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Table of contents

Exploring Cultural Patterns in Business Communication. Insights from Europe and Asia

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Abstract: *This paper starts from the assumption that in our current world, dominated by fast-paced changes, culture has acquired increasing prominence, which is likely to affect interpersonal and business relationships alike. Therefore, relying on a number of cultural patterns (high and low context cultures, collaborative and individual cultures and polychronic and monochronic cultures (Hall, 1990, 1997; Moll, 2012), we aim to provide an overview of the dynamics of cultural differences and similarities between Europe and Asia, with a focus on the business environment. Thus, arguing language proficiency does not necessarily ensure successful (business) interaction, we will be analysing a number of elements involved in business communication (e.g. the way in which individuals in a particular culture relate to time or how they position themselves within a group). More precisely, we will be looking into the ways in which people think, negotiate, and manage conflict, in an attempt to identify the various elements that drive specific behaviours and account for cultural expectations and assumptions.*

Keywords: cultural patterns, high & low context, collaborative & individual, polychronic and monochronic, Europe vs. Asia

Introduction

Our paper starts from the premise that "culture is communication" (Hall, 2002), that meaning it is encoded in both language and in the cultural context where communication occurs and, therefore, linguistic proficiency alone does not guarantee the success of an intercultural business encounter; it depends more on the participants' cultural awareness and their ability to understand and use cultural variables (Jackson, 2020; Moll, 2012). Moreover, we argue that in the present day globalized context, people from diverse cultural backgrounds are required to work together and share the same environment. Thus, a key concept here would be awareness, since lack of cultural awareness is likely to hinder communication and affect both interpersonal and business relationships.

Thus, starting from this hypothesis, our research goal is to identify the main business communication patterns that may affect communication in business encounters, with some insights

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from Europe and Asia. Many definitions of the word *culture* have been put forward, as the concept governs (almost) all instances of human interaction. Moreover, we argue that individuals, as members of communities, cultures and subcultures, are constantly shaped by, and in their turn, shape their own culture. A genuinely collective phenomenon, culture is defined by Hofstede as the sum of the "unwritten rules of the social game", consisting of "the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede et al., 2010, p. 6). In a restrictive sense, *culture* is understood as a feature of civilisation, a "refinement of the mind" (Hofstede et al., 2010, p.5), pointing particularly to products of this refinement, in the form of literature, arts, education, etc. From a broader perspective, culture is perceived as moving past the boundaries of such interpretations, encompassing "patterns of behaviour, symbols, products, and artifacts" (Jackson, 2020, p. 27).

When we hear the word *culture*, we may think about a number of things, such as the 'national culture', the 'religious culture' or 'ethnic culture', 'international culture', or even the 'organisational or business culture'. Furthermore, while we usually associate culture with the behaviours, customs, rituals, traditions, etc. generally practiced by a certain community, in discussing business culture and business communication, we need to consider issues such as norms, values or beliefs shared by the members of that community. We may even have to take into account that climate and geography, as business practices are inherently linked to regional hierarchies and powers. In discussing "the collective programming of the mind", Hofstede identifies five universal elements that occur – to a varying extent – in all countries/ cultures: power distance, masculinity, individualism, long-term orientation and uncertainty avoidance (1980, 13). According to Hofstede, these are in fact a reflection of the ways in which cultures have adapted to life conditions, and, consequently, they correspond to five fundamental problems – hierarchy, identity, gender, virtue and truth (Hofstede et al., 2002).

In our paper, we are far from intending to apply a "one size fits all" approach to cultures; on the contrary, we aim to identify practices that have been adopted by all cultures, practices that govern interaction in both business and general contexts. In so doing, we will rely on the terminology put forward by researchers like Melanie Moll (2004, 2012), Edward T. Hall (1976, 1991), or Geert Hofstede (2001, 2002, 2010). In particular, we will ground our investigation in the concept of cultural patterns, as defined by Moll (2012), in an attempt to discuss upon the characteristics that distinguish or bring together the Asian and the European cultures. Our main interest here is to identify the ways in which people from the two cultures under discussion relate to issues like language, time, space, or communication styles.

According to Melanie Moll, "a cultural pattern is a recognised behaviour or group of behaviours that defines or is defined by the people who perform it" (Moll, 2012, p. 44), which influences the "ways in which people (…) interact, socialise, and relate to one another and their surroundings" (Moll, 2012, p. 44). As the scholar shows, cultural patterns reflect both the norms of acceptable behaviour within a given culture, and the expectations that members of a particular community may have from "communicatively competent members of their society" (Moll, 2012, p. 44). One example is that of greeting styles, which vary greatly from one country to another. For example, while a handshake can usually function as a globalised greeting in European cultures, we need to bear in mind that there are cultures where any form of physical contact is avoided or even forbidden.

In order to draw a coherent illustration of the cultural data characterising the two cultural areas chosen as a case in point, we will make use of the theoretical frameworks put forth by the researchers mentioned above. We need to point out, from the very beginning, that none of the constructs we will be describing operates in a vacuum, isolated from the others but, on the contrary, they complement one another.

1. High and low context cultures

The first cultural pattern we address and apply in our paper is that of high versus low context cultures, a distinction dealing with the "amount of contextual information that members of various cultures tend to use when communicating with one another" (Moll, 2012, p. 46). In her analysis of cultural patterns, Melanie Moll draws on previous work conducted by Edward T. Hall (1976, 1991, 1997), and, similarly to the American anthropologist, she supports the view that "culture is communication", arguing that "one of the best places to look for cultural distinctive is within our own interaction, or language use" (Moll, 2012, p. 45).

Edward T. Hall is widely acknowledged as one of the pioneers and founders of the study of intercultural communication. He began his research after World War II, a period which had familiarised him with various cultures and which had formed the basis of his keen interest in the field of intercultural communication. He became particularly interested in the study and implications of space, time and context in the complex process of intercultural communication.

In his work, *Beyond Culture*, Hall identifies a dimension which could be used to describe cultures in terms of the amount and type of information that a person can manage, i.e. the way the exchange of information is performed (directly vs. indirectly), a dimension which has been the foundation of numerous studies conducted with the purpose of describing cultures and of enabling

intercultural communication and exchanges. He distinguishes between *high and low context* cultures. In broad terms, in *high context* cultures, people speak indirectly in order to avoid conflict and maintain harmony at all costs. Politeness and display of respect are paramount in high context cultures. Consequently, non-verbal cues are extremely important since gestures, eye-contact, use of silence constitute the main communication channels – "Hall's framework suggests that business professionals in a high-context environment (e.g., China, Japan) tend to communicate verbally and non-verbally in ways that assume that others know much of what they know (e.g., cultural scripts, historical background, social conventions)." (Jackson, 2020, pp. 282-283)   On the contrary, in *low context* cultures (best exemplified by Germany and the US), people communicate directly, the focus is on the task to be carried out and all unnecessary details are eliminated from the act of communication. Excessive politeness is rather taken as a good reason for suspicion (Utley, 2007) and "business professionals who employ a low-context style of communication do not make assumptions about their communication partner's knowledge and typically provide detailed information in their verbal message" (Jackson, 2020, p. 283).

The most appropriate contexts in business interactions which provide valuable information on *high/ low context* cultures are the ones which imply providing negative feedback. Irrespective of situation, telling a partner/ employee/ supplier, etc., that their professional input is insufficient or simply unsatisfactory requires a good deal of tact and ability to empathise. The issue becomes even more difficult to deal with when the actors involved do not share a common cultural background, when notions such as politeness and respect are perceived through a different lens. While some cultures focus on the task and tend to communicate directly whenever there is a problem in carrying it out, others are more concerned with people's feelings and saving face. It is this difference in approaching communication which inspired Hall in classifying cultures as *high* and *low context*.

In her 2015 work, *The Culture Map*, Erin Meyer, a professor at INSEAD, clearly illustrates and rightfully insists on the importance of Hall's dimensions, particularly on improving business professionals' abilities to deal with high vs. low context cultures. In her work, Japan (the highest context culture in the world), China, Korea, Indonesia, followed by India, Saudi Arabia are top in terms of high context communication while the lowest context cultures are: the US (on the top position), Australia, the Netherlands, Germany, followed by Finland, Denmark, the UK. Therefore, linguistically speaking, low context cultures tend to make intensive use of *upgraders* in providing negative feedback (and not only), e.g., *totally*, *absolutely* while high context cultures will tend towards an intensive use of downgraders, e.g., *maybe*, *a little*, *sort of*, *a little*, etc. To reinforce this idea, the author exemplifies with what the British (an average low context culture) could say in certain

situations, translating what they actually mean and with what the Dutch (clearly a low context culture) understand: what the British say - "I was a bit disappointed"; what they mean – "I am very upset and angry"; what the Dutch understand – "It does not really matter", or "I'm sure it's my fault", meant as "It's not my fault" and understood by the Dutch as "It's his fault" (Meyer, 2015, p. 67).

