes beyond reading financial statements and involves absorbing comprehensively large amounts of complex information quickly,

evaluating the actions of management and, how these actions impact the firm (Khanna et al., 2014). Therefore, when directors have prior experience at senior levels in a firm, the human capital they develop should be invaluable as they should be more effective in providing strategic advice (Khanna et al., 2014). In addition to this, Fich (2005) argues that directors with previous experience of being a director provide unique expertise and are of greater value than directors of other occupations or positions. Directors with such experience are expected to produce high-quality outcomes through their pool of knowledge, skills and connections (Conger, Lawler & Finegold, 2002). External connections developed through previous board appointments and industry experiences represent valuable capital as such connections provide access to vital resources (Hillman, 2005). Upper echelons theorists propose that managerial (in this case directors') inclinations, strategic choices and decisions are explained by the directors' pre-existing knowledge systems and skills. These knowledge systems and repertoire of skills are primarily derived from prior professional experience (Bailey & Helfat, 2003; Kor, 2003; Kor & Sundaramurthy, 2008). Therefore, directors' current and past professional experiences as board members or as senior executives can be a strong indicator of their human capital (Certo, 2003). The main benefit of directors with senior level experience is that they provide the unique resource of direct experience, which indicates greater intelligence and effectiveness (Khanna et al., 2014). Taken together, the arguments presented above suggest that the previous appointments of NEDs are a suitable proxy for experience; therefore, we suggest the following propositions:

**Proposition:** *The prior experience of Non-executive directors enhances board effectiveness and is positively associated with firm performance*

## 5. Conclusion

This paper builds propositions that move beyond NEDs independence as the conventional proxy of board effectiveness. Although our proxies are not exhaustive, in this paper we propose that the age diversity and prior experience of NEDs are better indicators of board effectiveness. Our paper addresses the gap in literature by focusing more on NEDs competencies, skills and capabilities that enable them to effectively perform their monitoring and strategic roles. In addition, our conceptual framework suggests that board effectiveness should increase firm performance (Brennan, 2006). As a result, the characteristics of the board of directors have a direct effect on both firm performance and board effectiveness. From a theoretical perspective, our study contributes to the extant literature by integrating agency and upper echelons theories to offer a more holistic framework that focuses on directors' capabilities. The next part of this study will collect relevant data and test these propositions to validate the arguments put forward. Future work may also explore experience as a multi-faceted variable as various types of experience may have a different impact on performance.

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***Bureaucracy of Power-Dependence in Domestic Politics in Japan and  
Interdependence of International Relations in the UK, U.S. and EU***

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**Abstract**

This paper investigates power-dependence of central-local government relations and interdependence of international relations. The power-dependence means political dependence in the political networks between central government, bureaucracy, local government and interest groups in common regime state. On the other hand, the interdependence means comprehensive relationship, from which zero-sum game is not necessarily derived, between various states with different regimes. This paper investigates two issues based on these political theories. First, this paper explores degrees of power-dependence among central government, bureaucracy and local government, focusing on degree of involvement of bureaucracy in Japan. By scrutinizing several cases, I classify degrees of involvement of bureaucracy into three categories; initiative of bureaucracy, initiative of the politicians and initiative of the domestic interest group. I also discuss conservatism of the bureaucracy in Japan. Second, as for interdependence in the international relations (IR), this paper explores degree of influence of the domestic interest group to the bureaucracy in the negotiation of the Trans Pacific Partnership (TPP), especially between Japan and U.S. and the negotiation of the Economic Partnership Agreement between Japan and the EU. In both negotiations, strong opinions of the interest groups are seen from the conservative agriculture associations in the U.S., the EU and Japan. I consider reasons why conservative interest group raises conflict between different Ministries of bureaucracy group of a state. This paper also investigates Japan-United Kingdom relations from viewpoint of degree of involvement of bureaucracy.

Keywords: Japanese Bureaucracy, Interest Group, Foreign Economic Policy

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## Introduction

This paper considers Japanese bureaucracy in the domestic power-dependence and international interdependence. Before proceeding the discussion, three political theories are outlined, on which this article is based, Katzenstein's theory, Rhodes' theory and Nye and Keohane's theory.

In the real policy making process, many aspects became to be seen which domestic politics influences the foreign economic policy. The increasing influence of the domestic politics to the foreign economic policy is clear due to the following reasons. First, the political theory emerged by Katzenstein or Putnam who proposed relevancy between domestic policy and foreign economic policy. Katzenstein pointed out that domestic interest group and political party influence the foreign economic policy. Putnam presented 2 level game model. In the domestic level of the model, the game is played between government and interest group, and in the international level of the model, the game is played between states. Second, the Japanese bureaucracy dealing bilateral or multilateral relations became influenced not only by the international relations but also opinion of the domestic interest groups.

R.A.W. Rhodes presented a political theory of dependence relation between British government and local government, which is called power dependence theory (1981). Rhodes proposed five propositions of the power dependence, where the keyword is the resource which means authority, money, political legitimacy, information and organization. Rhodes' main proposition is that all organization depends on the other organization for the resource. Furthermore, the organization exchanges the resource for achieving the goal. The policy network is unconsciously made based on the concept of the power dependence. Due to the definition by Rhodes, the policy network is a formal or informal linkage between the government and the other actors. In Japan, the policy network also plays an important role in the policy making process. However, main actors in the United Kingdom are government and local government, whereas main actors in Japan are government, bureaucrat and Liberal Democratic Party.

The linkage in the international relations, first advocated by James Rosenau in the 1960s and after that, in 1970s, strategically developed by Henry Kissinger for the cold war between the United States and Soviet Union. Kissinger described "linkage strategy" which makes diplomacy, not by focusing on one foreign issues, but by packaging several foreign issues. In the 80s, Joseph Nye and Robert Keohane redefined "linkage diplomacy" to apply between the allies and friendly nations; the US-UK special relations, the US-France relations and US-Japan relations. The linkage diplomacy by Nye and Keohane is based on the linkage strategy by Kissinger. The common factor between power-dependence and interdependence is asymmetry. Asymmetry of domestic politics is applied to asymmetry between central government, bureaucracy, ministries, politicians, diet, interest groups and local government. On the other hand, asymmetry of international relations is asymmetry between nations.

### Comparison of Bureaucracy in the History

	<b>The UK</b>	<b>The U.S.</b>	<b>France</b>	<b>Japan</b>	<b>Austria</b>
<b>Characteristics of Bureaucracy</b>	<b>Party Politics by politicians</b>	<b>Party Politics by politician and interest groups</b>	<b>High Bureaucracy</b>	<b>High Bureaucracy</b>	<b>High Bureaucracy</b>
<b>Degree of bureaucracy From 17th century to 19th century</b>	<b>Middle</b>	<b>Low</b>	<b>High</b>	<b>High</b>	<b>High</b>
<b>Degree of bureaucracy 20th century</b>	<b>Middle</b>	<b>Middle</b>	<b>High</b>	<b>High</b>	<b>High</b>

**Table 1 Comparison of Bureaucracy in the History made by the author**

Before proceeding to the bureaucracy in Japan, I briefly summarize traditions of the bureaucracy in the United States, the United Kingdom, the Europe and Japan. In the United States, from 19 century to mid of 20 century, as the machine politics is trendy by which politicians decides the policies by the leading of the interest group, the politicians assign bureaucrats under the influence of the interest group, which is called spoils system. The United Kingdom, compared with the United States, the bureaucracy is little influenced by the interest group. In the UK, the party politics is working well, therefore, the bureaucracy is not so dominant as France and Japan. In France and Austria, the bureaucracy is historically strong, especially at the time of the Bourbon Dynasty and the Habsburg Monarchy. Because the absolute monarchy and the bureaucracy are harmonious. The bureaucracy of Japan is also traditional like that of France. The bureaucracy in Meiji period, inherited from the strong bureaucracy in Edo period, continued to support the absolute monarchy, which featured authority of the new government. Though, in Taisho period, the bureaucracy was temporally weakened due to the rise of the party politics.

#### **From Bureaucratic Leadership to Official Residence Leadership**

From the post war to the present day, it is out of question that Japanese bureaucracy has been playing important role in the policy making process. However, at the same time, the involvement of the bureaucracy in the political process has changed in the transition of the relation with the Liberal Democratic Administration and US-Japan relation. I shortly summarize the involvement of the Japanese bureaucracy in the political process.

During the era from the post war to the sign of Treaty of San Francisco, Japanese bureaucracy was in fact under the control of the General Headquarters (GHQ) for the

Allied Powers. Though prime minister, Shigeru Yoshida, took strong leadership, Yoshida was still under the control of the GHQ. From the 55 System triggered by the merger of conservative party, the Liberal Democratic Administration, bureaucracy and big industry built strong network, called iron triangle, which was a driving force of Japanese economy revival.

From the late 50s to the 70s, each Liberal Democratic Administrations, led by strong leadership of prime ministers, Kishi, and Ikeda, succeeded in Japan-US Security Treaty and doubling of income, respectively. These results were realized by the leadership of the politician and bureaucracy. However, these results were not due to official residence leadership.

Katzenstein pointed out that Japanese foreign economy policy is supported by the business, especially big companies to which economic interest serves. He also insisted that Japanese foreign economy policy is facilitated by the high centralization between state and society (Katzenstein, 1978).

Since the 70s, the foreign economic policy is forwarded between the United States and Japan in place of the security and political issues between them. Its beginning is Japan US textile negotiation. In May, 1969, United States Security of Commerce, Stans, required self-regulation of Japanese textile product export. In March, 1971, Federation of Japanese textile announced self-regulation, and on October, memorandum of understanding of US-Japan textile problem was agreed. Japan government decided emergency loan (75.1 billion Japanese yen) and relief financing (128.7 billion Japanese yen). The resolution by the self-regulation is characterized by the following points. First, the self-regulation of Japanese textile product exports is derived from asymmetry between the United States and Japan at that time. Second, the political process of US-Japan textile negotiation is owed to the initiative of Minister of Trade and Industry, Tanaka, but its political process is cooperation between politician and bureaucrats rather than official residence leadership. The self-regulation is a cooperative work of the politician and bureaucrats.

After the US-Japan textile negotiation, the US-Japan car negotiation (ended self-regulation at Japanese side), the US-Japan semi-conductor negotiation in the 80s continued. Triggered by Plaza Accord (1985), the Structural Impediments Initiative (1989-90) and Japan-United States Framework for new Economic Partnership in the 90s continued. In each negotiations, the main actors were bureaucrats.

Hashimoto Administration of the Liberal Democratic Party emerged change from bureaucratic leadership to official residence leadership. However, resistance of the bureaucracy is strong. Prime Minister Koizumi attempted to abolish special corporations but failed. However, Koizumi Administration succeeded realization of Japan Post Privatization. Koizumi Administration also succeeded organization reform of every governmental department and agency.

Democratic Party Administration cannot make use of the bureaucracy. However, In Abe Administration of Liberal Democratic Party, the official residence leadership is remarkable. The bureaucracy become to be controlled by the government, because Prime Minister Abe set the bureau of personnel at Cabinet Office and this bureau decides personnel above the assigned rank at every governmental department and

agency. At the same time, the domestic interest group became to influence the foreign economic policy, and the self-regulation at Japan side disappeared.

### **Degree of Involvement of Bureaucracy in Japan**

Diplomacy and domestic politics are related each other. This section considers degree of involvement of bureaucracy in the policy making process in Japan. It is nothing to say that the bureaucracy is involved in all the policy making. However, degree of involvement of bureaucracy depends on the policy and classified into three patterns.

The first pattern is the policy making by the initiative of the bureaucracy. The budget policy making by the Ministry of Finance (MOF), the foreign policy making by the Ministry of Foreign Affairs Japan and the security policy making by the Ministry of Defense are typical policy making by the initiative of the bureaucracy. The common characteristics is that these policies are basically formulated based on the sovereign strategy which is not influenced by the interest group.

The second pattern is the policy making by the initiative of the politician. The politician can make law under the institution of legislation by Diet Members. Especially, the political phenomenon is sometimes seen that famous politician introduces unnecessary infrastructure, for example road and station, to the favorable voting district of the country side. However, what I discuss here is not such a country side politician. I will focus on Prime Minister, Junichiro Koizumi, who realized Japan Post Privatization by his strong initiative. When the Prime Minister proposed Japan Post Privatization, not only the Ministry of Posts and Telecommunications, but also part of the Liberal Democratic Party opposed to Koizumi's proposal. It is nothing to say that opposition parties were against the Prime Minister. As soon as the bill of the Japan Post Privatization was rejected in the Diet, the Prime Minister dissolved the House of Representatives. The result of the referendum was a land slide win of the Liberal Democratic Party and consequently the bill of the Japan Post Privatization was passed in the Diet. This case is a typical example that the policy making process is led by the initiative of the politician. It is to be noticed that the local authorities were not involved in this policy making process, although the Japan Post Privatization is essentially connected with the local administration.

The third pattern is the policy making process by the initiative of the domestic interest group. The bureaucracy of the corresponding ministry which takes charge of the domestic interest group, for example agricultural group, is influenced by the opinion of the interest group, therefore the foreign economy policy of this ministry is the reflection of the interest group. The reflection of the foreign economy policy is caused by the movement in which JA and relevant agricultural association try to protest tariff reduction of the imported agricultural products which may jeopardize Japanese agriculture, in the multilateral negotiation, TPP, and the bilateral negotiation, Japan-EU EPA. The foreign economy policy of the Ministry of Agriculture, Forestry and Fisheries sometimes becomes different policy from that of the central government supported by Ministry of Economy, Trade and Industry. The decentralization between the Ministry of Agriculture, Forestry and Fisheries, and central government is due to opinion of the JA, which insists the interest of the agricultural product, supported by the Lobbyist-politician.

## Conservatism of Japanese Bureaucracy

Kiyoaki Tsuji pointed out the conservatism of the Japanese bureaucracy as follows: “Considering the emergency of the bureaucracy is the result of the absolute monarchy, it is natural that our bureaucracy cannot overcome old principle of the feudalistic social position (Tsuji, 1956, p. 185). The bureaucracy in Japan started in Edo period. Okitsugu Tanuma, Masahiro Abe, and Naosuke Ii are the strong Roju or Tairo, chief senior councilor. In Meiji period, Toshimichi Ohkubo is the founder of the bureaucracy. After Ohkubo, Aritomo Yamagata and Hirofumi Ito are the strongest politicians. Yamagata built the bureaucracy of the absolute monarchy based on the army and police. On the other hand, Ito built the party Rikken Seiyukai, the big party of Japan. Although in Taisho period, the political party revived, the government controlled by the army was dominant and the bureaucracy supported the government in Showa period. Since the 55 System triggered by the merger of the conservative parties, the policy network among the government, bureaucracy and industry became strong connection. This iron triangle was driving force of the revival of the Japanese economy.

During Meiji period (1868-1912), the conservatism of the bureaucracy is especially remarkable in the local government. The government did not make much account of the local government from the starting point. In the letter which Lords of Home Affairs, Ohkubo sent to Sanjoh (Dajodaijin; Prime Minister), Ohkubo described principle of the legislation of the local government that the new legislation is not effective unless the legislation depends on the peculiar customs unique to the local society (Tsuji, 1956, pp. 147-148). Before the end of the Second World War, the prefectures are the branch office of the central government and supervising agency for the local society.

Next, I discuss conservatism of the bureaucracy derived from the professional technique of the bureaucrats. The conflict between the politician and bureaucrat has been pointed out from the era of Max Weber. The way by which the bureaucrat takes leadership to the politician has been the same in old days and present days, using professional technique of the law and occupation of the information, without showing conflict in public. The resource of the bureaucracy is derived from detail knowledge of the law which busy politician cannot obtain and widely collected information which the politician cannot know (Curtis, 2002).

The conservatism of the bureaucrat is derived from the instinct which makes bureaucrat to avoid under the control of the politician. This is because who becomes the next prime minister is unpredictable, moreover, the opposition party government may be founded. Thus, the bureaucrat is always ready for the escape route. Such an escape route is also seen in the administrative guidance by the bureaucracy. For example, the national university is guided by the Ministry of Education (MEXT) or the secretary -general sent from MEXT to the university. The manner by which MEXT or the secretary -general guides the university is not always direct order. They take indirect order to the university in such a questionnaire; “How do you realize the guidance of MEXT?”.

I discuss change of the correspondence to international relations of the Japanese bureaucracy. The foreign policy and foreign economic policy by the Japanese

bureaucracy have been made under the asymmetry between Japan and the United States. The self-regulation of the exports at Japan side, which are results of the Japan-US textile negotiation and Japan-US car negotiation in the 70s and 80s, is derived from the asymmetry between two countries. Such a self-regulation at Japan side is due to the political process in which the government and the bureaucracy cooperated in the bilateral negotiation, and the interest groups were obliged to accept the self-regulation of the export of the textile and car. In these negotiations, the interest groups were weak. However, as recent trend of the Japanese foreign economic policy, the bureaucracy and government come to be influenced by the allegation of the domestic interest group, whose representative is agricultural cooperative, which alleged risk of the imported agricultural product in the TPP negotiation. The influence of the domestic interest group to the foreign economic policy can be understood as the new trend against the conservatism under the US-Japan asymmetry.

### **Degree of influence of the domestic interest group to the bureaucracy**

I will explore degree of influence of the domestic interest group to the bureaucracy in the negotiation of the Trans Pacific Partnership (TPP), especially between Japan and U.S. and the negotiation of the Economic Partnership Agreement between Japan and the EU.

In the Japan-US negotiation of the TPP, the important agendas are agricultural product and car. The tariff elimination was avoided by increasing on-duty range of the US rice. Japan will import 50,000 tons of rice from the US in the first three years and import 70,000 tons of rice in 13 years, and remain to import 770,000 tons of rice by the World Trade Organization (WTO) agreement.

In Autumn 2015, Japan central government has basically agreed TPP. So Japan central government began to promote agricultural reform, by the Liberal Democratic Party, especially Director, Agriculture and Forestry Division Shinjiro Koizumi and the Ministry of Agriculture, Forestry and Fisheries. The Ministry of Agriculture, Forestry and Fisheries has submitted eight bills to the National Diet. The bills are the reform of JA and liberalization of raw milk.

In the final phase of the TPP negotiation (2015), the negotiator at Japan side are Cabinet Secretariat, Ministry of Foreign Affairs, Ministry of International Trade and Industry (MITI) and Ministry of Agriculture, Forestry and Fisheries, whose representative is Amari, Minister of MITI. The negotiator at US side is the Department of Commerce, whose United States Trade Representative (USTR) is Froman. The pressure to the Department of Commerce, especially Froman by the interest group in the United States was strong beyond comparison than that by the interest group in Japan. The main interest groups in the United States are Association of the cereals and Association of the stock raising in the mid west.

The asymmetry between Japan and the United States in the TPP negotiation is not so strong as that in the Japan-US textile negotiation. The self-regulation at Japan side disappeared and opinions of the interest group (JA) became to influence the Ministry of Agriculture, Forestry and Fisheries. In general, when the asymmetry works well, the interest group cannot influence to the bureaucracy.

In the bilateral negotiation, the Japan-US asymmetry is effective for the policy making advantageous to the United States. However, in the multilateral negotiation like the TPP, the asymmetry between two states is not effective. The reason why President Trump withdrew from the TPP and wants to negotiate free trade agreement (FTA) is that Japan-US asymmetry works well.

There exists another reason why Japan-US asymmetry does not work well in the TPP negotiation. It is because one aspect of the TPP is collective security for encircling net around China, therefore, the United States cannot strongly allege asymmetry to Japan.

In the World, the GDP of Japan is 7%, and the GDP of the EU is 18% (IMF World Economic Outlook Database April 2017). In 2016, the export from Japan to the EU is 8.0 trillion yen, and the import from EU to Japan is 8.1 trillion yen. On the other hand, the export from Japan to the U.S. is 14.1 trillion yen, and the import from the U.S. to Japan is 7.5 trillion yen.

In the Japan-EU EPA negotiation, the EU required opening of the train market in Japan. Japan resisted to EU demands because Japan insisted equipment procurement as railway areas and by private sectors. On the other hand, Japan demanded tariff reduction of industrial product, for example, tariff 10 % on Japanese cars.

The Liberal Democratic Party of Japan has demanded Japan central government that Japan central government should improve tariff imbalance between Japan and EU because 70% of import items from EU to Japan is non-tariff, and 70% of export items from Japan to EU is imposed tariff. Especially, about the tariff of cheese, the import of cheese to Japan is 30% from EU, and 68% from TPP countries like the U.S., Australia, and New Zealand.

On July 2017, Japan and the EU basically agreed the Japan-EU EPA. Among the elements of the Agreement, main import issues are cheese and wine, and the main export issue is car. The Camembert cheese *et. al.* (current tariff 29.8 %) is newly set the import framework of maximum 31,000 ton, and its tariff is decided zero after 16 years. The wine (current tariff 15 %) is decided to eliminate its tariff immediately.

Focusing on the tariff of the Japan-EU EPA, I consider the national interest, the interest group and the asymmetry between states. Though Japan guarded the tariff of the cheese in the TPP negotiation, Japan accepted the reduction and elimination of the cheese tariff in the Japan-EU EPA. From this fact, I can obtain the following results of the foreign economy policy. First, Japan and the EU had to make hurry to raise the flag of the free trade against Trump's protectionism. Second, Japan had to set the tariff reduction ration which cannot be accepted more, for the coming bilateral Japan-US FTA. Third, though the asymmetry exists between Japan and the United States, the asymmetry does not exist between Japan and the EU. However, the reason why the import tariff ration of some issue in the Japan-EU EPA is lower than that in the Japan-US agreement of the TPP is due to the above situation of Japan and the EU. Fourth, because this basic agreement is derived from the national interest of Japan and the EU, the domestic agricultural interest group cannot sufficiently influence its allegation and is sacrificed for the national interest of Japan.

Japan-UK Foreign and Defence Ministerial Meeting has been held in 2015, 2016, and

2017. On January 2015, the first UK-Japan Foreign and Defence Ministerial Meeting was held. The cornerstone of the Japan-UK Foreign and Defence Ministerial Meeting is the lucrative defense deal on April 2012 between UK prime minister David Cameron and Japan prime minister Yoshihiko Noda. The ministry of foreign affairs and the ministry of Defence succeeded in the alliance or quasi-alliance between the UK and Japan. If Japan-UK EPA is agreed, the relation between the UK and Japan is expected to be stronger.

Japan-France Foreign and Defense Ministers' Meeting has been held in 2014, 2016 and 2017. The ministry of foreign affairs and the ministry of Defence succeeded in the alliance or quasi-alliance between France and Japan, NATO(OTAN) and Japan.

## **Conclusion**

The major conclusions of this paper will be summarized briefly. These findings range in the following aspects: from bureaucratic leadership to official residence leadership, degree of involvement of bureaucracy in Japan, conservatism of Japanese bureaucracy, and degree of influence of the domestic interest group to the bureaucracy.

- (1) The Japanese bureaucracy supported the absolute monarchy in Meiji period. From the end of the second world war to the sign of San Francisco Treaty, Japanese bureaucracy was under the control of the General Headquarters for Allied Powers. In 1955, the merger of conservative party converged to the 55 System, and the string network called "iron triangle" was built by the Liberal Democratic Administration, bureaucracy and big industry, which is the driving force of Japanese economy revival.
- (2) In the 1970s, the foreign economic policy was forwarded between the United States and Japan in place of the security and political issues. The Japan-US textile negotiation (1970s) and Japan-US car negotiation (1980s) ended the self-regulation at Japan side due to the asymmetry between two countries. The self-regulation is a cooperative work of the politician and bureaucrats.
- (3) Hashimoto Administration of the Liberal Democratic Party emerged change from bureaucratic leadership to office residence leadership. This trend was inherited to Koizumi Administration and Abe Administration. The personnel of the bureaucracy became to be controlled by the bureau of personnel at Cabinet office, set by Abe Administration. At the same time, the domestic interest group became to influence the foreign economic policy, and the self-regulation at Japan side disappeared.
- (4) The degree of involvement of the Japanese bureaucracy in the policy making process is classified into three patterns. The first pattern is the policy making by the initiative of the bureaucracy. The budget policy making by the MOF, the foreign policy making by the Ministry of Foreign Affairs and the security policy making by the Ministry of Defense are typical policy making by the initiative of the bureaucracy. The second pattern is the policy making by the initiative of the politician. The policy making of Japan Post Privatization is a case in which Prime Minister Koizumi takes initiative for its realization. The third pattern is the policy making process by the initiative of the domestic interest group. The agricultural

policies in the TPP and Japan-EU EPA are cases in which domestic agricultural group influenced the policy making process.

- (5) The conservatism of the Japanese bureaucracy can be observed in several aspects. First, in Meiji period, the government did not make much account of the local government from the starting point. Second, the conservatism of the bureaucrats who take leadership to the politician comes from the professional technique of the bureaucrats. Third, the bureaucrats intend to avoid under the control of the politician by the ready for the escape route. Fourth, the influence of the domestic interest group to the foreign economic policy can be understood as a new trend against the conservatism under the US-Japan asymmetry.
- (6) In the bilateral negotiation, the Japan-US asymmetry is effective for the policy making advantageous to the United States. However, in the multilateral negotiation, like the TPP, the asymmetry between two states is not effective.
- (7) The reason why Japan and the EU reached the basic agreement of the Japan-EU EPA is the following. First, Japan and the EU had to make hurry to raise the flag of the free trade against Trump's protectionism. Second, Japan had to set the tariff reduction ration which cannot be accepted more, for the coming bilateral Japan-US FTA. Third, though the asymmetry exists between Japan and the United States, the asymmetry does not exist between Japan and the EU. However, the reason why the import tariff ration of some issue in the Japan-EU EPA is lower than that in the Japan-US agreement of the TPP is due to the above situation of Japan and the EU. Fourth, because this basic agreement is derived from the national interest of Japan and the EU, the domestic agricultural interest group cannot sufficiently influence its allegation and is sacrificed for the national interest of Japan.

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NATO (OTAN) North Atlantic Treaty Organization

Ministry of Foreign Affairs of Japan, TPP,

Ministry of Agriculture, Forestry and Fisheries, TPP,

Ministry of Foreign Affairs of Japan, Japan-EU EPA,

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## ***The Dynamics of Large Public Traded Corporations in Santa Catarina, Brazil***

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### **Abstract**

The present research comprised the study of three public companies: BRF SA, Tupy SA, and WEG SA. These companies present a high level of technological development, with administrative headquarters located in Santa Catarina - Brazil, with business in several countries. The aim was to accompany historical development, geographic expansion, and business evolution of such companies in Brazil and in the world. Moreover, to identify the role of stock market for their development, and the activity of large pension and investment funds (holders of large global shareholdings – by 2013, both accounted for the equivalent to 75.5% of world GDP). For this purpose, visits and interviews were carried out at the companies' headquarters, at stockbrokers, and at the stock exchange of São Paulo (in 2015, 52.8% of investors of BM&FBovespa SA were foreigners). It was observed the high development capacity acquired with the implantation of such corporations for local and regional society. Expansion and emergence of significantly populous neighborhoods occurred, as well as the establishment of colleges and technical schools for local labor qualification, among others. Certainly, the creation of a solid stock market was of great importance for the expansion of industrial activity (investment in new manufacturing parks, technological upgrading, verticalization, among others). The current phase of world capitalism evidences the expansion of international trade, fluctuating exchange rates, and greater liquidity of markets. Therefore, the insertion of the economy of Santa Catarina, Brazil is a dynamic reality, where each step is required to improve management, production, and technology of big companies.