The same view is taken by Melanie Moll who argues that in high context cultures "much of the meaning or intended interpretation of the talk is found in the context or situation of the speakers and less (…) in the actual talk itself", while in low context cultures "speakers encode much more of the specific information in the talk segment, and less information is shared in the situational context" (Moll, 2012, p. 46). Levels of directness, as characteristics of the high/ low context distinction can be exemplified by the following interaction: "Maria: Are you thirsty?/ John: What would you like to drink?" (Moll, 2012, p. 46), a broken conversational pattern, where the classic sequence 'question-answer' has been altered by the speakers' communication styles.

Misunderstandings and communication failures are even more likely to occur in Asian-European or Asian-American interactions due to the first's high context and the latter's low context communication styles. Moll provides the example of the German culture, as illustrative for the low-context communication style. "Germans tend to be very direct, to the point, and often highly value efficient messages" (Moll, 2012, p. 47), as opposed to high context cultures (e.g. Asia, where indirectness is preferred.

2. Monochronic and polychronic cultures

The second pattern we make use of in our paper is that of monochronic and polychronic cultures. Hall discusses the perception of time in many of his works. Nevertheless, his most representative work in terms of perception and attitudes towards time is to be found in *The Dance of Life* (1983). According to him, cultures tend to be either *monochronic* or *polychronic*. The key feature of *monchronic* cultures is that they tend to do things in a well-organized manner, one at a time, in a sequence. Punctuality is generally associated with monochronic cultures. On the contrary, in *polychronic* cultures, people tend to do many things at a time, which is perceived as "fluid", and punctuality is not necessarily considered a virtue.

Nowadays, business communication in English has become a field of study. Most often, business encounters take place between partners from different corners of the world and communication is performed between non-native speakers of English, whose linguistic proficiency is extremely varied. It is for these reasons that researchers' focus has been on identifying the best

means of communication in business contexts by concentrating on extra-linguistic elements. Cultural awareness becomes thus essential in any act of performing international business and consequently, cultural knowledge turns out at least as important as linguistic proficiency due to the fact that cultural information is essential in the complex process of building trust between partners, an element which is indispensable in business. It is then only natural that E. T. Hall's cultural dimensions, as well as those fostered by other researchers in the field, namely, Geert Hofstede, Fons Trompenaars, Richard Lewis, etc., are extremely useful to anyone involved in international business.

Erin Meyer (2014) points to E.T. Hall's concepts of time, i.e. monochronic vs polychronic and, starting from the fact that polychronic cultures approach time in a flexible manner, she describes them as *linear* (equivalent to monochronic) or *flexible* (equivalent to polychronic). The most representative examples of a linear approach to time come from Germany, Scandinavia, the US, the UK while the most eloquent examples of a flexible one come from the Middle East, Africa, India, South America. The author further points to the risk of conflicts which may arise in business interactions due to such fundamentally different approaches and perceptions of time and, implicitly, scheduling. These may determine people from a flexible (*polychronic*) culture to misjudge those from a linear (*monochronic*) culture as rigid and inadaptable while the latter would consider the first chaotic and incapable to focus on the task. Perception among cultures can vary immensely depending on the degree of flexibility considered: for example, Germans may complain about French lack of punctuality while Indians can hardly cope with French rigidity in scheduling. Nevertheless, Meyer draws a flexibility scale, with linear-time cultures on the left and flexible-time cultures on the right side, which proves quite revealing for our purpose. While Germany, Japan, the Netherlands, Switzerland, Sweden, the US, the UK and Denmark are on the left side of the scale, countries such as Spain, Italy, Russia, Brazil, Mexico, China, Turkey, Saudi Arabia, India, Nigeria, Kenya and Turkey are on the right. The average score is obtained by Poland, the Czech Republic, France. According to Meyer, in linear-time cultures, "project steps are approached in a sequential fashion, completing one task before beginning the next. One thing at a time. No interruptions. The focus is on the deadline and sticking to the schedule. Emphasis is on promptness and good organisation over flexibility." (Meyer, 2014, p. 227) In flexible time cultures, on the other hand, people do not mind interruptions, tasks may be changed as a consequence of new opportunities ahead and adaptability is praised. One extremely interesting aspect that Jane Meyer identifies is that, despite sharing the Asian cultural heritage, Japan and China differ in terms of time approaches: while "Japan is linear-time, China and (especially) India practice flexible-time" (Meyer, 2014, p. 228). However, despite the fact that we have initially pointed out that punctuality is most frequently associated to monochronic cultures, this does not apply in all cases. A

major exception to the rule is the case of China compared to Japan, best illustrated in Jane Meyer's above quoted work: while the Chinese are highly punctual (a feature most common among monochronic and therefore, linear-time cultures), their flexibility (a feature most common to polychronic, i.e. flexible-time cultures) is world famous and it is this feature which ultimately places them among the most representative polychronic cultures. Asian cultures, with the notable exception of Japan, tend towards a polychronic approach to time while most European ones, led by Germany, tend towards a monochronic (linear) approach to time. Nevertheless, while countries such as Poland or France adopt a well-balanced attitude towards time management and scheduling (i.e. they fall on the middle of the scale drawn by Meyer), Spain, Italy (Latin cultures) and Russia tend towards a higher degree of flexibility.

3. Collaborative and individual cultures

As regards the collaborative versus individual cultures pattern, the central issue revolves around the concept of speech styles. According to Moll, speech styles provide information about the extent to which a culture is more individualist or collaborative (often in conjunction with the notion or low versus high context cultures). This refers to whether or not the message is transmitted directly, or it is packed with politeness and softening markers, and corresponds to a direct or indirect speech style. In order to soften the message, speakers may resort to special words, called "hedges" (Moll, 2012, p. 47), which may take the form of polite words or phrases (e.g. please; I was wondering), modal verbs or question forms. While the reasons for using a direct or indirect communication style may vary widely, the prevalence of one over the other is often associated with the adherence to a high or a low context culture.

Let us consider the following example taken from Gibson's *Intercultural Business Communication*:

A Belgian manager working in Thailand is unhappy that his secretary regularly arrives at work at least 30 minutes, and sometimes as much as one hour, late for work. He knows that the traffic in Bangkok is bad, but this is getting ridiculous. One morning, when she arrives late again, he explodes in front of the others in the busy office. He then takes her aside and tells her that if she can't get to work on time she may risk losing her job. She responds by handing in her resignation (Gibson, 2009, p. 34).

The example above can be explained by the different communication styles characterising the two cultures exemplified, the Belgian and the Thai one, respectively. In this precise situation, direct criticism – even used in a private, face-to-face interaction – is not permitted, as it could lead to 'loss of face'. As Moll also shows, "enormous social problems can occur when someone from a highly direct culture uses their conversational norms in a place or culture where indirectness is more highly valued and seen as polite" (Moll, 2004, p. 33). Reliance on an indirect communication style could have been a good alternative to the blunt criticism shown by the Belgian manager. One example would be the use of indirect questions that could have hinted at the problem (e.g. Have you had your car fixed yet, or are you still using public transportation? or Has your mother got out of hospital yet?). This strategy, although without mentioning the problem directly, would have enabled the manager to hint at his secretary's repeated late arrivals. Moreover, a communicatively competent interlocutor would have read between the lines that the Belgian manager was unhappy with his secretary's attitude to schedules, working hours and punctuality. In Verluyten's terms (1999), this strategy is called 'blurring the message', and it fosters better understanding and conflict avoidance. On the other hand, the Belgian manager's attitude is explained by his cultural background; as Moll argues, some cultures "tolerate quite high levels of directness. (…) [and where] open, frank, and often quite blunt utterances are the norm for conversation" and "are part of the normal cultural makeup" (2004, p. 33).

The critical incident involving the Belgian manager who tells-off his secretary in front of the whole office is an illustration of the high and low context cultures divide. The Thai culture is high context; face saving is paramount, and, in general, communication is structured in more polite forms. However, high context communication moves beyond the mere use of softeners, polite forms and modal verbs. One case in point is that of Asian cultures, where agreement – even on a surface level – is highly valued; blunt disagreement, on the contrary, is hidden under smiles, and face-saving and politeness prevail over other aspects of the instance of communication.

As we have seen, the high versus low context cultural pattern is closely connected to people's attitude towards time. Thus, we notice that high context individuals tend to be polychronic, they perceive time as a flexible entity, placing less weight on punctuality, and consider that the overall aim is far more important than the means of achieving it – time-related aspects included. Such an attitude could hinder communication with a monochronic, low context (business) counterpart, for whom punctuality and strict observance of schedules and deadlines is critical.

According to Melanie Moll, high context cultures also tend to be more collaborative. They value solidarity and they tend to focus on the group as an entity. Moreover, even in a work-related context, it is not uncommon in high context cultures to inquire about one's family (sometimes it is

even desirable and used as a means to build relationships with business partners). Conversely, low context cultures tend to be more individualistic and to "separate social categories of work, family, entertainment, etc. into clear divisions" (2012, p. 51). For low context cultures (e.g. Germany, Austria) it is rather uncommon to inquire about the private life of a business acquaintance, since the private and public spheres are separated.