Keywords: capitalism, investment, internationalization, stock market.

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## 1 – Introduction

This work was developed in the state of Santa Catarina - Brazil, southern region of Brazil, which received important influence of European immigrants (Germans, Italians) during the course of the nineteenth century. The local characteristics added to the cultural diversity allowed the emergence of big companies like BRF, Tupy and WEG. They are now global companies and have great economic importance for the state of Santa Catarina, and for Brazil.

Thus, it is important to point out that the emergence of corporations is related to the fact that Western entrepreneurs need to organize themselves in search of the best way to carry out their productive and economic activities. According to Rosemberg (1986), it was in the fifteenth century that these entrepreneurs conquered relative autonomy for their activities.

In this sense, the eighteenth century is characterized by the emergence of factories and the expansion of production, according to increasingly large societal groups. In the following century, these groups advance in autonomy, facing the political controls of their operations. Thus, in the quest for autonomy for decision making, public corporation becomes a convenient solution for the evolution of their activities.

In the sixteenth century, England, France and the Netherlands authorized (through charters) companies for specific and exclusive activities to carry out activities, which were strongly related to projects of commercialization and colonization companies. At the beginning of the nineteenth century, public companies emerged, working with construction of roads, ports, canals, railways and banking business (USA), leading to decline of commercialization companies. In the future, corporations will be involved in the supply of water, gas, electricity, transportation and telephony (ROSEMBERG, 1986).

In the 1880s and 1890s, stock exchanges in the United States were opened to industrial companies, which contributed to the development of public companies and the constant development of large companies.

Corporations are used in this way to financing their productive and commercial activities. In view of this, the stock corporation industries have a great relationship with the banking system, since it is in the banking institution that the individual capital necessary to foment the entire process of capitalization of large corporations is concentrated. At that time, banks became a mediator in the money market, exercising important authority and control over corporations (HILFERDING, 1985).

Nowadays, besides the large banks in the stock market, there is the participation of investment and pension funds, which have reached a remarkable proportion in recent years. In 2013, resources managed globally by investment funds and pension funds accounted for a fortune equivalent to 75.5% of world GDP (PAÍS, 2015).

The allocation of resources controlled by these funds in December, 2013 was 44.8% in stocks, 25.7% in fixed income and 12.2% in other investments. There is a trend in the concentration of global assets, where the 20 largest funds cover 41.4% of the

business under its control, and 52.8% of these funds accumulate mainly in North American firms (WATSON, 2015).

Thus, the companies considered in the present study have in their history an important relation with the capital market. According to their respective needs (technological innovation, infrastructure, internationalization, among others), each one advances in levels of corporate governance, liquidity stock, and client and investor confidence. Thus, as it will be approached, such advances made possible great local and regional development where these companies are installed.

## **2 - Companies and the Stock Exchange**

### **2.1 – BRF SA.**

BRF SA is a huge company that operates in the production of food. It emerged in 2009 through the fusion of the companies Sadia SA and Perdigão SA. Perdigão has its origin in the city of Videira in the year 1934, and Sadia was founded in 1944 in the city of Concórdia, both cities in the Brazilian state of Santa Catarina.

In 2009, Sadia suffered a financial loss caused by foreign exchange operations in the years 2008-2009 (a major global crisis), a fact that favored its fusion with Perdigão. In July 2009, the association agreement between Perdigão and Sadia was consolidated, thus BRF Brasil Foods SA was created, the largest global protein company in market value, headquartered in the city of Itajaí, Santa Catarina - Brazil. In addition to the public offering of shares<sup>1</sup>, Level III ADRs were issued in the US capital market (BRF, 2009).

Thus, BRF was born as the world's largest poultry exporter and the second largest meat exporter, with sales of 58% in the domestic Brazilian market, and 42% in the foreign market. In 2009, BRF had about 100 thousand employees, 24 overseas offices, industrial park with 63 production units (60 in Brazil and 03 abroad - Argentina, England and the Netherlands), exports to 110 countries, portfolio with over 3,000 items<sup>2</sup> and 36 distribution centers that serve consumer markets in Brazil and worldwide.

BRF gains expressiveness in the market, in 2015 reaches about 95% of Brazilian households, controls 35 factories and more than 20 logistics centers in Brazil. According to figure 1, the company serves more than 120 countries and has 13 industries<sup>3</sup> in other countries, employing around 106 thousand workers in Brazil and abroad (BRF, 2015).

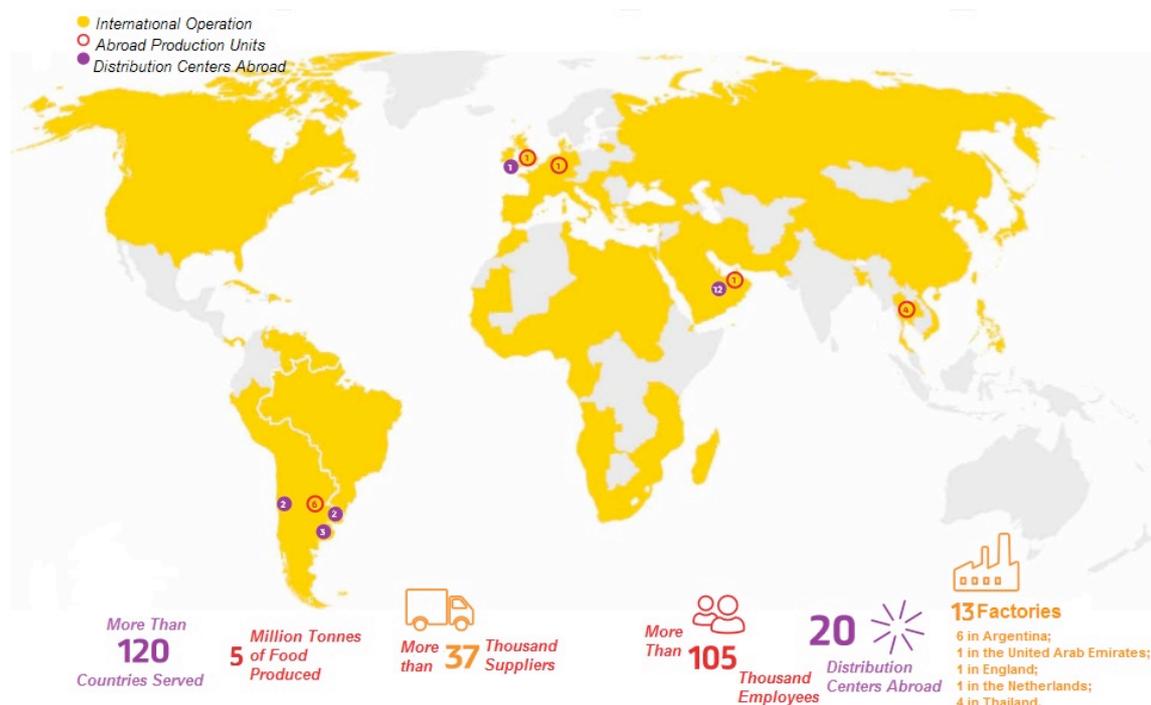
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<sup>1</sup> Shareholdings of BRF: Petros - Fundação Petrobrás de Seguridade Social (11.41%), Previ - Caixa Previdenciária Employees of Banco do Brasil (10.67%), Tarpon Gestora de Recursos SA (8.51%), Gic Private Limited (6.39%), Treasury Shares (1.66%), Others (61.36%) (BM & FBOVESPA, 2017).

<sup>2</sup> Serving meats, dairy products, margarines, pastas, ready-made and frozen dishes, frozen vegetables, among others (BRF, 2009).

<sup>3</sup> BRF in 2015 had six plants in Argentina, one in the United Arab Emirates, one in England, one in the Netherlands and four in Thailand.

The company's net sales in 2014 amounted to R\$ 29 billion (47% international and 53% national), and in 2015 BRF achieved a net sales of R\$ 32.19 billion (50% international and 50% national).



Source: BRF, 2015.

Figure 1 – BRF S.A. – Global Performance in 2015.

## 2.2 – Tupy SA.

Tupy S.A. is a company that was established in the city of Joinville, in the state of Santa Catarina - Brazil in 1938, a place that in the nineteenth century received a large number of German immigrants. Thus, the company was founded by Albano Schmidt, Herman Metz and Arno Schwarz, all with Germanic origin (TUPY, 2016).

In 1941, the company made connections from a malleable cast-iron alloy with the Tupy brand, so the company becomes a sales leader throughout the country, highlighting the production of automotive parts such as blocks and motor heads, which are currently the products that account for 60% of the company's<sup>4</sup> business.

The 1970s were of great importance for Tupy, which began to operate in international markets, and its exports reached the markets of Latin America and Europe. The expansion of international business intensified with the establishment of the company in the United States in 1976, and in 1977 in Germany through regional offices. Tupy's operations in other markets mean that in the following years the company will consolidate itself as a major automotive company (TUPY, 2016).

The 1990s were a major turnaround for Tupy. In 1995, the controllers (after 57 years in the company's management) transferred control of the company to large pension

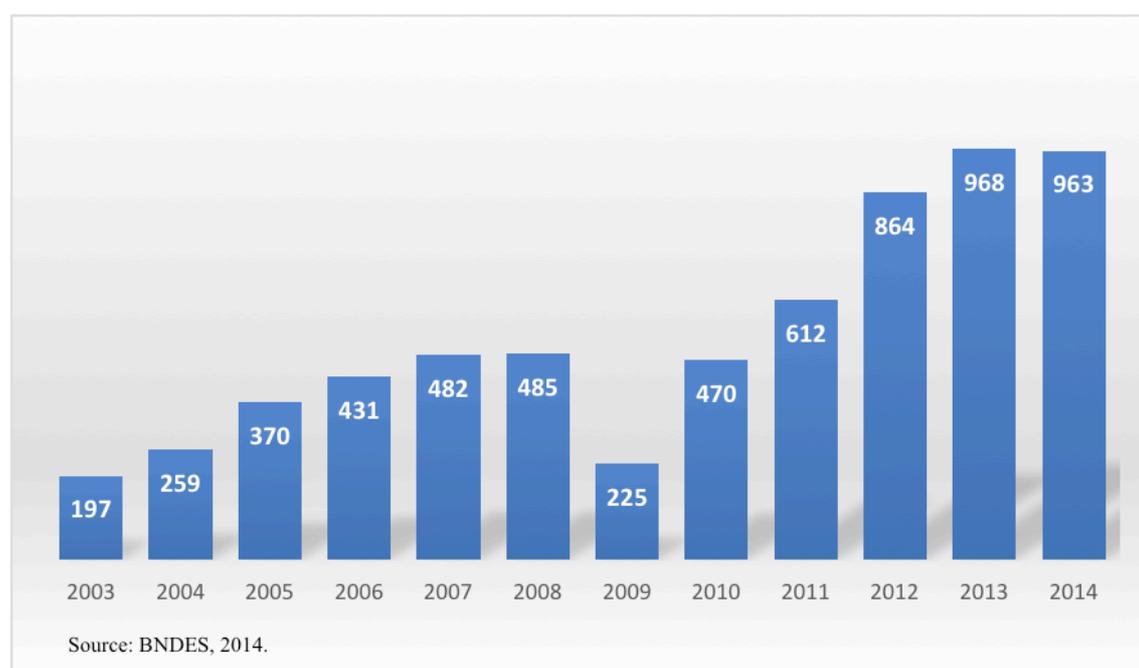
<sup>4</sup> The first deals carried out for the automobile industry in Brazil were through contracts with the Volkswagen company in 1958 for the manufacture of brake drums (TUPY, 2016).

funds and banks<sup>5</sup>. In 1996, Tupy started working with machining services, generating more value to its businesses. In the year 2000, Tupy dominates the technology for vermicular<sup>6</sup> cast iron, signing an inaugural contract with Ford of the United Kingdom for the large-scale supply of engine blocks.

In 2012, Tupy acquired its first production bases abroad, two foundry units in Mexico (Ramos Arizpe and Saltillo cities). At this point, the company expands its productive capacity and consolidates itself as the largest global manufacturer of blocks and motor heads (Tupy, 2016).

The shareholding<sup>7</sup> of Tupy SA. was changed in the year 2013. The shares available to the market were 9.8%, and the company decided to carry out a "re-IPO" where it launched a primary offering of shares, making available to the market a volume of 26 millions shares, totalizing R\$ 455 millions (Tupy, 2013).

Graph 1 shows the evolution of Tupy's exports, which increases its revenues and expands its participation in the foreign market. There is a successful process of internationalization of the company, with a major advance in exports between 2003 and 2014. Thus, in the year 2014, Tupy obtained 73% of its income from abroad, sales mainly to the North American market from the Brazilian and Mexican subsidiaries (BNDES, 2014).



Graphic 1: Tupy exports in US\$ million

<sup>5</sup> The new Tupy controllers aimed to make Tupy a global smelter, for which short-term debts were settled and new acquisitions were made.

<sup>6</sup> Compacted Graphite Iron (CGI) is a metallic alloy that contributes to increased strength and lower engine weight - resulting in smaller, lighter and more durable products (TUPY, 2009).

<sup>7</sup> Shareholdings of Tupy: BNDESPAR - BNDES Participações SA (28.19%), Previ - Caixa Previdenciária Bank of Brazil Employees (26.03%), Telos - Fundação Embratel de Seguridade Social (6.81%), Pioneer Investments Management Ltda (5.18%), Others (33.79%) (BM & FBOVSPA, 2017).

Tupy's revenue in 2015 reached R\$ 3.4 billion, a growth of 10% compared to 2014. North America accounted for 59.7% of this volume, South and Central America 19.2%, Europe accounted for 15.8% and Asia, Africa and Oceania together for 5.3% (TUPY, 2015).

The company has now become a global manufacturer of vermicular iron engine blocks and heads with sales offices in Brazil, USA, Mexico and Germany. Its production units in Brazil are in Joinville - Santa Catarina (with a production capacity of 445,000 tons / year), and in Mauá - São Paulo (with a production capacity of 95,000 tons / year); In Mexico are in Saltillo (with a production capacity of 216,000 tons / year) and Ramos Arizpe (with a production capacity of 92,000 tons / year), reaching a production of approximately 850,000 tons per year and exporting to several countries in the world.

In this way, Tupy markets its products to long-term customers in more than 20 countries. Its exports represent a large part of the company's revenues, where 94% of its products are destined to the automotive sector (trucks, pick-ups, equipment) and 6% for hydraulics (connections, shot and profiles). Among its main customers are Mercedes Benz, Ford, Audi, Volkswagen, Chrysler, John Deere, among others (TUPY, 2013).

### **2.3 – WEG SA.**

WEG S.A. was founded in 1961 in the city of Jaraguá do Sul - state of Santa Catarina - Brazil, with a partnership between an electrician, an administrator, and a mechanic, namely Werner Ricardo Voigt, Eggon João da Silva and Geraldo Werninghaus.

With the accelerated expansion of the company, the directors decided to open the company's capital by launching shares in the counter market in 1965, raising its capital with the main goal of reaching new expansion programs and acquisition of machinery with higher technological<sup>8</sup> performance (TERNES, 1997).

At the end of the 1960s, WEG's partners took into account the need to maintain the company's growth and expand its business, thus making a trip to Germany in search of technology as well as new partners. The result was partnerships that made possible the construction of a new generation of motors, and the first one to be rigorously framed in the standards of ABNT - Brazilian Association of Technical Standards and IEC - International Electrotechnical Commission. In 1970, the first exports were made to Guatemala, Uruguay, Paraguay, Ecuador, and Bolivia.

In 1971, WEG opened its capital<sup>9</sup> on the stock exchange, and its shares were traded on the main Stock Exchanges of the country, since they were previously found only in the over-the-counter market.

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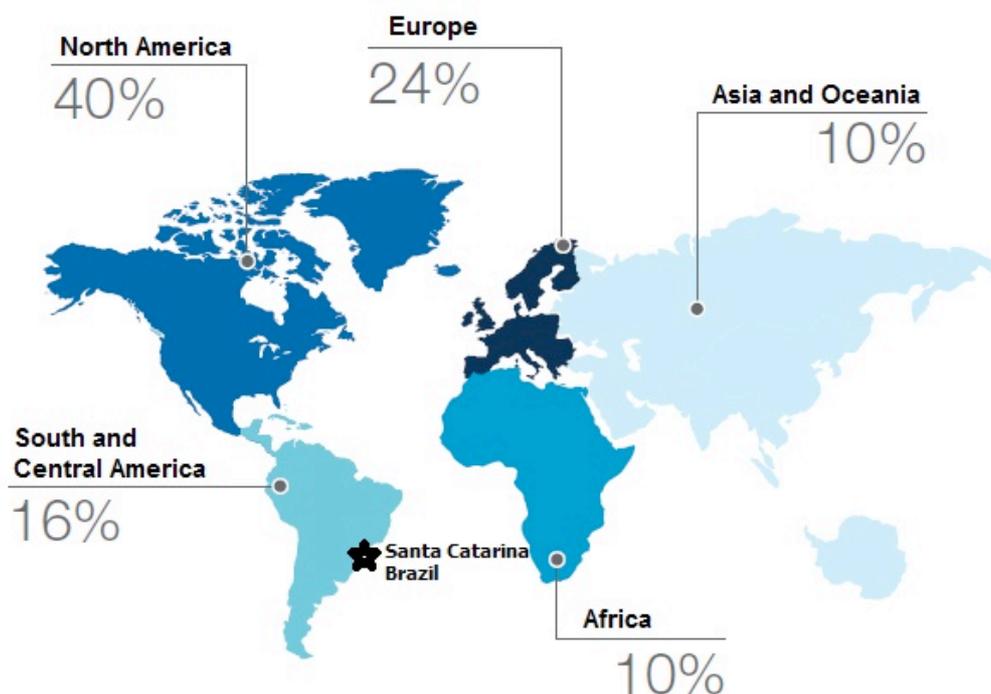
<sup>8</sup> The company operates in the production of electric motors, transformers, generators, industrial control and automation, paints and varnishes, circuit breakers, among others.

<sup>9</sup> Shareholdings of WEG SA.: WPA Participações (50.1%), Founders' families (14.4%), Administrators (0.1%), Treasury (0.1%), Others (35.3%).

WEG, between 1961 and 1969, was doing business exclusively in the domestic market, and its first revenues from international markets began to occur from the 1970s, those were the years in which the company began to trade with foreign markets. The 1980s were a period in which WEG was able to increase its sales outside Brazil and thus conquer new markets. In the 1990s, the internationalization process intensifies and prepares the company for the years 2000, years in which the company becomes highly globalized and respected in other countries and continents.

According to figure 2, it is possible to notice the high degree of internationalization of the company, where it can be observed its varied acquisition of business in several countries and continents. Currently, WEG has subsidiaries in 29 countries and factories in 12 countries, more than 460 product lines, employing around 30 thousand employees (WEG, 2016).

WEG's net sales in 2014 were R\$ 7.8 billion and in 2015 R\$ 9.7 billion. The company's revenue is divided among several continents of the globe, and North America represents the highest percentage of participation in WEG business. In 2013, it participated with 34% of the foreign market, and in 2015 with 40%. In the year of 2013, Europe obtained a participation of 34%, and 24% in 2015. South and Central America accounted for 16% share in 2015, Africa totaled 10%, Asia and Oceania reached 10% of WEG's foreign market revenue (WEG, 2015).



Source: WEG, 2015.

Figure 2: Percentage of revenue in the external market WEG - 2015.

#### 2.4 – The Stock Exchange: B3 – Brasil, Bolsa, Balcão

The stock market in Brazil began with the creation of the stock exchange of Rio de Janeiro, which at the time was the capital of the country. The regularization of the trading session took place in 1877, and in 1897 with Decree-Law No. 2,475, the stock exchange and its brokers were officialized (TOLEDO FILHO, 2006).

In São Paulo, the stock exchange began in 1890, and its members were designated by the government as trustworthy officials. In 1849, in the reign of D. Pedro II, brokers of the stock exchanges obtained recognition as a professional class, and in 1895 the appointment of the brokers was through Ordinance of the Minister of Finance (FGV, 1971).

The stock market in Brazil had little economic relevance until the 1960s, due to stock exchanges were organized precariously, securities brokers held hereditary, life-long, and government-appointed positions (RODRIGUES, 2012).

In early of 1964, some changes began with the implementation of the Government's Economic Action Program, with a process of securities restructuring, financial reforms and goals for the improvement of the financial system and the capital market. In 1965, Law 4,728 / 65 (Capital Markets Law) was passed, which regulates the Brazilian capital market, encouraging the capitalization of large companies through tax benefits in the process of IPO and investment in shares (RODRIGUES, 2012).

The capital market in Brazil changed after a process of financial globalization that began in 1991, facilitating the entry of the foreign investor in the country and the performance of large institutional investors. In the following years, there was a great recovery of the stock market, the numbers referring to capitalization and the volume traded reached in 2006 US\$ 718.6 billion, which represents almost six times the value of 2002, and US\$ 275.5 billion, representing the equivalent of 5.6 times the value of 2002 (MINARDI et al., 2007).

There was a significant increase in the participation of private companies in the stock market; in 1996, they accounted for almost 50% of the total number of companies opened, and in 2006 they were almost 80%. Thus, the factors that stand out in the improvement of the performance of the Brazilian stock market are: improvement of corporate governance practices, improvement in Brazilian institutional scene, and the increased liquidity of international markets (MINARDI et al., 2007).

In 2008, there was an alliance between the activities of BM & F (derivatives trading), and Bovespa. The incorporation of the two companies changed the name to BM&FBOVESPA S.A. - Commodities and Futures Exchange, and it was already founded as one of the largest stock exchanges in the world in market value (BM&FBOVESPA, 2015).

At the beginning of 2017, there is a new fusion between BM & FBOVESPA and CETIP (Custody and Financial Settlement of Securities). The merger of both creates the B3 - Brazil, Bolsa, Balcão, with potential and forecast to follow among the main stock exchanges worldwide (EXAME, 2017).

B3 is one of the world's leading stock exchanges and the largest stock exchange in Latin America. In January 2016, its market capitalization was among the top ten in the world, with a volume of US\$ 450 billion. However, compared to emerging indices such as Shanghai (US\$ 6.1), Hong Kong (US\$ 2.8) and Johannesburg (US\$ 899), the Brazilian stock market shows that the national potential is much higher than presented up this time (CEMEC, 2016).

The number of listed companies in January 2016 was 358 companies; this amount makes B3 among the eleven major exchanges in number of listed companies, but still far from the 2,828 companies listed in Shanghai, far from the 1,873 companies that are in the Hong Kong index, and "closest" to the Johannesburg index, which has 899 listed companies (CEMEC, 2016).



Source: B3, 2017

Figure 3: Ibovespa Index – July 2017

According to figure 3, the Ibovespa has shown a good recovery since a sharp drop in the beginning of the year 2016. These are the records presented by the capital market of a great political instability by which Brazil passes in the last years and that affects the country's economy.

## Discussion

The development of the Brazilian capital market occurs gradually and slowly in view of the great potential the country has when compared to other nations. According to the interviews conducted in this study, market professionals are unanimous in reporting the high interest rates practiced in Brazil, and this fact causes many investors to stop opting for the stock market (which finance large industries) to apply their resources. Thus, it is evident that banking activity in Brazil is very profitable; for instance, in the year 2014 the return on the net worth of the large Brazilian banks was on average 18%, well above the US banks (7.68%) (BBC, 2015). On the other hand, there is a need for increased funding for the development of capital markets and large Brazilian companies.

There are some changes that are occurring slowly in the Brazilian capital market, as it is known that the largest sources of funds in Brazil are banks (via savings). Thus, some brokerage firms have excelled in the Brazilian market, brokerage firms are big partners of the banking sector (offering investment products from the banks themselves), manage large investment funds, and offer differentiated conditions for clients (advice, better rates) through a wide choice of investments in the capital market - something important for the stock exchange and listed companies. In

developed markets such as the US, the investment profile is mostly linked to the stock market through brokerage firms.

Faced with the current phase of capitalism, where the expansion of international trade is evident, the companies studied here developed and expanded globally using the capital market, inaugurating research centers, establishing partnerships with universities, institutes and clients. Thus, the companies adapted to the local, national and international context, expanding their businesses in national territory and abroad.

The emergence of BRF SA. through the fusion between Sadia and Perdigão officialized an international expansion project (BRF, 2009), which has been solidifying through a large geographic expansion of the company (Figure 1). The company's internationalization is fueled by the inauguration of factories, new acquisitions and the strengthening of higher value-added products.

The company was structured with a focus on the productivity of its entire productive chain, which in the long run contributed to reduce possible negative effects of conjunctural factors, such as exchange rates. In this respect, the company invested a total of R\$ 702.9 million in 2010, of which 32.2% were in improvements to its units, 24.9% in new projects and 42.9% in productivity (BRF, 2010).

In 2012, the company reinforces its performance goals based on the strengthening of its brands, portfolios, as well as in the distribution and local production, aiming to act with less intensity in commodities and more in processed and higher value-added foods. The company's internationalization plan expands with the construction of a factory in Abu Dhabi, an acquisition in Argentina, the purchase of the Federal Foods on Middle East, and a new business in the Chinese market. In the year of 2016, BRF's focus was on service in the Asian market, where the company already serves more than thirteen countries in the region, registering an increase in direct business of around 20% and the qualification of three new units of the company that export to the Chinese market.

Tupy, which has a historical relationship with the development of the city of Joinville, since the city was transformed with the reflections of such an enterprise, the current headquarters of the company (largest industrial park) gave conditions for the Boa Vista neighborhood to become one of the most populous neighborhoods of the city (with hospitals, colleges, among others). In Boa Vista neighborhood, the Tupy Technical School was installed in 1959, which was an important step in qualifying the local workforce necessary for the company's development.

Currently, looking for the next steps in search of technological frontier jumps, the company, starting in 2014, has adopted a strong effort in technological cooperation in partnership with universities such as the University of São Paulo - USP, Ohio State University in the USA, Autonomous University of Coahuila in Mexico, as well as with the SENAI Institute of Technology of Joinville and Conecyt Saltillo in Mexico; for this, the company created the Vice-presidency of Technology, Research and Innovation.

As noted in Tupy's history, the company has made moves in recent years that have favored its operations in the global market (manufacturing, marketing) and in the

capital market (capitalization). They are dynamics that favor the company's image in the international market (investors) and solidify its internationalization process.

About WEG, in the early 2000s, the company entered a phase of globalized internationalization characterized by the opening of factories abroad and the expansion of its multiculturalism through hiring employees from other countries. During this period, WEG overcame obstacles such as setting up factories outside Brazil, where it is necessary to establish company cultural guidelines and at the same time to benefit and encourage local labor (in case of factory purchases). In this phase, it was of great importance to send Brazilian workers to work outside Brazil and foreigners for the company's facilities in the national territory.

With the internationalization process solidified, WEG began to win global customers through its coverage around the world. In this phase, the company considerably increases its performance in the Asian market. The company makes acquisitions in every year (2000 - 2010), streamlining its business network abroad, sending its products to the most important global markets. With operations in more than 100 countries, the company sought geographic diversification to maintain a consistent dynamic of external growth, avoiding the economic oscillations of each nation.