Conclusions

Our investigations have confirmed previous research conducted in the field, showing a clear connection between monochronic/ polychronic cultures and high/low context cultures (Jackson, 2020). While drawing a detailed description of monochronic/polychronic cultures based on Hall's and Kaufman-Scarborough's works, Jackson concludes that while in monochronic systems, people tend to stick to plans, value privacy, are accustomed to short-term relationships and are low-context, in polychronic systems, they tend to build long-term relationships, they borrow and lend things quite easily and, most importantly, are high context. Her findings are supported by examples from high context cultures such as: Egypt, India, Saudi Arabia. Another interesting association that Jackson points out is that between Hall's high/low context cultures and Hofstede's individualist/ collectivist cultures: "For Hall (1976), there is a strong correlation between high-context and low-context cultures and collectivism (...). He posits that membership in a collectivist or individualistic culture influences how business professionals relate to co-nationals and plays a role in determining how much information is provided in intercultural interactions." (Jackson, 2020, p. 283) We may therefore assume that while Europe, as a whole, may described as a low context culture, particularly if compared to Asia, we should nevertheless bear in mind the fact that there are various degrees of directness across the old continent and that, also, while Japan leads the world in terms of indirectness, by comparison, the Chinese are much more direct.

Having analysed these cultural patterns, we emphasise, once again, that they do not represent universals; instead, they should be interpreted within their context, since behaviour within the different cultural groups is subject to variation. Thus, members of high context groups could share low context characteristics and vice-versa. One case in point is that of low context cultures (e.g. the US) which, urged by political correctness, have started to rely more on indirect speech strategies. The constructs discussed are instrumental in broadening awareness of how intercultural communication works, and in acknowledging the fact that linguistic proficiency is not enough to ensure the success of the (business) interaction. Meaning is far from being encoded in language alone, but also in context,

in the ways in which people position themselves in society or how they related to notions of time and space.

Thus, beyond all cultural knowledge that any professional in international business should acquire in order to be able to cope with such challenges, we should all be prepared to adapt to the particular context that we are to participate in and to bear in mind that culture is a dynamic phenomenon, with various layers which reflect cultural dimensions manifesting at various levels and to different degrees.

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Measuring and monitoring change in a strategic business context. Considerations on the role of organizations' composition elements

Tudor IRIMIAȘ[*]

Abstract

This paper brings theoretical arguments that support good business administration practices. The European business environment (see the EU motto: united in diversity) is as homogeneous in terms of legislative areas (i.e., the single market, economic and monetary union, fair competition practices), as heterogeneous in terms of particularities and cultural, regional and local contexts, which can be methodically extracted through the PEST analysis (political, economic, social and technological). In this business context but also of the desideratum of any organization to generate added value, regardless of its nature, the process of quantifying the status quo of the organization must be considered as a decisive factor in the change management process. The organization's strategy has to be therefore translated into criteria that are compatible with its goals and quantifiable - only then will it be possible to adequately assess the results of implementation. In the following lines I present the methodological norms for quantifying the status quo of an organization, as well as the potential types of indicators needed.

Keywords: strategic management, organisational change, change indicators, strategicstatus quo

Introduction

The activity of an organization takes place, if we consider the temporal dimension superimposed by the complexity of the decisions assumed by the management on the operational, tactical and strategic level. The aspects that operationalize the strategic objectives start from the premise of measurability.

Organizational management researchers argue that balanced assessments of organizational performance (i.e., the organization's status quo) must start from a variety of indicators and dimensions that reflect the functionalities and environments of the organization (see Cameron and Whetten, 1982; Sicotte *et al*., 1998; Irimiaș, 2018b, p. 83). A novel approach to change management emerges from the model of management consultants Hayes and Hyde (2016) who highlight the need for an indicator

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of change. The authors (Hayes and Hyde, 2016) reiterate[1] that it is accepted that about 70% of change programs fail. A solution to this problem can be continuous monitoring of change and finding the means by which such a process parallel to change can be executed (compare Buono and Kerber, 2008, p. 112). This is necessary in order to turn change management into a flexible process that allows for real-time improvement interventions, thanks exclusively to the characteristic of process monitoring.

The need to quantify the activity of an organization stems, among other things, from the actions taken at European level to develop methodologies for constructing composite indicators (compare Nardo *et al.*, 2005; OECD, 2008; COIN, 2019) aiming (1) to increase interest in the indicators composed in academic circles, the media and those who do politics; (2) providing a wide range of methodological approaches to composite indicators and (3) meeting the need for international guidelines for this area (see El Gibari *et al.*, 2019).

From the perspective of consulting in business strategies (Hayes and Hyde, 2016), it is concluded that, "in the long run, the success of planned changes can be assessed by performance indicators". Because one of the main imperatives of organizational change is to convince and have human resources on their side as active participants (i.e., promoters) in the change process, the indicators are intended to help organizations cope more effectively with change, by facilitating the information of all parties involved (compare Myers and Reed, 2018, p. 52).

Quantifying the status quo of the organization prior to strategic planning is recommended because (1) it creates *a picture of the current state of the organization* that can be reported at each step of the change implementation process to determine the evolution or involution of the undertaking, 2) it gives the change management process *visibility and transparency in relation to each resource*, process or structure of the organization and (3) it *facilitates the implementation* due to its features of quantification-measurement of the elements of the system which is subject to change.

Irimiaș (2018b, p. 84) highlighted the triggers of change in four distinct environments: social, political, technological and economic and the two dimensions of organizational activity, micro and macro. The working method consisted of evoking and analyzing different models and methods of scanning the organization and the business of the organization (compare Schreyögg and Koch, 2010, p. 81; Hungenberg and Wulf, 2015, p. 15), resulting in the division described above. This method aims to define the measurable status quo of the organization through indicators which are specific for the business at the time of the impact of change. An effective way to effectively and realistically

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[1] Compare Beer, M., Eisenstat, R. and Spector, B. (1990), Why change programs don't produce change, *Harvard Business Review*, Vol. 68, No. 6, pp.158–167; Beer, M. and Nohria, N. (2000), *Breaking the Code of Change*, Harvard Business School press, Boston; Roberto, M.A. and Levesque, L.C. (2005), *The art of making change initiatives stick*, *MIT Sloan Management Review*, Massachusetts, Vol. 46, No. 4, pp.53–60.

capture the timing and magnitude of change is to consider the process of adopting and defining composite indicators. These are, according to the OECD (2008), compilations of singular indicators, which appear when it is desired to define a multi-dimensional conceptual model.

1. Determining the compositional elements of the organization and the relationships between them

1.1. The composition elements of the organization

This subchapter highlights the importance of the *real and desired value* of the indicators which are characteristic for the changes in the organization by building the discourse from the following perspectives:

- *elements within the organization* that are influenced by changing indicators,
- *recommended intervention techniques* for inducing change and
- *selection, evaluation and standardization* of the resources necessary for the intervention.

In the first phase, that of planning the necessary activities and resources, I recommend an overview of the organization perceived as a system (compare Okhrimenko, 2017, p. 509) of tangible and intangible forces, promoters of or against change, inherent -as a matter of fact, which digress the compositional elements of the organization. In short, I consider the system as a group of elements between which a set of connections and relationships is established. Continuing the same reasoning from this scientific approach, the compositional elements of the organization are the simplest parts of it, which can no longer be analyzed or detailed because it is no longer necessary or possible. They are generally represented by individuals, objects or other units.

In choosing the elements that make up the system, the optics built so far on the organization of a complex system were first taken into account, in a dynamic balance of forces, triggering and opposing change (Irimiaș, 2018a, p. 35) and secondly, the reasoning according to which, the triggers for change come from the four environments: economic, political, social and technological, each with their two micro and macro dimensions (Irimiaș, 2018b, p. 84). The set of predefined indicators that encompass, in a quantifiable form, the strategy of an organization, define the impact that change can have on the organization as a system, while establishing its boundaries.

The elements of the system indicate characteristics or states susceptible to undergo transformations in time. The state of an element or a conglomeration of elements is identified by means of an attribute or state variable and, in the case of this research, by one or more indicators of change. The relationships and connections in a system occur because the composition elements of the

organization are interconnected, the modification of one of them generating changes in one or more elements. The relationships between the elements are sequential, reciprocal or polar. At a given moment, the status quo of the organization is diagnosed with the help of all the states of its elements characterized by changing indicators; these states can change for various reasons, thus expressing the functioning of the system.

A system can be open or closed, depending on the intensity of its relationships with other systems that are external to it. In the case of the entity with primary economic functionality, for example, the organization is considered an open system with the ability to influence (at the micro level) and to be influenced (at the macro and micro level). The influences and communication between the organization and its living environments are given by the values and evolutions of the indicators that measure the effects of change, representing the input variables, given by the stages in which the composition elements of the organization are. Certain inputs can be considered disruptive factors, which change the state of some elements of the system. The category of input variables that can change the state of a system by influencing its operation in order to achieve a set goal is called the system control. The stage of the input variables is given either by the disturbing factors detected by modifying the indicators that measure the effects of the change, or by the desire of the management expressed by selecting some "desired values" of the indicators; I mention that the two actions described can also take place at the same time.