Currently, WEG is among the largest manufacturers of electric and industrial motors in the world. In this regard, it started to have consistent aims in terms of internationalization, installing subsidiaries in five continents to increase its ability to compete globally, technologically and commercially, providing technical assistance and solutions for industrial complexes, projects and integration with the services and products of WEG.

## **Conclusion**

In summary, it can be seen that the potential of the Brazilian capital market is much higher than that shown up to now. Although the Brazilian stock exchange is one of the largest exchanges in the world, there is a large space to expand the business conducted in the Brazilian capital market. The historical and high interest rate of the country and the political instability of the last years are extremely relevant factors for the decision making by large national and international investors.

The process of diffusion and solidification of the companies of Santa Catarina studied here demonstrate the high degree of commitment in the performance of their respective sectors of activity, as well as with the investors that trust in these companies. Strengthening the local workforce, partnerships with universities, research institutes and clients solidify the companies' long-term business and assist in business expansion.

In this way, a developed capital market will contribute to the strengthening of Brazilian companies and, of course, to the emergence of companies that can contribute to local / regional development, as well as in other countries, such as BRF, Tupy and WEG. These factors contribute to the strengthening of the capitalism of Brazilian companies; companies that have a great relation with the international market can benefit from this fact to: improve their way of production through the sum

of knowledge and cultures of other countries; and expand their products portfolio through the recognition of other markets as consumer references, among others.

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***The Effects of Aerobic Dance with 9 Square on the Cardiovascular Endurance System and the Percentage of Body Fat***

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**Abstract**

This experimental research was one group pretest-posttest design. The purpose of the study was to compare the effects of Aerobic Dance with 9 Square on the cardiovascular endurance system and percentage of body fat before and after the implementation. Simple random sampling was employed to select a sample group of fifty students who studied in Silpakorn University and enrolled in the Principle of Exercise for Health course in the first semester of 2012. The main instrument was aerobic dance with 9square program. The samples were trained by aerobic dance with 9square program for eight weeks, three days a week (Tuesday, Wednesday, Thursday), one hour a day (17.00-18.00 hours) Pre- and Post-tests were implemented before and after the experiment to test the subjects' cardiovascular endurance and percentage of body fat. Statistics used in analyzing data were frequency, percentage, mean, standard deviation, and t-test dependent. The results showed that aerobic dance with 9square program had a positive impact on cardiovascular endurance and percentage of body fat. Subjects' heart rate while exercising was 137.74 BPM (beat per minute), and after training, it was 113.04 BPM. It showed that students' cardiovascular endurance, and percentage of body fat after training was proved significantly better than the result before training statistically ( $p < .05$ ).

Keywords: aerobic dance, nine-square, cardiovascular endurance system, percentage of body fat

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## Introduction

Being healthy is everyone's wish such the saying that "Without disease is a precious fortune." Being healthy combined with good mind contributes to effective people. In this current innovative society, "Sedentary behavior" is technology that allows people more conveniences and little movement, which is known as. Each day, less people move their body, which cause more risk to be suffered from NCDs, non-communicable diseases. They are grouped in relation to human's routine, and behavior that many cause, such as, heart attack, circular problems, diabetes, breast cancer and intestinal cancer. This brings more burdens on high expense but less physical efficiency to deal with work. In order to reduce risk of the aforementioned diseases, aerobic dancing boosts vascular circulation and lungs to absorb more oxygen. Aerobic dance with 9 square gives patterns of movement to brain which help it to be more systematic. This project is an experimental research about results from Aerobic dance with 9 square on physical efficiency, vascular circulation endurance, and fat percentage of body of Silpakorn's students. The experiment lasts 8 weeks and both before and after the experiment. This study also compares the endurance of vascular circulation and fat percentage in body before and after Aerobic dance with 9 square.

## Literature Review

Physical Efficiency means an ability to control and command body to do activities and work effectively, can be recovered and enthusiastically without being exhausted or fatigue. Instead, body's power in a short minute. To set proper exercise for each person, it is necessary to consider many elements to be proper for their physical and goal (Krabuanrat, 2006). General knowledge of exercise consists of exercise intensity, period of time, frequency which can be applicable to people's real lives. Likewise, People of all ages enjoy dancing without repetition and the dance gives them patterns in their brain to be more creative and imaginative. They also scaffold what they have learned and be examined their endurance from the exercise in a short period of time.



Picture 1 and 2 aerobic dance with 9 square

## Conclusion

According to the result of the experiment, it explains that aerobic dance is making movements with different rhythm that dancers can be creative in their moves. Thus it is suggested that people should exercise regularly in order to not only activate brain to be imaginative enhance change in vascular circulation and fat percentage in body.



Picture3 Fat percentage measured by TANITA



Picture 4 YMC -3 Minute Step test

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***Mass Media and Peace in Bosnia-Herzegovina: The Role of the Bosnian Mass Media after Dayton Accords, 1995***

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## Introduction

This paper examines the role that mass media played in Bosnia-Herzegovina after Dayton Accords 1995. It provides a theoretical framework and explores how Bosnian media outlets contributed to the peace process and national reconciliation. To envisage the difficulty of retooling the Bosnian mass media to promote peace, the paper reflects to the destructive role that mass media played during the Bosnian war. It highlights the roles of media outlets controlled by Bosnian Muslims, Bosnian Serbs, and Bosnian Croats. Because these rival ethnic groups had used mass media to fan war before Dayton Accords, the paper examines efforts aimed at utilizing these media organizations to serve the cause of peace. The paper also sheds light on newscasts convergence, namely between Belgrade's media and Bosnian Serb media on the one hand, and Zagreb's media and Bosnian Croat media on the other hand. This newscast convergence influenced the peace process in Bosnia-Herzegovina and affected its multiethnic and multicultural heritage.

The paper underscores the assistance that United States and the European countries provided to Bosnian media to sustain the peace process. It discusses the role that the Organization for Security and Cooperation in Europe (OSCE) played in regulating the Bosnian media to promote peace and democratization. The paper pays a special attention to role of The Media Experts Commission (MEC) in regulating the Bosnian media and utilizing it as a tool for enhancing peace during the 1996 elections.

## Conceptual framework

This paper builds on a number of theoretical frameworks, particularly, agenda setting, Ball-Rokeach and De Fleur's (1976) media system dependency theory and Gerbner et al.'s (1980) cultivation theory. According to Graber (1993) agenda setting is the gate-keeping that informs audiences "in fairly uniform fashion which individual issues and activities are most significant and deserve to be ranked highly on the public's agenda of concerns"(p. 216). Iyengar (1988) argues that individual readings of media messages activates selective recall that may challenge these messages and weakens agenda-setting effect (p. 598). Lasorsa and Wanta (1990) provide a different viewpoint and suggest that personal experience might reinforce media messages "rather than interfere with them"(p. 806). McCombs and Shaw (1972) argue that by relaying information to audiences, mass media indicate which political issues are important. McCombs (1996) describes agenda-setting as "an instance of community building"(p. 435).

Brewer and McCombs (1996) delineate two models of agenda-setting: the linear model where influence trickles from the media to the public and then policy, and the independent model which depicts the movement from the media agenda to the policy agenda. It is important to note that agenda setting is related to framing. A number of studies have dealt with the importance of framing in depicting reality (Gitlin 1980; Graber (1989; Gamson 1989; Iyengar & Simon 1993; Entman 1993, 1991; Shah et al. 1996). Entman (1993) argues that media frames rely on salience, repetition and association with familiar symbols while directing "attention away from other aspects"(p.54).

Ball-Rokeach and De Fleur's (1976) media system dependency theory assumes that individuals rely on media for information and orientation. The degree of society's dependence on media depends on the degree of stability or conflict, the society is undergoing, and the centrality of media as a source of information. Ball-Rokeach and De Fleur (1976) develop a model that illustrates the interrelation between media, society and audience, and the link with media effects (p. 264). They argue that at times of crises audiences are expected to be more dependent on media for information. De Fleur and Ball-Rokeach (1989) conclude that the media system control scarce information resources that interact with other systems and "produce cooperation motivated by mutual interest, conflict motivated by self-interest, and change toward greater symmetry or asymmetry of dependency" (p.321).

Gerbner et al.'s (1994) cultivation theory assumes that television content furnishes recurrent patterns of events as a source of perceptions of social reality that could be at variance with the real world. The cultivation theory suggests that heavy television viewers hold distorted image of the real world. Signorielli and Morgan (1990) refer to "cultivation analysis" as the third component of "Cultural Indicators" that deal with media content and its relationship to audience beliefs and behaviors (p. 15). Moreover, the authors suggest that "exposure to the total pattern rather than only to specific genres or patterns is what accounts for the historically new and distinct consequences of living with television: the cultivation of shared conceptions of reality among otherwise diverse publics" (Gerbner et al. 1994, p. 18).

### **A brief historical background**

Pre-1990 conflicts in Bosnia could be attributed to socio-economic factors (Christian rural peasantry versus Muslim landowners); imperial conquest (Habsburg versus Ottoman); and in early 1990s competing Serbian, Croatian and Muslim nationalisms. In addition, religious rivalries pitted Serbian Orthodoxy, Croatian Catholicism and Islam against each other ("Unfinished...", 1996, p. 14; Bennett, 1995).

When the Allies defeated Germany in World War II, Josip Broz Tito the leader of the victorious Partisans emerged as the ultimate leader of Yugoslavia. He adhered to communism and utilized the mass media "to bring Yugoslav people together in the Titoist spirit of 'brotherhood and unity.'" (Bennett 1995, p.10). Tito introduced the 1974 constitution that decentralized power, and tied the six republics in a federation. The constitution also provided autonomy to Kosovo and Vojvodina. Following his death in 1980, Yugoslavia plunged into political and economic crises. In the wake of the fall of communism in the Soviet Union and Eastern Europe, the Yugoslav federation started to disintegrate.

### **Balkan media as a tool for waging war**

Slobodan Milosevic emerged as an undisputed Serb leader by 1987. He benefited from the surge of Serbian nationalism that started with the 1986 memorandum of the Serbian Academy of Sciences and Arts that called on Serbs to be more assertive (Rogel, 1997, p. 95). In 1989, he amended the 1974 Constitution to annul Kosovo's autonomy. Milosevic

manipulated Serbian mass media and emerged as “a Serbian hero”(Rogel, 1998, p. 95). His central theme was that “all Serbs should be united in a single Serbian state”(Bennett, 1995, p. 97). Serbian media alleged that Serbs were exploited during Tito’s era and they demanded equality. But non-Serb nationalist leaders in the other Yugoslav republics challenged Milosevic’s move for centralization and used mass media in their republics for their advantage. Media war aggravated nationalist grievances and precipitated the disintegration of Yugoslavia (Snyder & Ballentine 1997, p. 30; Hampson, 1996, p. 154). Zimmermann (1995) asserts, “The manipulators condoned and even provoked local ethnic violence in order to engender animosities that could then be magnified by the press, leading to further violence”(p. 12).

Milosevic’s desire to dominate the Yugoslav federation ignited ethnic wars and led to Yugoslavia’s disintegration. His military assaults against Croatia in 1991 and Bosnia-Herzegovina in 1992 failed to quell pro-independence movements. Balkan wars involved disintegration of state structures and “the manipulation of opinion through the electronic media, and widespread violation of humanitarian law, including civilian massacres, mass rape, systematic starvation, hostage-taking, and the destruction of historic and cultural sites”(Kaldore, 1995, p. 19).

On January 15, 1992 the European Community recognized Slovenia and Croatia as independent states. Bosnia-Herzegovina held referendum on independence in February 1992. The European Community recognized it as an independent state on April 6, 1992. The war in Bosnia started the same day. On April 7, U.S. recognized Slovenia, Croatia and Bosnia-Herzegovina as independent states. “The remainder of Tito’s Yugoslavia, Serbia and Montenegro, chose to remain together and officially adopted the name of Federal Republic of Yugoslavia (FRY) on April 27, 1992”(Rogel, 1997, 27).

Some scholars suggest that it was the media war that ignited ethnic hatred and not “ancient Balkan hostilities”(Bennett, 1995, p. 148; Zimmermann, 1996a, p. 120). But “the impact of the supply of nationalist propaganda must be assessed in light of the demand for it”(Snyder & Ballentine, 1997, p. 29). Thompson (1994) articulates this point when he refers to pervasive prejudice and fear. He argues, “there was a disposition to believe ‘news’ which elicited and exploited the prejudice; without the media, however, Serbia’s leaders could not have obtained public consent and approval of its nationalist politics”(Thompson, 1994, pp. 127-128). The Serbs gave Milosevic and his program “support in three separate elections (1989, 1992, and in December 1993), thereby sharing with him in any guilt for the wars”(Mojzes, 1994, p. 158).

According to the New York Times, “Broadcast propaganda helped foment the ethnic hatred that led to war, and today it is impeding peace and reconciliation. (“Creating...,” 1998, A32). Rogel (1998) concurs and adds that television “was used to spread lies and fear about the enemy (false war information was regularly broadcast) and about political opponents in elections. Both Milosevic’s and Tudjman’s campaigns used media effectively to their advantage”(p.51). Media messages were meant to unify audiences of each ethnic group, and increase their fear of persecution by rival ethnic groups. Thus,

many “radio and television stations were primary targets in the war on Bosnia.” (“Journalists...,” 1996, p. 6).

### **Bosnian media and Dayton Accords 1995**

Following the shelling of a marketplace in Sarajevo in 1995, NATO bombers launched air strikes against Serb targets (“NATO begins...,” 1995, p. 19). NATO’s air strikes and the subsequent Croat and Muslim counterattacks forced the Serbs to soften their position and accept peace (Hoar, 1995, p. 20). After marathon negotiations, and a skillful carrot-and-stick approach, U.S. succeeded in persuading the warring parties to initial Dayton Accords on November 21, 1995, in Dayton, Ohio. On December 14, 1995, a General Framework Agreement was signed by Bosnian President Alija Izetbecovitch, Croatian President Franco Tudjman and Serbian President Solobodan Milosevic in Paris, France. The U.S.-backed Bosnian-Croat Federation “gained 51 percent of the territory of the republic and Sarajevo became again a unified city”(Zimmermann, 1996a, p. 233; “Signing...,” 1994, p. 137). “An imperfect document, the Dayton Accord provided for two recognized political entities within Bosnia separated into three military zones and enforced by 60,000 NATO troops (IFOR)”(Xhudo, 1996, p. 145). When Milosevic endorsed Dayton Accords, Belgrade media stopped mentioning Bosnian Serb leader Radovan Karadzic as a hero, but made “hints that he was involved in money-laundering and war-profiteering”(Silber & Little, 1995, p. 335).

Dayton Accords brought peace to Bosnia-Herzegovina, but it did not end the feelings of bitterness, injustice and animosity. In addition, the implementation of Dayton Accords’ military aspects, which stabilized the country, contributed to its virtual dismemberment. Entrusting NATO-led Implementation Force (IFOR) (and since December 1996, its successor, the Stabilization Force (SFOR)), with patrolling “the 1,000-kilometer demilitarized zone, actually helped legitimize the divide between the Muslim-Croat federation and the Serbian Republic of Bosnia-Herzegovina”(Rogel, 1997, p. 73). In addition, rival Bosnian Serbs and Croats, were “averse to free debate, free movement of journalists and even distribution of publications between the Serb-held half of the country and the Croat-Muslim federation—and even between the federation’s components parts.” (Randal, 1996, A 25).

Bosnian Muslims were dissatisfied with Dayton Accords because they believed it gave the Bosnian Serbs more land than they deserved. Haris Silajdzic, the Muslim prime minister of Bosnia-Herzegovina, criticized the peace deal and stated, “It’s not a just agreement...but it’s probably the best we could get” (Zimmermann, 1996a, p. 232). The Bosnian Serbs who accepted Dayton Accords grudgingly believed that they should gain 64 percent of Bosnia-Herzegovina as well as half of Sarajevo. Since Dayton Accords gave them only 49 percent of Bosnia’s territory, and they “lost Sarajevo and failed to destroy the Bosnian Federation” it was clear that they would aim at undermining Dayton Accords (Holbrooke, 1997, pp. 170-171). Moreover, Bosnian Croats were also dissatisfied with Dayton Accords because they could not sustain their mini-state, Herzeg-Bosna as an independent state. Moreover, they felt that U.S. and European countries forced them to accept living with Bosniac Muslims in a Federation. Thus, as Simic

(1996) has indicated “the future of Bosnia-Herzegovina is still uncertain” because none of “the parties to the conflict had realized its ultimate goals in Dayton”(p. 7).

### **Mass media in Bosniac-controlled Federation territory**

When the war started in Bosnia-Herzegovina in April 1992, Bosnian Muslim-dominated government argued that the war was not caused by different faiths or ethnic groups, but “caused by pure and simple aggression”(Silajdzic, 1997, p. 462). To preserve the integrity of Bosnia, Radio-Television Sarajevo (later became Radio and Television Bosnia-Herzegovina (RTVBH)) suppressed the news of the Yugoslav People’s Army’s (JNA) attack on Sarajevo (Stone, 1996, pp. 229-231). Thompson (1994) argues, “As a result, RTVBH’s effect on its audience was precisely opposite to that of TV Belgrade and TV Zagreb on theirs; it disarmed them psychologically”(p. 229). However, by 1993, Radio Bosnia-Herzegovina (formerly Radio Sarajevo) lost its balanced reporting and became the mouthpiece for the Bosnian Government. Media outside Sarajevo were under siege by warring factions. Though newspapers and magazine were shut down, Sarajevo’s daily *Oslobodjenje* (liberation) survived the war.

In mid-1995 Bosniac-controlled territory had about 32 local radio stations and 16 local TV stations, 170 magazines and uncounted newspapers. State-controlled television (RTVBH) could be seen by “at least 30 percent of the population of Republika Srpska as well as 78 percent of the population of Bosniac-controlled Federation Territory” (“Appendices,” 1999, p. 11). Alternative television stations included TV-IN, which was sponsored by the Office of the Humanitarian Representative (OHR). Other television stations that belonged to TV-IN included, RTV Mostar, TV Hayat. In addition, there was Liberty Television, which belonged to Radio Free Europe and broadcast to TVX in Sarajevo, TV Mostar, and Zetel in Zenca. However, “The highest profile and most expensive project, TV-IN, which is otherwise known as the Open Broadcast Network and cost \$ 10.5 million in 1996, has been a failure”(“Media in Bosnia...,” 1999, p. 2).

State-controlled Radio Bosnia-Herzegovina (Radio B&H) which covered all of Bosnia-Herzegovina, was the most popular radio. Other radio stations included, Radio Hayat, a nationalist radio; Sarajevo-based Radio Zid, which broadcast BBC, VOA and Deutsche Welle’s Croat and Serb language news services; and Radio Mostar, a Bosniac radio in east Mostar (“Appendices,” 1999, pp. 9-10). Another alternative medium was a Swiss-financed and OSCE-sponsored Free Elections Radio Network (Radio FERN). A number of new radio and television stations were established after Dayton Accords.

The press also flourished after Dayton Accords. The two Sarajevo dailies, *Oslobodjenje* and *Vecernje Novine* (Evening Newspaper) enjoyed relative editorial freedom, though *Oslobodjenje* was “64 percent owned by the state, and *Vecernje* 49 percent.” (Stone, 1996, p. 76). The two papers had regional editions in Tuzla and Zenica respectively. There was also a new daily, *Dnevni Avaz* (Daily Voice) published with material support of the ruling Bosnian Muslim Party, SDA.” (Stone, 1996, p. 76). *Lijiljan*, a weekly magazine was also connected with SDA. It was launched in 1995 with the support of George Soros’ Open Society Fund. *Dani*, a Sarajevo monthly also received assistance

from the Open Society Fund. But the highest recipient of the Open Society Fund financial support was Slobodna Bosna, an investigative biweekly. Another publication was Ogljedalo an “inter-entity monthly joint venture funded by USAID and London’s Institute of War and Peace Reporting linking Tuzla’s Front slobode, Banja Luka’s Novi prelom, Doboj’s Alternativa and Bijeljina’s Ekstra magazin”(“Appendices,” 1999, p. 8). According to International Crisis Group, “Despite a handful of quality publications, however, circulations are generally small and most of the industry would collapse if the donations dried up”(“Media in Bosnia...,” 1999, p. 7). Commenting on the difficulties facing his paper, Mehmed Halilovic, editor of Oslobođenje, said, “We survived the war, but in some ways it may prove even harder to survive in peacetime.”(Randal, 1996, A 25). The head of the Media Center in Sarajevo said, “We may have a lot of media, but no one is making a profit except one radio and two television stations....Every thing else is built on air.” (Stone, 1996, p. 76). The war has caused many older experienced journalists to flee abroad.

Most of the radio and television programs in Bosniac-controlled areas, were controlled by nationalistic parties. However, there were exceptions “such as Radio and TV 99 and Radio Zid in Sarajevo, as well as some small radio stations throughout Bosnia.”(Stone, 1996, p. 76). The Bosniac Government expressed little tolerance for anti-government reports. In one incident, police in Sarajevo seized copies of the Politika satirical magazine because it portrayed Izetbegovic as Tito (“Bosnian press...,” 1997, p. 11). OSCE criticized the Bosnian government for confiscating Politika magazine. On their part, Muslims were also critical of NATO. The Muslim-led Government complains that NATO “has forced it to comply with demands of the Dayton peace accords, such as the return of Serbian and Croatian refugees to Sarajevo, while not putting equal pressure on the Bosnian Serbs”(Hedges, 1998, A10). Thus, selective implementation of the Dayton Accords was unacceptable to Bosnian Muslims.

### **Bosnian Serb media**

On April 7, 1992, the Bosnian Serbs led by Radovan Karadzic declared their own state, Republika Srpska. Bosnian Serb Army and Bosnian Serb Democratic Party (SDS) established their own television and radio stations (SRT) in addition to a news agency, the Serb Republic News Agency (SRNA) in Banja Luka, northern Bosnia. The agency and the radio-television services in Serb-controlled areas in Bosnia-Herzegovina converged with Belgrade’s media, and became almost undistinguishable. For example, during the first year of the war “Kanal S evening news [based in Pale, Bosnia, and owned by Karadzic] was rebroadcast every night on TV Belgrade”(Thompson, 1994, p. 253). The SRNA and Kanal S provided their audiences with war propaganda that was intended to demonize Croats and Muslims and mobilize Bosnian Serbs (Thompson, 1994, p. 257). Serb media in Bosnia-Herzegovina continued their destructive role even after the signing of Dayton Accords. For example, Bosnian Serb “media campaigns seem to have played a very considerable part in persuading Serb residents to flee” Sarajevo refrain from living in the Bosniac-Croat Federation (“Unfinished...,” 1996, p. 93). Moreover, Bosnian Serb leader Radovan Karadzic continued to characterize Bosnian Croats as “fascists and Muslims as Islamic fanatics”(Zimmermann, 1995, pp. 16-17). According to Abramowitz

(1997) “The Pale news media pose an immediate threat to the Dayton peace agreement”(A34).

In September 1995, the High Representative for Bosnia-Herzegovina, Carlos Westendorp warned the Serbian television for broadcasting reports supporting Karadzic and attacking NATO-led Stabilization Force (SFOR). When pro-Karadzic supporters ignored his warning, NATO bombed SRT's transmitters (“Bosnia's battle ...,” 1997, p. 2). But the Serbs repaired the transmitters and resumed anti-NATO propaganda “comparing SFOR to the occupation forces from the Nazi era.” (“Rebel Serb TV...,” 1997, p. 1). In response, SFOR declared that it would not “hesitate to take necessary measures including the use of force against media networks or programs inciting attacks on SFOR or other organizations.” (“NATO to Bosnia...,” 1997, p. 1).

In late September 1996, SFOR seized four transmitters broadcasting signals from Bosnian Serb state television in Pale and switched their signals to a television in Banja Luka, loyal to NATO-backed Bosnian Serb president Biljana Plavsic. Robert Gelbard, the chief U.S. envoy to Bosnia, said, “the Pale studio had continually broadcast ‘threats...lies and distortions’ about the international organizations enforcing the 1995 Dayton peace accord.” (“Regulate...,” 1997, p. 7). However, when pro-Karadzic elements protested NATO's action, NATO returned the transmitters with certain conditions. “Under the deal, pro-Karadzic broadcasters agreed to tone down anti-NATO and anti-U.N. propaganda” (“Serb hard-liners ...,” 1997, p. 1).

Interestingly, the power struggle over the Bosnian airwaves disrupted a show of a popular Venezuelan-made soap opera, named *Kassandra*. According to Pat Neal “viewers all over the war-torn country were tuning into a Venezuelan-made soap opera for their doses of passion, drama, intrigue and power struggles in what could be called a passionate escape from reality.” (Neal, 1997, p. 1). According to Pat Neal, “concerned that the show's absence could spark unrest, the U.S. Department wanted it back on the air.” (Neal, 1997, p. 2). The show was resumed when U.S. intervened and brought a copy of the soap opera from Miami-based Coral Pictures. According to a media specialist, since Dayton talks, audiences “have shunned news and taken refuge in pop music and pirated movies on television.”(Randal, 1996, A 25). Silva Vujovic, a Bosnian consultant for Sarajevo-based Media Plan, argues, “Bosnians of all political persuasions are sick and tired of news which they automatically equate with the propaganda held responsible for contributing so much to starting and maintaining the war.” (Randal, 1996, A 25).

When the U.N. International War Crimes Tribunal indicted Radovan Karadzic for committing war crimes during the Bosnian war, Bosnian Serb television increased its anti-NATO and anti-UN messages. Hedges (1998) indicates that “nationalist Bosnian Serb newspapers including *Serb Oslobodenje* and *Javnost* refer angrily to Mr. Westendorp as ‘the dictator’ and complain of ‘colonial domination by the West.’”(A10).

To stop Bosnian Serb's inflammatory rhetoric and incitement of violence, NATO requested the U.S. to deploy three EC-130E (a C-130 cargo plane mounted with an airborne television station) specialized aircrafts. These aircrafts were intended to

transmit UN broadcasts and “jam Bosnian Serb broadcasts.” (“U.S. deploys ...,” 1997, p. 1).

During the summer of 1997, SRT “began an anti-NATO campaign, mixing footage of NATO soldiers with that of Nazis in World War II.”(Metzel, 1997, p. 16). Thus, on October 1, 1997, NATO-led troops seized four key Bosnian Serb television transmitters “because of broadcasts considered hostile to the 1995 Dayton peace accord.” (“NATO troops ...,” 1997, p. 1). Moreover, NATO Secretary-General Javier Solana stated that “Bosnian Serb Television was obstructing the peace process by suggesting that the U.N. International War Crimes Tribunal at the Hague, Netherlands, is anti-Serb.” (“NATO troops ...,” 1997, p. 1). Thus, NATO military chief Gen. Wesley Clark told NATO defense ministers that “broadcasts would resume under ‘new management,’ adding that the transmitters were being turned over to supporters of Plavsic.” (“NATO troops ...,” 1997, p. 1). However, Bosnian Serbs continued to obstruct the return of non-Serb refugees and described aid agencies’ efforts as “‘conspiracy’, while the refugees themselves are accused of ‘perpetuating aggression against Serb territory.’” (Peric-Zimonjic, 1997, p. 1).