A particular form of control of a system is the regulation (represented by the transition between *real and desired* values), which for a control center, means to proceed in the manner in which the operation of a controlled subsystem leads to a certain desired state, that is, to achieve the target - objectives.

Like any system, the functioning of an organization is mirrored in changing its elements. One of the major transformations in an organization can be, for example, the production or provision of services, characterized by processes. The process of production/provision of services comprises two distinct sides - the technological process and the work process. The technological process represents the direct, quantitative and/ or qualitative transformation of the objects of work by modifying their dimensions, chemical composition, internal forms or structure and/or their spatial arrangement. The work process represents the activity of the executor in the sphere of production/provision of services or the fulfillment of a function in the non-productive sphere, but of existential nature regarding the organization as a system.

In order to produce/ provide services in the organization, the factors of production/ provision of existing services come together, merging in proportions that depend on both the availability and

condition of the composition elements of the organization and objectives. The purpose of these processes is, following the combinations of available composition elements, either material goods or services.

Due to the conceptual overlaps mentioned above, the application of the notion of system to that of organization can also be made from the perspective of different component elements. It is necessary to observe that the properties of the elements of the organization are interdependent, interinfluential and modifiable by managerial decisions of planning, organization, management, stimulation and/ or control. Viewed from the perspective of an economic system with political, social and technological implications, I propose the following composition elements of the organization:

- financial means (from an economic point of view) including the rights and obligations of the organization included in the balance sheet in value form. Financial means refer to the shares held in other companies and to the receivables of the organization and to the liquidities in the bank or in the house:
  - o → *rights* (potential gain), *obligations* (potential expenses), *liquidity* (cash).
- the management network of the organization and the information-decision-making network (from a political point of view) with its different forms of propagation in the enterprise:
  - o → *accuracy and decisional efficiency* (*strategy*), *power exercised effectively* (*management*), *influence used* (*leadership*). In the context of the elements of the political composition of the organization, it is mentioned that the "power" is formally acquired through the function, and the "influence" is acquired through the informal components of the organizational composition.
- human resources (socially), characterized by various state variables (e.g., efficiency, satisfaction, qualification, function). Also, in this category, the following can be included as entities from the perspective of the compositional elements of the organization: the set of ethnic knowledge and the social values (i.e., organizational culture) and the set of professional and scientific knowledge of the members of the organization.
  - o → *work efficiency* (RU professionalism), *job satisfaction* (RU satisfaction), *organizational values* (RU organizational identity).
- material means (from a technological point of view): machine tools, equipment, installations for which the balance sheet retains two state variables: the value and the category of fixed assets. Other state variables may relate to the nature of the equipment, installed capacity or production capacity. The same category includes raw materials, representing finished, semi-finished or in-process products which are in the balance sheet under the name of holding values:

o → *technological efficiency* (as it should be), *technological flexibility* (as it should be), *technological efficiency* (as it should be).

The following table shows the 12 primary composition elements of the organization proposed in this theoretical research, divided by their areas of origin:

Table 1 The composition elements of the changing organisation

Perspective	The changing elements
(P) Political	*accuracy and decisional efficiency*
	power exercised effectively
	influence used
(E) Economic	*financial rights*
	financial obligations
	liquidities
(S) Social	*work efficiency*
	job satisfaction
	organizational values
(T) Tehnological	*technological efficiency*
	technological flexibility
	technological efficiency

1.2. Establish the necessary techniques and resources

This subchapter will detail the 12 composition elements of the organization, established in the previous subchapter and set out in Table 1. The composition elements of the organization which is subject to change are correlated with the bunch of techniques and resources required in order to modify them.

By *techniques* I mean the set of procedures and skills used in the exercise of the management of the composition elements of the organization. The steps to follow in the process of monitoring and controlling change will be:

1. Both the deadline for implementing the necessary change and the reporting and control time points are determined and these are graphically represented by using a Gantt chart;

2. The potential number of human resources necessary to induce change and respect the time frame follows from here;

3. Following the analysis prior to the implementation of the change, the budget necessary to carry out the change will emerge.

The term "*human resource*" will mean the person who manages or participates, taking into account also the anomalies of human behavior (see Avram and Irimiaș, 2018, p. 696) within the

processes of organizational change. Human resources actively or passively participate in the evolution or involution of the process.

In order to preserve the basic condition of a model, that of simplifying reality, the most comprehensive and general elements of composition in each environment of the organization are selected. Following this reasoning, three elements from each environment were considered (the justification for the importance for each of these elements that were selected was presented together with the description of the element). Next, the composition elements of the organization will be detailed from the perspectives of potential techniques and managers.

From a political perspective (P), the enterprise consists of all entities that aim to manage the organization's resources in order to achieve its strategic objectives; among these, there are: the management network (power, delegation, methods, techniques) and the information-decision-making network (information, tools). Thus, the micro and macro environments of the organization are reflected on the following three elements of composition: *Accuracy and decision-making efficiency, Power exercised and Influence used.*

The techniques used in managing *decision-making accuracy and efficiency* (i.e., strategy and organizational structure) are consulting and openness to expert forecasting and management decision systems, monitoring and evaluating the results of the decision-making process and optimizing it, increasing the organization's capacity for collection, interpretation and operation with information as a support resource for decision making, permanent reporting in the decision making process to the strategic objectives of the organization. Taking into account the nature and purpose of each mentioned action, the accuracy and decisional efficiency is given by the capacity of comprehension and analysis, preparation and efficiency of the management network (managerial chain) of the organization.

The techniques used in managing the *exercised power* (i.e., management) are efficient punctual and nominal delegation, making and fulfilling promises, setting and meeting deadlines, sharing tasks and directions, and monitoring the activities of managers, monitoring and analyzing business processes within the organization. Taking into account the nature and purpose of each mentioned action, the efficiency of the exercised power is given by the professional training and the accumulated economic and political, theoretical (formal in nature) competencies of the human resource with managerial attributions.

The techniques used in managing *the use of influence* (i.e., leadership) are influencing and manipulating, harmfully or non-harmfully, of the human resources to perform tasks and objectives, creating a link between strategic objectives and management activity, evaluation and optimization of business processes within the organization. Taking into account the nature and purpose of each

mentioned action, the beneficial use of influence is given by the personal qualities (of an informal nature) and by the accumulated and possessed social competences of the human resource with managerial attributions.

From the economic perspective (E), the enterprise consists of all financial resources owned (shares, receivables, cash) and owed (debts). These financial resources are expressed in various forms and can be identified in the financial documents of the organization. Thus, the micro and macro environments of the organization are reflected on the following three elements of composition: *Financial rights, Financial obligations, and Liquidities*.

The techniques used in the management of *financial rights* are the *analysis* of their evolution on the financial market and the *action* (modification) on them. Following the analysis of the financial rights owned by the company, the decision is made to keep or give up a benefit, or to claim or not a certain right. Taking into account the nature and purpose of each, these financial rights can be sold (shares), collected (receivables) or exercised (deductions, compensations, etc.).

The techniques used in the management of *financial obligations* are the *analysis* of their evolution on the financial market and the *action* (modification) on them. Following the analysis of the financial obligations of the organization, the decision is made to honor them or not. Taking into account the nature and purpose of each, these financial obligations can be paid (expenses - invoices), returned (loans) or repurchased (bonds).

The technique used in the management of the organization's *liquidity* provides guidance to the evolution of the financial rights and obligations possessed in order to maintain *a current supra-unit liquidity*. Current liquidity is one of the most important financial rates of an organization and indicates the financial possibilities to cover its debts through short-term assets. Current liquidity is the ratio of current assets to total short-term debt. The higher its value, the more timely the organization can pay its current debts without resorting to long-term financial resources or loans. The liquidity of the organization may increase or decrease depending on the financial intentions of the organization.

From the social perspective (S), the enterprise consists of all human resources that contribute from a productive or unproductive perspective, directly or indirectly, to the achievement of the fundamental objectives derived from organizational strategy, specific or individual, and all organizational values that contribute to training, maintenance and change of the organizational culture. Thus, the micro and macro environments of the organization are reflected on the following three elements of composition: *HR Efficiency, HR Satisfaction* and *Organizational Values*.

The techniques used in the management of **human resources efficiency** (n.a. HR professionalism) are based on the functions of development and maintenance of human resources. These techniques are:

- *employee training and development* - problem solving, case studies, presentations, demonstrations, discussions, document work exercises, role-plays, simulations, out-door experiential learning.

- *career management* - through professional training, expanding and enriching the content of work, offering career counseling, organizing evaluation and development centers, organizing workshops on career-related topics.

- *maintaining discipline, safety and health* - ensuring optimal conditions of hygiene, labor protection and strict compliance with work discipline as well as in carrying out programs to combat the causes of indiscipline at work (reduction of fatigue, de-alcoholization programs, ensuring consistency between the purposes of employees and those of the organization, etc.).