By 1998, Republika Srpska had “25 news papers and other periodicals, 36 radio stations (seven of which are privately-owned), seven television stations (i.e. production units or studios) and one official news agency, SRNA”(“Media in Bosnia...,” 1999, p. 5). Though, Sarajevo-based television stations, Croatian television as well as Belgrade television could be watched, SDS-controlled television in Republika Srpska was the most influential medium. With regard to radio, the only semi-independent radio was Radio Krajina which became an “influential forum for alternative points of view”(“Media in Bosnia...,” 1999, p. 6).

Bosnian Serbs also managed to control the press. SDS controlled Banja-Luka’s dailies Glas Srpska, and Srpsko Oslobođenje. Otherwise, Belgrade press was available and “read more than anything published in Republika Srpska”(“Media in Bosnia...,” 1999, p. 5). Alternative press included Novi prelom in Banja Luka, Alternativa in Doboj and Panorama in Vijelijina. However, the most influential paper was Nezavisne novine which evolved “with the financial assistance from the UK’s Overseas Development Agency, the US Agency for International Development (USAID) and George Soros’ Open Society Fund”(“Media in Bosnia...,” 1999, p. 6).

### **Bosnian Croat media**

Emulating Bosnian Muslims and Bosnian Serbs, Bosnian Croats proclaimed their own state, Herceg-Bosna on August 28, 1993. Its leader was Mate Boban who emerged as a Bosnian Croat leader through Tudjman’s patronage (Silber & Little, 1995, p. 293). Bosnian Croats controlled media outlets in areas that they controlled during the Bosnian war. They established Herceg-Bosna News Agency (HABENA) as well as TV Siroki Brijeg near Mostar. This TV station was operated and controlled by Croatia Radio and Television (HRT) in Zagreb, and “there was no attempt to disguise it as a separate entity”(p. 261). Thus, news from Herceg-Bosna and Croatia converged and sustained war

propaganda against Bosnian Muslims, who were characterized as “mujahedin and ‘Islamic fanatics’”(Thompson, 1994, p. 262).

Since Dayton Accords did not recognize Herzeg-Bosna as a state, Croatia started to absorb Bosnian Croat-controlled areas. Consequently, “Croatian currency, telecommunications, and media are all in use. In 1995, the Bosnian Croats were granted a number of directly elected members in the Croatian parliament”(“Unfinished...,” 1996, p. 103). In addition, Bosnian Croat’s media continued to impede the implementation of the peace process. According to New York Times, “in the Croatian sector, which is controlled by virulent nationalists, some television and radio stations still incite people to block the return of refugees or call those who work with other ethnic groups ‘traitors’”(“Creating...,” 1998, A32).

After Dayton Accords, Bosnian Croat media market remained almost closed to alternative media. By 1998, there were fifteen radio stations, five television stations and ten papers. The most influential media were TV Herceg-Bosna, and Croatia’s HRT which supported the Bosnian Croat ruling party, HDZ. There was also a privately-owned hardline nationalistic television, Hrvatska Televizija Mostar. Moreover, there was Hrvatska Radio Postaja Mostar, which the Bosnian Croats seized from the Bosnian Government during the war. Under Bosnian Croat control, the radio lost its pre-war multi-ethnic character and became “exclusively Croat and fiercely nationalistic” (“Appendices,” 1999, p. 5).

With regard to the press, there was Hrvatska rijec, which backed the Bosnian Croat party HDZ. There was also Horizont, which was a semi-independent paper. The Bosnian Croats issued a weekly paper, Hrvatski list. This paper had good access to Croatian market because it was “printed at the Slobodna Dalmacija plant in Split, Croatia, and distributed by the same company”(Thompson, 1994, p. 261). Croatia’s press referred to Bosnian Croat news as Herceg-Bosna news in an attempt to boost Herceg-Bosna’s status. In addition, Croatia’s television (HRT) whose signal covered much of Bosnia and Herzegovina, was “the principal information source” in Bosnian Croat controlled areas (“Media in Bosnia...,” 1999, p. 6). Moreover, Bosnian Croat municipal authorities owned Radio Herceg-Bosna.

### **The Serbian media**

During the war, the Serbian mass media referred to Croats as “‘Ustase’ (and later, Muslims became ‘Turks’).” (Zimmermann, 1996a, p.121). Moreover, during the 1992 “ethnic cleansing” in Bosnia, Belgrade media portrayed Serbs as victims of Turks, and charged that “Muslims were plotting to establish an Islamic fundamentalist state”(Snyder & Balletine, 1997, p. 28; Globe, 1996, p. 192; Macleod, 1997, p. 250; Zimmermann, 1995, p. 4). Thus, Belgrade’s media played a prominent role in inciting Bosnian Serbs against Croats and Muslims.

After signing Dayton Accords, Milosevic said that he “has instructed the media to tamp down their former anti-Muslim and anti-Croat fervor and get behind the Dayton

Accord.”(Marton, 1996, p.2). This shift in media content by late April 1993, was instrumental in shifting Serbian public opinion in favor of peace in Bosnia (Thompson, 1994, pp. 127-128). However, most Serbs did not “understand why this loss is celebrated as peace.” (Silber, 1996, p. 62). According to Perlez (1997) despite his promise in Dayton Accords to uphold free press, Milosevic “shut some of the regional television stations run by opposition parties. The only privately owned television in Belgrade, Karic TV, was pulled into line after it showed some independence”(Perlez, 1997, p. 5). When Milosevic faced anti-government protests in the winter of 1996 -97, his government “deprived newspapers of newsprint, threatened owners and jammed opposition radio broadcasts”(Wilkinson, 1998, A2).

The Serbian Government controlled the News Agency, Tanjug as well as Serbian Radio-Television (RTS). An alternative media was Radio B92 which was established in 1989. Its audience was limited to Belgrade area (about 2 million listeners). The largest private radio station was Studio B, which reached one-third of the country. It was “mostly staff-owned and funded by advertising”(Thompson, 1994, p. 118).

The Serbian Government also managed to control major newspapers, namely Borba (Struggle) and Vecernje novosti. The other papers, namely “Politika and Politika ekspres, are controlled via the collaboration of the directorship of the Politika group”(Thompson, 1994, p. 124). A semi-independent magazine was Vreme (Time), which had “never chorused the standard anti-Muslim and anti-Bosnian justifications of the war”(Thompson, 1994, p. 124). Other independent papers that stood out included Nasa Borba, Danas and Dnevni Telegraf.

The Serbian Government continued to harass and intimidate independent-minded media which were depicted as “the American fifth column”(“Current situation...,” 1999, p. 6). Serbian media depicted opposition media as “traitors of Serbian national interests”(Perlez, 1998, p. 6). In addition, the Government managed to takeover local independent media, ration newsprint and exert pressure on businesses not to advertise in unsympathetic papers. The takeover of semi-independent newspaper, Borba was well-known. Harassment of independent Radio-TV Studio B was relentless (Stone, 1996, p. 74). In February 1996, Serbia “revoked the registration of the Soros Foundation Centers in Serbia and Montenegro, which had been working to raise the skills of journalists.” (Stone, 1996, p. 74). Perlez (1997) argues, that for ten years now, “state television has fed the Serbs with an undiluted diet of nationalism”(p. 5). Veran Matic, founder of Radio B-92, adds that Serbian television informed Serbs that Serbia was the center of the world and the West wanted “to destroy it” (Perlez, 1997, p. 5).

In 1998 patriotic fervor continued to dominate state-run media in Serbia. Opposition was described as “treacherous foreign conspiracy.”(Wilkinson, 1998, p. 2). Ivan Mrdjen, editor in chief of Nasa Borba explained that Belgrade authorities summoned representatives of the five independent newspapers and told them that the government “expects a ‘patriotic’ attitude from the media during national crises.” (Wilkinson, 1998, p. 2). Serbian authorities controlled newsprint to control the press. “Nasa Borba, the only major independent daily in Serbia, struggles to reach more than 10,000 readers, whereas

Politika, the pro-Milosevic paper, never suffers from a newsprint shortage and reaches 300,000.”(Marton, 1996, p. 2). Migliarina (1998) argues, “A tight political grip by the ruling parties affected most of the local media scene; even formally private media were often controlled by political forces, and the few truly independent journalists had to fight their own personal battles with self-censorship”(p. 2).

### **Croatian media**

Croatian President Franco Tudjman wanted to divide Bosnia into two entities: a Croat-controlled entity and a Serbian-controlled entity (“unfinished...,” 1996, p. 103; Zimmermann, 1996a, p. 117; Vevoda, 1996, p. 109). He used the war as a pretext to muzzle independent media. In “1992 the respected weekly Danas [Today] was forced out of business and the independent-minded daily, Slobodna Dalmacija [Free Dalmatia], was taken over by HDZ sympathizers”(Bennett, 1994, p. 231). Croatian Television (HTV) and the government-controlled paper Vecernji list were used as tools for Croatian war propaganda.

Croatian media “Coverage of war in Bosnia has been designed to deliver simple messages: Croat forces in Bosnia are only defending themselves and their ‘centuries-old heaths’;... the other sides, the Serb forces and, since early 1993, the ‘Muslim forces’ too ...are expansionist, aggressive and genocidal”(Thompson, 1994, p. 166). Zimmermann (1996a) adds, “The nationalist media sought to terrify by invoking mass murderers of a bygone time. The Croatian press described Serbs as ‘Cetniks’- the Serbian nationalists of World War II”(p. 121). Moreover, Tudjman called Bosnian President Izetbegovic “the mujahedin Alija”(Thompson, 1994, p. 135) and depicted Bosnian Muslims as “dangerous fundamentalists” who wanted to establish an “Islamic state in the heart of Europe”(Zimmermann, 1995, p. 15, 1996a, p. 117). Croatian media repeatedly referred to the Bosnian Army as “mujahedin”. Thompson (1994) contends, “Croatian war reporting is Croatian war lying...it will take decades for the profession [journalism] to recover from producing so many lies”(p. 201). Ethnic-cleansing and other atrocities that Croatian forces committed against non-Croats went unreported in Croat media (Thompson, 1994, p. 199).

Though Dayton Accords called for promoting independent media in the Balkans, Tudjman continued to muzzle media organizations. For example, “nearly all of the fifteen TV stations in Croatia are owned by people sympathetic to the ruling party.” (Brodsky, 1998, p. 23). The state-controlled radio and television (HRT) reached about 74 percent of the population. Another example was the closing down of “Radio 101, an extremely popular radio station whose termination prompted 100,000 demonstrators to march in protest in Zagreb in November 1996”(Rogel, 1996, pp.114-115). Because Croatian authorities controlled the three national television networks and influential radio stations, Croatian journalists “accused President Franjo Tudjman of acting as editor-in-chief of all media, electronic and print.” (Borsky, p. 23). Some writers who called for peace in the Balkans were harassed. Publications that faced intimidation included anti-war biweekly Akzin and Jutarnji List (Morning Paper)( Stone, 1996, p. 75).

Croatian government used newsprint, distribution, and legal suits as means to control independent press. According to Borsky (1998) “four of the six newspapers in Croatia are state-controlled and these inform 8 percent of the people while weekly newspaper are the main source of information for about 2 percent.”(p. 23). One independent newspaper, Feral Tribune, which depicted Tudjman and Milosevic as partners in war crime, faced about 80 percent hike in newsprint price. John Fox, the director of the Washington, D.C., office of the Open Society Institute, contends, “The Croatian government is setting the pace for media repression in the region...It uses a relentless strategy of economic, administrative, and police measures against the media and individual journalists.” (Brodsky, 1998, p. 23).

### **Western attempts to retool Bosnian media to promote peace**

Balkan journalists who met in mid-1995 in Ljubljana, Slovenia, recommended that “to ensure that ‘peace’ is translated into democratic institutions, healthy reconstruction and economic development, the West must insist that independent and free media be a precondition, an essential feature.” (Stone, 1996, p. 76). According to the New York Times, “The challenge for Bosnia and international community is to help keep these new media active after NATO troops leave, and to improve the state television and radio stations that are the main source of news for Bosnians”( “Creating ...,” 1998, A32). Another issue facing the Bosnian media resides in the nature the market-driven journalism that Western countries wanted. The challenge will be how to balance profit motives and civic journalism (Vinson, 1997, p. 48).

### **U.S. assistance to Bosnian mass media**

Holbrooke (1997) asserts, “the American policy goal, simply defined, should remain to prevent partition and implement Dayton.”(p. 171). To promote peace, U.S. Government as well as U.S. private sector extended financial and technical assistance to Bosnian media (“Unfinished...,” 1996, p. 93). President Clinton stated, “We’ve helped to turn the media from an instrument of war into a force for peace, stifling the inflammatory radio and television broadcasts that helped to fuel the conflict”(“Clinton announces...,” 1998, p. 109). U.S. also has helped in restructuring the state-run media to meet “international standards of objectivity and access and, establish alternative independent media”(“Clinton announces...,” 1998, p. 109). During her visit to Croatia in August 1998, U.S. Secretary of State, Madeleine Albright “called for ‘respect for a free media’ in order to ‘keep leaders accountable.’” (Brodsky, 1998, p. 23). She criticized the state-controlled television (HRT) informed Tudjman that “ ‘HRT cannot operate this way’ ... ‘Having an open and free media, especially a television that functions freely, is one of the benchmarks of what has to happen.’”(Brodsky, 1998, p. 23).

Washington warned Bosnian Serb hardliners in mid-August 1997, to halt the ‘vile poison’ from Pale SRT, or face the consequences. James Robin, the State Department Spokesman said, “We call on the Pale leadership to end this rhetoric. Karadzic and his cronies should stop throwing kerosene on the fire”(Peric-Zimonjic, 1997, p. 1). The shift in U.S. policy from focusing a specific date for withdrawing its forces to creating “‘concrete and achievable benchmarks,’ clearly gave the peace process a much-needed

psychological boost early in 1998.” (“To build a peace...,” 1998, p.7). In a nutshell, U.S. commitment to enforce many military aspects of the Dayton Accords was instrumental in sustaining the fragile peace process in Bosnia-Herzegovina (Doherty, 1994, p. 484).

### **The role of the OSCE in regulating the Bosnian media**

Following its deployment in 1996, “the Implementation Force (IFOR) took an important step to improve the media situation when it used its transport helicopters and trucks to take journalists from all sides to joint press briefings with other implementing agencies” (Miglierina 1997, p. 2). In addition, as stipulated in Dayton Accords the OSCE established a Provisional Election Commission (PEC) to conduct elections in Bosnia-Herzegovina. The PEC created the Media Experts Commission (MEC) in May 1996. The MEC was entrusted with helping the PEC to ensure the fairness of the elections. The mandate of the MEC was “twofold - to enforce the media’s compliance with the PEC’s election rules regarding the media and to advocate for journalists’ freedom of expression” (“The Media ...,” 1998, p. 8). In August 1997, the OSCE created the Media Monitoring Center (MMC) to provide the MEC with information about the quantity and quality of media organizations in Bosnia-Herzegovina. In 1998, the MMC’s role was expanded to monitor the Bosnia media compliance with the PEC rules and regulations. Moreover, the Media Access Support Team (MAST) was created to facilitate the interface between media outlets and political parties.

The MEC imposed sanctions against media outlets that violated the PEC rules and regulations. For example in 1997, at the MEC’s initiative the Stabilization Force (SFOR) seized a Bosnian Serb radio transmitter that used “inflammatory language and hate speech regarding local elections” (“The Media...,” 1998, p. 11). This action demonstrated the MEC’s seriousness in imposing sanctions against those who broadcast inflammatory language. In another incident the MEC imposed sanctions against the Croat Democratic Union (HDZ) which broadcast inflammatory speech from its HTV station in Mostar. When the HDZ refused to condemn hate speech, in compliance with MEC’s rules, the Election Appeals Sub-Commission (EASC) “struck three candidates from the HDZ candidates list” (“The Media...,” 1998, p. 11).

In Serb-controlled areas (Republika Srpska) Karadzic’s television station, Channel S, worked in complete violation of the PEC’s rules and regulations. Under MAST pressure, Channel S accepted some of MEC directives. However, one week before the election, it resumed broadcasts “favoring the SDS/SRS” in its news coverage (“The Media...,” 1998, p. 17). According to MEC other stations including HRT returned to violating MEC’s directives after the election. In addition, MEC instructed Radio St. Jones, which was headed by Karadzic’s daughter, to follow its regulations. But the radio “inexplicably chose instead to cease broadcasting news on August 21, 1998” (“The Media...,” 1998, p. 17).

The MEC’s report suggests that the most pervasive problem facing the media in Bosnia-Herzegovina was “the lack of professionalism”, particularly lack of “distinction between reporting fact and opinion”. The report adds that media outlets in FRY and Croatia

should be monitored because they affect political campaigns in Bosnia-Herzegovina. In addition, many Bosnian “political parties are offshoots of political parties in Croatia and FRY, including: the Croat Democratic Union...; the Socialist Party of Republika Srpska; and the Serb Radical Party of Republika Srpska” (“The Media...,” 1998, p. 28). The MEC concludes, “Overall, it seemed that political parties received equitable access to the media. However, it seems the motivation behind this was more their fear of the consequences of not abiding by OSCE rules than the principle of access” (“The Media...,” 1998, p. 39). It adds, “If we still do not see the media investigating the government or attacking human rights abuses, at least we are seeing greater access to the opposition, fewer attacks on them, and less hate speech” (“The Media...,” 1998, p. 44).

MEC drew criticism for its “ineffective response” to complaints regarding media non-compliance with the PEC rules and regulations (“The Media...,” 1998, p. 10). The New York Times criticized the MEC for regulating the content of broadcasting and argued, “If the commission appears to be imposing Western-backed censorship, it will violate democratic principles, enrage Bosnian citizens and encourage neighboring dictators to strengthen their hold on the media.” (“Creating...,” 1998, p. A32). Proponents of freedom of press criticized MEC’s efforts and considered regulating Bosnian media as “censorship”(Shenon, 1998, A8). In Bosnia-Herzegovina, “Several media outlets complained about having not been involved in drawing up the guidelines” (“The Media...,” 1998, p. 41). According to Miglierina (1997), the OSCE’s overall media operations can be described as “less effective, though they play a major role in the implementation of the Dayton accord”(p. 3).

## **Conclusion**

It is known that mass media played a destructive role during the Bosnian war. However, they were not the primary cause of the war. Though journalists reported, and often exaggerated what had happened, Muslims, Serbs and Croats were prepared to hear what their respective media had told them. Bosnian politicians manipulated the media to obtain public consent to execute their nationalistic agendas. Moreover, in Bosnia, Serbia and Croatia, which were authoritarian regimes, media independence was tantamount to “treachery”. Thus, media organizations in these countries mirrored their political systems. Biased reporting persisted as Muslims, Serbs and Croats highlighted atrocities committed by their rivals and obscured their wrongdoing.

OSCE’s support for Bosnian media ranged from fostering media regulation to seeking sanctions against inflammatory language and misinformation. However, OSCE and MEC in particular adopted a top-down approach that ignored daily political realities on the ground. The MEC’s report reveals the Commission’s paternalistic and heavy-handed approaches. Parties to the conflict should have been involved in drafting the rules and regulations that governed their media outlets. However, some of the MEC’s shortcomings could be attributed to the complex nature of ethnic cantonizations and power configurations in Bosnia-Herzegovina.

It is important to note that NATO used force to impose Dayton Accords on Serbs. Moreover, neither Bosnian Muslim nor Croats were satisfied with the peace deal. Thus, the feelings of bitterness and animosity continued to prevail despite the enforced cease-fire. In fact Dayton Accords has contributed inadvertently to dividing Bosnia-Herzegovina along ethnic lines. The elections of 1996 and 1998 brought nationalistic parties to power and reinforced ethnic divisions. This phenomenon could be a harbinger to partition. Most media outlets in Bosniac-controlled territory of the Federation, Croat-controlled territory of the Federation as well as Republika of Srpska were government-controlled. Journalists faced harassment and investigative journalism was discouraged. NATO's attempts to neutralize Karadzic and put his broadcast media in the hands of West-backed rival, Plavsic had failed. Alternative media thrived on foreign aid from Western countries. Thus, its sustainability remains questionable.

While Belgrade's newscasts converged with those of Republika Srpska, Zagreb's newscasts converged with those of Herceg-Bosna. Thus, mass media in Serbia and Croatia continued to affect the peace process in Bosnia-Herzegovina. Moreover, though broadcasting from the three ethnic entities overlapped Bosniac Muslims, Bosnian Croats and Bosnian Serbs continued to watch their respective mass media organizations. In sum, Bosnia-Herzegovina remains an ethnically divided society despite Western efforts to maintain its multi-ethnic, multi-cultural identity. In such a deeply divided society it is not easy for mass media to forge national unity and nation-building. Thus, four years after Dayton Accords, the peace process in Bosnia-Herzegovina remains fragile and unsustainable.

To conclude, mass media alone can not sustain peace in Bosnia-Herzegovina. Since Dayton Accord has inadvertently facilitated the partitioning of Bosnia into two entities, audiences in these entities remain loyal to their government-controlled media organizations. Moreover, because NATO-led forces declined to implement key aspects of Dayton accords, namely the return of refugees and the arrest of indicted war criminals, many Bosnians remained skeptical about the viability of the peace process. Thus, mass media alone may not preserve the Bosnian paradigm as long as Bosnian Muslims, Bosnian Croats and Bosnian Serbs continue to harbor animosity for each other. In such a situation, partitioning of Bosnia-Herzegovina into three mini-states, Muslim, Croat and Serb remains a possibility.

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## ***Tourism Routes and Learning Activities in the King's Projects of Thailand***

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### **Abstract**

The King's royal initiated projects of Thailand are one of the most important strategies for developing the country. The projects have launched in all areas throughout Thailand. Benefits from the projects not only helped people live sufficiently but also led them how to learn and apply the knowledge to their lives. The majority of the projects have become learning centers for communities and turned to be tourism areas for visitors. The objectives of this preliminary research aimed to study tourism routes and learning activities of the King's projects in Phetchaburi province which located in the middle part of Thailand. The King's projects, such as Leam Phak Bia Royal-Initiated Project, Chung Hua Man Royal Project, Huay Sai Study and Development Center, and another two projects were studied.

Keywords: tourism route, learning activity, the King's royal initiated projects, Thailand

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## Introduction

The royal initiated projects have been developed for over 50 years (started in 1952) by the late King Bhumibol Adulyadej (King Rama 9) with the objectives to develop the upcountry people's quality of life, and to develop and conserve the environment – both soil and water. At present, there are more than 4,000 royal-initiated projects throughout Thailand. After the death of King Bhumibol Adulyadej, Thai people have been keenly interested in these projects; they have visited them and learn what the late King had done for His country. Thus, many royal-initiated projects have been changed to be the resources of studies as well as tourist attractions of both Thai and foreign visitors.

In this study, concepts and principles of sustainable tourism, sufficiency economic, and royal- initiated projects, as well as creative learning were reviewed and applied. The authors defined tourism following the late King Bhumibol Adulyadej's initiated projects as a unique feature of the new tourism activities associated with the royal-initiated projects in Phetchaburi province; with the objectives of providing visitors with direct experience in the tourism activities, learning and understanding, impressing and seeing the values that lead to application to the benefits of living, contribute to the creation of products and the economic value of the community, as well as create consciousness of those involved in the conservation of sustainable tourism. Moreover, the authors defined creative learning as learning based on creativity and leading to innovation, which can be applied to the benefits of living. Also, the tourism following the late King Bhumibol Adulyadej's routes was defined as the routes to the tourist attractions in the royal- initiated projects in Phetchaburi province.

For the area of study, Phetchaburi is a province located in the central part of Thailand, bordering Pak Tho district in Ratchaburi province, and Amphawa district in Samut Songkhram province; Prachuab Khiri Khan province to the south; the Gulf of Thailand to the east, and; the Socialist Republic of the Union of Myanmar to the west. Most of the population is agriculturists (66.20 per cent) ([www.petchaburi.go.th](http://www.petchaburi.go.th), 2012; Phetchaburi Agriculture and Technology College, 2012: 1-2; Phetchaburi Province, 2012: 3-4). Phetchaburi is in a group of provinces located in the lower part of central Thailand; it is considered very important according to the country geography since most of the terrain is lowland plain, it can facilitate traveling and link transportation by water and land. It also has variety of abundant resources and is considered an important economic center (National Research Council of Thailand, 2012: 3-4). Phetchaburi is a well-known province for its various tourist attractions with history, nature, sea and beautiful beaches. Additionally, it has 22 royal-initiated projects; many of them are well-known among tourists who visited to learn about them and buy their products, such as the royal-initiated project of Huay Sai Study and Development Center, Laem Phak Bia Research and Development Center, and Chang Hua Man, etc. (Phetchaburi Province, 2012: 32-37.)

## Research Methodology

The research methodology used in this research is research and development (R&D) with multi-staged of data collection for both qualitative and quantitative data, namely:

1. **Research<sub>1</sub>**: Field study to survey routes and models of available creative learning activities according to the late King Bhumibol Adulyadej's trail in Phetchaburi province.

2. **Development<sub>1</sub>**: Create and develop models for tourism creative learning activities, based on the late King Bhumibol Adulyadej's trails.

3. **Research<sub>2</sub>**: Implementation of the developed models for creative learning.

4. **Development<sub>2</sub>**: Evaluation and improvement the implemented models of creative learning based on the late King Bhumibol Adulyadej's trails.

This article presented the findings from stage 1 in which the data were collected from the field survey of 5 royal-initiated projects, namely Laem Phak Bia, Chang Hua Man, Nong Jik, Punthurat and Huay Sai projects. The authors collected the data during January to June 2017 through in-depth interviews with 10 operating officials of the projects and 20 Thai tourists. The data were analyzed by content analysis and presented the findings in the essays with illustrations.

## Findings

The findings of the preliminary study revealed that:

1. The tourism routes of the five projects were started from Tha-Yang to Cha-Am districts in Phetchaburi province, and it could be managed as one and a half day trip. The findings also revealed the potential of tourism in terms of tourism resources, available facilities, management, and cooperation of the people and organizations.

2. The creative learning activities of the areas included wastewater treatment, water conservation, mangrove conservation, growing plants in dry areas, feeding dairy cattle. The projects also produced daily organic products, and they offered the creative learning centers to farmers and visitors. Tourists could learn and experience the Thai way of life with the local people, in particular, farmers in the communities. With the large area of each project, visitors could also enjoy walking or cycling along the routes around the area.

The findings of this study confirmed both of the development from the late King Bhumibol Adulyadej's projects, and His dedication to the people.



**Picture 1** Laem Phak Bia Royal-Initiated Project

There is a lecture building to educate visitors, a bus provided to take them to visit different sightseeing spots, and mangrove trails for their study.



**Picture 2** Wastewater treatment within Laem Phak Bia Royal-Initiated Project

A part of the procedure to treat wastewater sent from downtown Phetchburi was shown. The treatment is through natural procedure; bring the wastewater into the treatment pond and waiting for settling until the water quality is improved.



**Picture 3** Learning activities at the Huay Sai Study and Development Center

Within this royal-initiated project, the learning activities of planting vegetables, plants, fruits, and process of waste products such as charcoal for daily use, are demonstrated.

### **Conclusion**

The findings reveal both of the development from the Royal Development Projects, and the dedication of the late King to his people. Currently, Thai people visit the Royal Development Projects not only to learn but also to follow the footsteps of our beloved King.

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