- *maintaining discipline, safety and health* - ensuring optimal conditions of hygiene, labor protection and strict compliance with work discipline, as well as in carrying out programs to combat the causes of indiscipline at work (reduction of fatigue, de-alcoholization programs, ensuring consistency between the purposes of employees and those of the organization, etc.).

- *employees' counseling and stress management* - in organizations there are many stressors that can affect the efficiency of employees' work, regardless of the hierarchical level at which they work. Stress is the adaptation response, mediated by individual characteristics, response generated by external actions or events that require from the individual a special mental and / or physical effort. Stress can be both positive (eustres) and negative (distress). It is not what happens to us that matters, but how we react. The Greek philosopher Epictetus said that people are not afraid of reality, but of the image they have of it (Cornescu et al., 2003, p. 240).

The techniques used in managing human resource satisfaction (HR satisfaction) are based on the functions of motivating and maintaining human resources. These are the following:

- *evaluating employees' performance* in order to: improve performance, plan human resources, pay, promote, improve.

- *rewarding employees by* - ensuring consistent, balanced and motivating financial and non-financial rewards.

- *analysis, design and redesign of positions* - aims to define how the objectives, tasks, competencies and responsibilities will be organized and integrated into the positions so that

their occupation will lead to increased staff motivation and make necessary corrections periodically (Cornescu *et al*., 2003, p. 239).

- *maintaining discipline, safety and health* as well as *employees' counseling and stress management* mentioned above.

The techniques used in the management of organizational values (*organizational identity HR*) are based on the functions of development and provision of human resources. These are the following:

- *organizational development* which aims to ensure healthy relationships within and between groups and to help groups anticipate, initiate and lead change. Organizational development presupposes the existence of a normative, re-educational strategy, likely to affect value systems, attitudes, which also involve the formal reorganization of the organization, in order to cope with the accelerated pace of change (Cornescu *et al*., 2003, p. 232).

- *planning human resources by* - discovering the right people, the necessary number of human resources, the knowledge, skills and experience needed for a particular position, establishing the optimal / appropriate place and time and using the allocated financial resources appropriately.

- *recruitment and selection by* - defining the position, attracting candidates, selecting future employees.

- *integration of employees through* - presentation of the organization, working conditions, disciplinary procedures, the possibility of union organization if necessary, medical facilities, transport, canteen, training policies, payroll, career paths.

- *training and improvement of employees* as well as *the management of the aforementioned careers.*

From the technological perspective (T), the enterprise consists of all the material means that are available to human resources in order to exploit them so as to carry out the productive and non-productive activities of the organization; they are expressed in accounting through two state variables: the value and the category of fixed assets. Thus, the micro and macro environments of the organization are reflected on the following three elements of composition: ***Technological efficiency, Technological flexibility*** and ***Technological efficiency.***

The techniques used in the management of ***technological efficiency*** (*as appropriate*) are the rigorous control of the situation of stocks, acquisitions and costs, the maintenance of technological production resources in a good state by: observing the technical verification terms indicated by the guarantee and ensuring their operation in the parameters indicated, stimulating the research and development activity within the organization. Taking into account the nature and purpose of each

mentioned action, the technological efficiency is given by the way in which the material resources of the organization are used and maintained through the actions of politically regulated human resources with technical purpose.

The techniques used in the management of **technological flexibility** (*as necessary*) are the control and the clear theoretical and practical delimitation between the range, the working and rest times, the possibility and favorability of adaptation and readaptation offered by the technical characteristics of a certain material technological resource. Taking into account the nature and purpose of each mentioned action, the technological flexibility is given by the capacity of material and human resources to adapt and be adapted by interaction to the way of working imposed by political regulations with economic purpose.

The techniques used in the management of **technological efficiency** (*what is needed*) are the preparation of human resources from a professional, multidisciplinary point of view in order to operate with the material means of the organization from two simultaneous perspectives: technical and economic. The technical one refers to the minimum use of technological resources with obtaining a maximum result, and the economic one resides in the strictly necessary commissioning of the material means in order to reach the predetermined target. Taking into account the nature and purpose of each mentioned action, the technological efficiency is given by the capacity of human resources to reach maximum results with the allocation of minimum resources as a result of the return of the investments of the politically regulated organization with social purpose.

Section 2 presents a possible methodology for monitoring changes in an organization, an approach that presents a unique point of view in terms of how the change in the company has been analyzed so far (by making a way of quantification) and how the strategic management (using indicators of change) can be applied on an organization.

2. A methodology for quantifying the status quo of an organization

The objective of the scientific research undertaken is to *define the most efficient and effective possible intervention, with potential for change, that can be performed at a given time on the organization.* Following this desideratum, I propose the following arguments that support the theoretical discourse:

- the organization is considered the reference point under analysis;
- the organization is interconnected with the four environments: social, political, technological and economic;

- the condition of the averages can be translated into statistical data through relevant indicators;

- when the environment changes, there is a change in the organization due to the chain reaction and the dynamic balance that Lewin (1943) talks about (when the change is created, an imbalance is created).

The methodology of the process of quantifying the status quo of the organization is, through the ways of quantifying and defining the triggers and opponents of change, as complex as it is varied and difficult due to the following considerations:

- encompasses *all the sociological, technological and economic elements* of identification and description of the organization from all four environments (social, political, technological and economic) and its two dimensions (micro and macro);

- the triggers, with the highest degree of occurrence and generality, are divided into and measured by *three types of indicators*: concrete (have default values or are assigned existing values from the organization's environment), abstract (quantifiable by methods of sociological or non-quantifiable research);

- *the large volume of data,* collected following the research of questionnaires and market studies aimed at measuring and / or evaluating phenomena and processes in the dimensions of the organization (abstract indicators), must be constantly correlated with concrete indicators. This correlation is needed to calculate the effect of potential change.

2.1. Quantification of concrete indicators

The concrete indicators characterize the factors, with high potential of influence on the organization, that have values established within and following the social, political, technological and economic processes with quantitative specificity and with a palpable result.

In order to collect the data needed to give values to concrete indicators (measurable by weights, percentages/ decimals or values expressed in units specific to the process in question), it is necessary to resort to the following actions:

- Analysis of the organization's documents: financial-accounting records, formal organization, reports. This can be done by: reading, writing, comparing, calculating, measuring;

- Analysis of the market (at micro level) in which the company operates and its position in relation to stakeholders through: official public digital documents;

- Analysis of the macro context of operation of the organization by including national and international bodies for the analysis of flows, trends, trends and statistics in the macro-social,

-political, -technological and –economic environments. The analysis will be made on official public digital documents.

The sources of information on concrete indicators can be divided into: physical or electronic primary sources (scientific articles, reports and analyzes provided by specialized national and international institutions, accredited and recognized in the structuring of statistical data), physical or electronic secondary sources (collection and synthesis documents information, the written press) and physical or electronic tertiary sources (encyclopedias, discussion forums, webblogs and personal web pages).

For the purpose of achieving the process of quantifying the status quo of the organization, it is recommended to abandon tertiary sources of information and use as few secondary sources of information as possible. The primary sources of information must have the highest share in data collection in order to give values to concrete indicators because the latter have the following characteristics:

- They are the objective and credible results of novelty research in a certain field;
- They can be cited easily and confidently because they are verified and recognized;
- The verification of the information is done systematically and thoroughly by specialists.

Reliable sources must be apolitical in nature and have no interest other than to provide real and characteristic data to the matter in question in an objective and effective manner; some suitable examples are considered:

- The World Bank Group[2]
- Euromonitor International[3]
- Earth Trends Environmental Information[4]
- The Economist Intelligence Unit Limited[5]
- National Institute of Statistics[6]
- Organisation for Economic Co-operation and Development[7]
- Central Intelligence Agency, *The World Factbook*[8]

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[2] http://www.worldbankgroup.org/, căutare termen: „Romania"

[3] http://www.euromonitor.com/, căutare termen: „Romania"

[4] http://earthtrends.wri.org/, căutare termen: „Romania"

[5] http://viewswire.eiu.com/, căutare termen: „Romania"

[6] http://www.insse.ro/cms/rw/pages/index.ro.do

[7] http://www.oecd.org/home/

[8] https://www.cia.gov/library/publications/the-world-factbook/index.html

2.2. Quantification of abstract indicators

In quantification, the verbal formulations of indicators, especially social and political ones, are related to their quantitative expressions, using certain standards and criteria for this purpose. "The researcher's task is to retain the most natural wording, given the way in which the population perceives the area analyzed, but which is significant in relation to the objectives pursued in the research."[9] The first stage of the investigation consists in determining the object which, in the case of the present research, is each indicator of the change. The establishment of the survey universe and the composition of the sample precede the pre-testing of research tools to guarantee the accuracy and relevance of the feedback received.

The investigation and quantification strategies, in terms of abstract indicators, are:

- Methods and techniques for collecting empirical data;
- Empirical data processing techniques;
- Procedures for analysis, interpretation and construction or theoretical reconstruction based on empirical data.

In order to strengthen this approach that deals with both methods and techniques and procedures which are used synchronously, and have the purpose to quantify the status quo of the organization, we mention here the path from theoretical to empirical described by Chelcea (2001, p. 18): "if the investigation represents a method, the questionnaire appears as a technique, the method of application ... through self-administration, as a procedure, and the actual list of questions (the printed questionnaire), as an investigative tool."

The most commonly used primary data collection methods are the documentary research, the interview, the observation and the experimentation. The choice of data collection method is influenced by the researcher's availability of resources such as money, time or facilities.

The documentary research method involves historical analysis and comparative combination and is performed when a study is either completely historical or has a defined historical dimension.

The observation method (field work) can be applied with the help of human resources or by automation. The accuracy of the information obtained from this method is high but it has a major disadvantage in terms of revealing motivations, attitudes or opinions, explaining what happens but not why it happens. This method has been used in the development of indicators specific to the drivers of change and serves to detect the forces opposing change in the enterprise.

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9 See www.dictsociologie.netfirms.com – Dicționarul de sociologie, căutare termen: „cuantificare".

The method of the survey by interview or questionnaire consists either in interviewing a limited number of people representative for a certain social group targeted by the research direction, or in applying a questionnaire regardless of the size of the sample. The types of interviews are: personal, where it is assumed a direct contact face to face with the subject, telephone and mail, physical or electronic. The latter are the most profitable in terms of financial resources but have a low response rate, feedback. The use of these methods is considered in the process of quantifying abstract indicators that require a different approach from that for concrete indicators.

The experimental method (experiment) can provide valuable information on a large scale despite the fact that research is done in a limited way. This method seems to be costly in terms of time and financial resources. This method will be used in testing the developed models and in concluding the results obtained from the research within the doctoral internship.

In order to process the empirical data related to defining abstract indicators for change management, the following elements are defined:

- creating, completing and updating an electronic database of empirical data collected;
- performing significance tests and calculating the correlations of the indicators;
- valid, accurate and sensitive coding (condensation, systematisation and normalization) and tabulation of information (manual, mechanical and electronic) showing their frequency of occurrence.

In the technical sciences, as well as in the economic ones, mathematical modeling is done with the help of classical mathematics tools. In order to model change management in an enterprise, the first approach is to try to quantify the status quo of the organization. To achieve this goal, we start from the assumption that there are defining indicators of change in the enterprise, characteristic of the triggers of change. These indicators are divided into two types, concrete and abstract, and in order to quantify the status quo of the organization, it is necessary to approach them in parallel.

For this reason and due to the fact that the data that help to compose the indicators can never be established and evaluated with full precision, the research on quantifying the status quo of the organization uses the fuzzy logic analysis procedure (see, Irimiaş and Pop, 2016). Fuzzy logic gives the process of modeling the organization's status quo some room for maneuver, in terms of accurately measuring the parameters of the change detection and quantification model, for the following two reasons:

- Real situations are often unclear and confusing as to their delimitation and cannot be accurately described.

- The detailed description of a real system, such as the enterprise, requires a conglomeration of detailed data that a human being cannot recognize, perceive, process and understand at the same time.

3. Proper diagnosis of the status quo of the organization

"By definition, an indicator is used to measure an objective to be achieved, a resource to be mobilized, an effect to be achieved, a quality level or a contextual variable" (MDLPL, 2007, pp. 17).

The purpose of this theoretical approach is to develop a functional framework for a system of indicators that aims to quantify the status quo of the organization. The approach of this procedure is the calculation of the forces and measures with which the intervention must be made on the organization in order to successfully start the process of managing and consolidating the organizational change. In addition to defining the triggering forces of change, this system of indicators allows effective and efficient monitoring.

When the management of a company aims to create a sense of urgency for change or crisis (compare Lorsch, 1986; Kotter, 1996; Teigland, 2009; Burnes, 2020), it needs support in order to take some decisions and policy approaches. From this point of view, the indicators can be at the disposal of the organization's management. They can transform social and abstract information into measurable units that can be used in the change management process.

The indicators of science, technology and innovation are essential in "telling the story of economic and social change" (Arundel *et al.*, 2007). Thus, the focus will have to be shifted from the measurements on activities, to the measurements on impacts, in order to be able to observe the consequences of activities, such as innovation, and to support the monitoring of managerial interventions.

At present, the best opportunities and ways to improve living standards and reduce poverty have their origins in technological innovation, which is one of the main determinants of economic growth, as pointed out by Aghion and Howitt (1997). It is possible to observe the high degree of incidence of those stated by the fact that, at present, the need, still unsatisfied, for the analysis of the institutional forces triggering technological and economic changes has intensified. Only by analyzing and quantifying these factors can patterns and patterns of origin, development and dissemination of science and technology be discovered. This socio-institutional environment can lay the foundations for innovations that transform current luxury products and services into tomorrow's products - cheap and accessible to anyone (Coccia, 2010).

Moreover, state funding and aid for research and development can be considered relevant and justified as these investments return in the form of an increase in national economic well-being and in the form of higher living standards for society. Public funding, for example, of research and development may have a direct impact on the economic performance of enterprises or may indirectly influence their own R&D expenditure. This example highlights that a macro-level decision or event can influence the micro level of the organization.

It is added that the factors that determine innovation are part of the economic system and depend on the institutional structures and political regimes of countries which, through legislation, social rules and education systems, represent the catalysts for change. As Coccia (2010) observes, studies on the best political regimes are the main topics of discussion that relate to social and economic progress. The author completes by analyzing the political regime, which like all social institutions, is an entity that can adapt or respond to changes in the external environment.

An indicator system in an organization allows, in addition to defining the triggering forces of change, effective and efficient monitoring of the process of change. From this point of view, the indicators can be at the disposal of the organization's management. The features of the indicators specified in the change detection operation can be structured as follows:

- *indicators* can characterize the status quo of *an organization at a given time*;

- *the values that make up the indicators* come from the *social, political, technological and economic environments* that correspond to *the micro and macro dimensions of the organization;*

- *changing the indicators* has the effect of the need for a response, a *reaction from the organization;*

- *indicators are assigned values* or have *default values*.

Following the undertaken theoretical approach, the following characteristic elements of the change management quantification process have been found:

- The success of implementing a change on an enterprise is conditioned by: the moment, the content, the process and the context of its development.

- In order to highlight the catalysts for change in an enterprise, an overview of business processes, tangible and intangible material flows is needed.

- Recommendations on the selection of the set of indicators:

  - Quantitative perspective:

    - The set of indicators will be dimensioned without losing or neglecting the big picture and the origin of the basic information.

    - It provides the possibility to include additional information within a constant measurement limit.

- Procedural perspective:
  - In future processes of testing and refining, the chosen indicators will tend towards a certain symmetry that can facilitate their comparison and development.
- Qualitative perspective:
  - The selected indicators will be considered relevant in summarizing the complex, multi-dimensional reality of the organization.
  - They will facilitate communication with all parties involved through the broad scope of definition and will promote accountability.
  - They offer users or interpreters the ability to effectively compare complex dimensions.

Next, the methodology for diagnosing the stage of the organization will be presented by characterizing and quantifying the indicators and defining the forces that oppose the change. The forces that oppose the change will be discussed from a theoretical point of view and highlighted as a result of the moment of the analysis of the triggering forces because:

- The opposing forces of change are visible only at the point where the nature, magnitude and impact of the change that needs to be undertaken is known;
- The most important forces opposing change come from the area of sociology and their neutralization is possible by selecting and using change management methods and techniques, specific and adapted to the nature and type of potential change in the enterprise.
- Effective change management is possible only through continuous monitoring and control that continuously reflect the resulting force (frequency and extent of use of methods and techniques) with which change must be conducted for effective barrier neutralization and successful implementation.

Conclusions

The role of leaders and managers in a changing environment, by creating the urgency of change, among other things, is fundamental to the overall success of enhanced change. It is important to consider the impact of change on employees and culture while aligning with the vision, mission and strategic values assumed. Because change is already a way of life in the structures of any organization, by practicing its proper management, based on transparency, ethics and accountability, it can mean positive and successful experiences. Thus, the management of an organization requires knowledge of the relevant environments and dimensions to score optimal results in accordance with the strategy imposed by the vision and mission of the business undertaken.

It can be concluded that the situations that the company faces on a daily basis are, in most cases, under the sign of uncertainty. Hence, difficulties in describing these situations that allow only attributes derived from qualitative natural language, such as: customer satisfaction, brand impact, low/ reduced competitiveness, attitudes and social values. These examples highlight the problems that arise in using accurate mathematical models to describe and process inaccurate and unclear data/ information.

In this scientific approach, the methods and techniques applied in the realization and completion of *the process of quantification of sociological indicators and the process of conferring values to the usual indicators of political and technical-economic profile* are analyzed. Having a predominantly normative character, the methodology of the process of quantifying the status quo of the organization formulates investigation strategies, indicating both common difficulties and shortcomings and highlighting ways to obtain valid results from a scientific and practical point of view.

As mentioned in this scientific discourse, an effective way to realistically capture the timing and magnitude of change is to adopt and define *composite indicators*. These are, according to Arundel *et al.* (2007), compilations of singular indicators, which appear when it is desired to define a *multi-dimensional conceptual model*. Thus, the methodology of conferring values to indicators, concrete and abstract, which detect and measure change in the enterprise, was specified. If the factors with a high degree of abstraction are followed, by specifying the quantitative aspects, the nature and the characteristic expressions of the necessary indicators, subject to analysis, the quantification prepares and makes possible their measurement. For this reason, quantification is sometimes analyzed as part of the operationalization of concepts, other times as part of measurement.

From the perspective of the methodology of the process of quantifying the status quo of the organization, quantification can be nominated as a distinct stage of concrete research, not only because of its importance but also because of the sequence of the research process in which it falls, either before gathering information, by incorporating quantitative descriptions in the measuring instruments, or after collecting the information, based on the analysis of their structure.

According to the Ministry of Public Works and Housing Development (2010), an indicator provides quantitative information, with the role of helping the factors involved in public interventions to communicate, negotiate and make decisions. An indicator quantifies an element considered relevant for the monitoring and evaluation activity within a program. A good indicator must provide simple information that can be easily communicated and understood by both the provider and the user.

A complete analysis of change must contain both macro and micro elements characteristic of the enterprise which, according to the principle of sustainability, is part of the economy, which in turn is part of society, both (economy and society) being embedded in the natural environment whose state and status conditions the existential framework of the enterprise. This paper emphasizes the importance of the drivers of change, highlighting their characteristics by dividing them in dimensions and, more specifically, in source-environments.

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Factors affecting women's waste separation behaviour in Turkey

Güngör KARAKAŞ[*]

Abstract

Turkey has recently made some regulations on environmental issues. Perceptions and participation of households are important for the implementation of legal regulations. Since women were more interested in household waste than men, in this study, environmental behaviours of women was investigated in Çorum province. Analysis of women's approach to separation of recyclable wastes in their source were investigated using the Theory of Planned Behaviour (TPB), Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The research was conducted in 2018 with 414 participants. According to the results of the research, it was determined that the most important factor of separation behaviour at source was consequences awareness. It was determined that almost all of the participants were willing to separate the wastes at source if necessary facilities were provided. For this reason, the work should be done to create consequences awareness in the province. Finally, for the sustainable environmental applications, separation facilities must be provided at all locations in the province.

Keywords: Sustainable Environment, Behaviour, Waste, Separation, Women

Introduction

Rapid urbanization, population growth, economic development and industrialization have caused municipalities to face solid waste problems in many countries in the world (Liu and Wu, 2011; Chiemchaisri et al., 2007; Saeed et al., 2009). Recycling and environmental issues together with the increase of Turkey's population has become more important. Therefore, the National Waste Management and Action Plan (NWMAP) was prepared on a national and regional basis in Turkey scheduled for 2023 (NWMAP, 2017). In the NWMAP, it is aimed to minimize the waste at the source and to collect the waste separated at the source according to their types. Collecting more waste via source separation, waste collection systems is an essential part of increasing resource efficiency, achieving Turkey recycling targets.

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If the wastes are not separated at the source, many environmental, economic and social problems arise. The fact that Turkey has set a zero waste target in order to use resources effectively is a very important environmental goal. Currently, although the infrastructure required for source separation is not available in all provinces in Turkey, partial source separation is being implemented in some cities and some districts of these cities. In the province of Çorum, where this research was conducted, there are containers for separation at the source in some neighbourhoods. The aim of this research is to reveal the factors that affect the waste separation behaviour of women.

1. Environmental Regulations in Europe and Turkey

In Europe, the European Economic Community had common market and economic growth targets as a priority between 1957-1972. For this reason, there is no important environmental measure in the 1958 Rome Treaty (Burchell and Lightfoot, 2001: 34). At the meeting held in Paris in 1972, environmental policies were discussed for the first time at the level of governments within the European Community. After the Single European Act (1986), Treaty of Maastricht (1992), Treaty of Amsterdam (1997) were signed in the following years, the European Commission introduced the Europe 2020 Strategy in 2010, which would replace the Lisbon Strategy (2000). Since the mid-1970s, EU environmental policy has been guided by seven environmental action programmes were defined priority objectives to be achieved over a period of years

The European Commission introduced a Circular Economy Action Plan in 2015 (COM, 2015) The Europa Union (EU) highlights household waste separation as an integral part of the Commissions' new circular economy package to stimulate Europe's transition toward sustainable development and global competitiveness (Milios, 2018). For this reason, it is aimed to increase the amount of packaging and packaging waste recovered through separation and recycling in European countries (Eurostat, 2016).

As in the whole world and in the EU, very important environmental regulations were not made in Turkey until the 1960s (Erdem and Yenilmez, 2017). Environmental issues were partially addressed in the First Five-Year Development Plan in 1963. In the following years, eleven Five-Year Development Plans were published. With the National Environmental Strategy and Action Plan initiated in the 2000s, progress has been made in the legislation and institutional structure in order to solve environmental problems. Among these development plans, especially in the eighth (2001-2005) and ninth Five-Year Development Plan (2007-2013), important steps were taken within the scope of harmonization with the EU (Erdem and Yenilmez, 2017).

Regarding the separation of wastes at the source, significant progress has been made with the Zero Waste Regulation published in 2019 based on the Environmental Law dated 1983 (No 2872). Within the scope of harmonization with the EU environmental regulation; Many plans have been prepared, such as Planning of High Cost Environmental Investments, National Environmental Integrated Adaptation Strategy, Solid Waste Master Plan, Waste Management Action Plan, National Recycling Strategy Document and Action Plan (NWMAP, 2017;14).

2. Theoretical Framework/Literature Review

Recycling is one of the most important environmental activities that can help protect natural resources and reduce the amount of solid waste (Arı and Yılmaz, 2016). Participation of households in recycling is crucial for effective recycling. In Iran, it was claimed that women should be taken into account in the separation of resources and education programs based on the implementation of their needs (Babaei et al., 2015). In a study which investigated the active participation of university students in the separation of wastes at the source, it was stated that the students who are more likely to participate are female students (Zhang et al., 2017). In another study conducted in the UK, it was determined that women were more interested in recycling than men (Pettifor, 2012).

In Spain, 154 housewives' environmental behaviours were analysed by the TPB. As a result of the research, it was stated that the TPB remains a very useful model for explaining recycling behaviour (Aguilar-Luzón et al., 2012). The TPB (Ajzen, 2011) was used to explain social behaviours (Armitage and Conner, 2001) and recycling behaviour in many previous studies (Chen and Tung 2010; Valle et al., 2005; Tonglet et al., 2004; Chan and Bishop, 2013). In the literature, the effects of consequences awareness (Chen and Tung, 2010), attitude (Huffman et al. 2014), perceived policy effectiveness (Wan et al. 2014), subjective norms, moral norms (Botetzagias et al., 2015), intention (Wang et al., 2016; S. Wang et al., 2019; Bortoleto et al., 2012), behaviour control, direct behaviour and indirect behaviour factors on recycling behaviour were investigated (Wan et al., 2014).

In previous studies, it was stated that the subjective norms were determinative in the recycling behaviours (Mahmud and Osman, 2010; Shaw 2008; Valle et al., 2005; Arı and Yılmaz, 2016). In another study, the role of intentions and attitudes in explaining environmental behaviours was emphasized (Meyerhoff, 2006). In a study to investigate the environmental behaviour of Hitit University students in Turkey, the intent and field activities were found to have an effect on environmental behaviour (Karakas, 2018). Another factor that is important in people's recycling behaviour is political regulation. Environmental behaviour occurs as a result of the correct perception

of political regulation. In a study conducted in Hong Kong, it was determined that the intent of recycling was affected by behavioural control, subjective norms, consequences awareness and perceived policy effectiveness (Wan et al., 2014). In a survey that used the recycling intent scale, the willingness to recycle was investigated. It was seen that the intention of recycling had a significant effect on recycling behaviours (Chan and Bishop, 2013). The behavioural intention of households was shaped by the perceived behavioural control, past behaviour and subjective norm in Turkey. Also, behavioural intention of females was reported by attitude (Oztekin et al., 2017).

In a study conducted in Kampala, Uganda, factors influencing participation in separatist activities were identified, such as household income, educational attainment, gender and impact awareness (Banga, 2011). In a study conducted in Hong Kong, it was emphasized that local authorities should provide more recycling bins and incentives (Wan et al., 2014). In some studies, moral norms were used to explain the behaviour of recycling (Chen and Tung, 2010; Pakpour et al., 2014). In a study, how the moral norms and demographic variables of individuals affect the intention of recycling were investigated with the TPB. According to the research, it was determined that the moral norms were more effective on the behaviour of recycling and the demographic variables were meaningless (Botetzagias et al., 2015). In another study, it was stated that moral norms were effective on the behaviour of recycling (Chan and Bishop, 2013). According to the results of the research conducted in China, it was emphasized that campaigns targeting moral obligations could increase the rate of participation in the separation behaviours at the source of waste (D. Zhang et al., 2015). It was also stated that social norms were effective in recycling behaviour in Turkey (Sorkun, 2018).

According to the results of the TURKSTAT Survey 2016, the amount of municipal waste collected was calculated as 1.2 kg per person per day in Turkey (TUIK 2018). In the survey, the daily average amount of waste per person in TR83 Region; It was determined that 0.98 kg in Amasya, 1.11 kg in Çorum, 1.29 kg in Samsun and 1 kg in Tokat. For the development of recycling behaviour, it is necessary for the participants to understand the recycling policies correctly and to explain the political sanctions to the participants (Sidique et al., 2010). Therefore, the success of recycling programs depends on the participation of households in recycling. Women play an important role in the recycling of household waste separation at home in Turkey (Arı and Yılmaz, 2016). In this study, it was aimed to investigate the approach of separation of wastes at the source by the TPB and structural equation models in the Çorum Province.

Data and Methods

The present study was conducted in Çorum Province, Turkey in March-October 2018. Data were collected through questionnaire method. The questionnaire was conducted through face-to-face interviews with 414 women. The following formula was used in the sampling:

$n=Nt^2pq\alpha^2(N−1)∕+t^2pq$, where:

n: The minimum number of individuals required for the sample,

N: Number of individuals in the universe (294 807),

t: The value in the t table according to the significance level selected in the study (1.96),

p and q: the homogeneity level of the universe (p;0.5 and q; 0.5 for the non-homogeneous universe), and α: is the margin of error (5%) (Saruhan and Özdemirci, 2011).

As a result of the calculations, the number of samples was calculated as 383.57, but just in case, a survey was conducted with 414 women. In the study, 33 items were used. Waste separation behaviours of participants were assessed with expressions in the form of a five-point Likert-type scale. These are 'Strongly Disagree, Disagree, Indifferent, Agree and Strongly Agree'.

A previously verified scale was used in the study (Wan et al., 2014). Sample adequacy was tested using Kaiser-Meyer-Olkin (KMO) test (Henry, 1974). The KMO value less than 0.50 shows inadequacy of data for the Exploratory Factor Analysis (EFA). The KMO values between 0.5 and 0.7 are moderate, while those between 0.7 and 0.8 are good, between 0.8 and 0.9 are excellent, and above 0.9 are the best (Andy 2009). After checking the suitability of sample size, the EFA analysis was performed to determine factors affecting women's approach to separation of recyclable wastes. Data were analysed by the EFA using SPSS statistics v. 22 software. Principal Component Analysis and Varimax rotation technique were employed for data analysis. The reliability of the scales used was tested by Cronbach's alpha and composite reliability test. Cronbach's Alpha and Composite Reliability (CR) coefficients of over 0.7 are considered reliable (Hair Jr. et al., 2014). Also, the criterion of convergent validity test average variance extracted (AVE) score must be above the threshold of 0.5 (Fornell and Larcker, 1981).

The CFA was used to measure the fitness of the factors obtained by the EFA. Robust statistic fit indices have been used in the psychometric literature. Fit indices were calculated through the structural equation model. Among them are Normed Fit Index (0.90 ≤ NFI <1), Relative Fit Index (RFI), Comparative Fit Index (0.93 ≤ CFI <1), Incremental Fit Index (0.90 ≤ IFI <1), Tucker Lewis Index (TLI ≥0.90) or Non-Normed Fit Index (NNFI≥0.90), Root Mean Square Error of Approximation (RMSEA≤0.08), minimum discrepancy function (CMIN) and Degrees of Freedom

(DF) (Bentler, 1990; Fan et al., 1999; Hu and Bentler, 1999; Kline, 2011; Schreiber et al., 2006). Finally, path analysis was used to determine the effects of the factors to each other.

Results and Discussion

In this study, the average age of the participants is 39.01. Their age ranges between 19 to 80 years. 11.4% of the participants were between 19- 25 years old, 33.3% were between 26-35 years old, 28.5% were 36-45 years old, and 26.80% were 46-80 years old (Table 1).

Table 1. Demographic Profile of Participant

Age	n	%	Household Size	n	%
19-25	47	11.40	2 and below	72	17.40
26-35	138	33.30	3	90	21.70
36-45	118	28.50	4	133	32.10
46-80	111	26.80	More than 5	119	28.80
Education	n	%	İncome	n	%
Elementary school	176	42.50	Up to ₺1651	156	37.60
Intermediate	104	25.10	₺ 1652-2901	110	26.60
University	134	32.40	₺ 2902-8500	148	35.80

₺: Turkish Lira (1 $= ₺5.28).

The average household size was 3.75 people per household. Of the participants' household size, 28.8% were five people and over, 32.1% of them were four people, 21.7% of them three people, and 17.4% of them two and below. Of the participants, 42.50% had primary education, 25.1% had secondary education, and 32.40% had a university degree. Participants' average monthly income was determined as ₺2286. 61. 36.60% of the women's income were below ₺1651. In addition, 26.60% of the women's income was calculated as ₺1652-2901, and the income of 35.80% was calculated as ₺2902-8500.

The KMO and Bartlett's Test were applied to test sample adequacy of the study. Field (2000) also stated that for KMO test, the value of 0.50 should be the lower limit. It is generally desirable that the KMO value is as close to one as possible. Büyüköztürk (2018) stated that the factor load value would be sufficient if it was 0.70 and above. In addition, at least ten times of each statement were suggested for path analysis (Kline, 2011). Therefore, 414 samples were used in the study. The KMO value was found as 0.868 which is excellent for the factor analysis (Cokluk et al., 2012). The results of the Bartlett's Test of Sphericity (11822.53) were also significant (P<.01). Factor loadings less than 0.50 were not reported. Eigenvalues obtained by the EFA and component number scree plot were given in Figure 1.

Figure 1. Scree Plot of Factors and Items
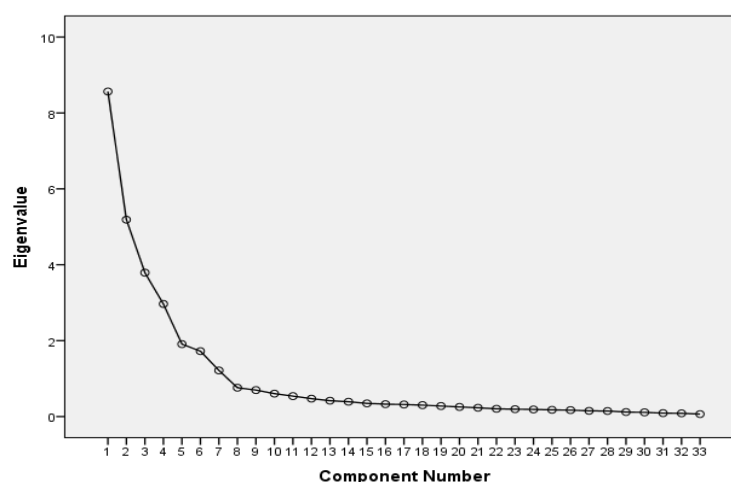
The factors affecting the separation of women's wastes at the source were investigated with the EFA. According to the EFA results, 7 factors and 33 items were found. These factors were named as 'consequences awareness', 'perceived policy effectiveness', 'subjective norm', 'attitude', 'direct behaviour', 'perceived behaviour control', and 'intention'. These factors explained 76.838% of the total variance (Table 2).

Table 2. Result of the EFA

Factors & Items	Standard Loadings	Variance Explained (%)
Consequences Awareness (CAW)		
"Recycling saves energy"	.900	
"Recycling improves environmental quality"	.880	
"Recycling saves money"	.864	
"Recycling conserves natural resources"	.856	15.079
"Recycling reduces pollution"	.834	
"Recycling creates a better environment for future generations"	.773	
Perceived Policy Effectiveness (PPE)		
"The Government's policy encourages me to recycle"	.884	
"The Government's promotion clearly explains the benefits of recycling"	.877	
"The Government's promotion helps citizens understand the importance of recycling"	.857	13.295
"The Government's policy facilitates me to recycle"	.813	
"The Government provides clear guidelines on recycling"	.806	
"Overall, the government policy on recycling is effective"	.784	
Subjective Norm (SN)		
"My neighbours expect me to recycle household materials"	.888	
"My friends expect me to recycle household materials"	.864	
"Most people who are important to me would approve of my recycling"	.826	13.257
"My co-workers or schoolmates expect me to recycle household materials"	.796	
"My family expects me to recycle household materials"	.766	
"Most people who are important to me think I should recycle"	.758	
Attitude (AT)		
"Recycling is useful"	.899	12.443
"Recycling is the future"	.869	

"Recycling is good"	.852	
"Recycling is responsible"	.828	
"Recycling is sensible"	.799	
Direct Behaviour (DB)		
"I have been recycling my recyclables regularly"	.943	
"I have recycling behaviour at home"	.910	10.550
"I have recycling behaviour at work"	.908	
"I have recycled my recyclables in the last days"	.889	
Perceived Behavioural Control (PBC)		
"I have plenty of opportunities to recycle"	.789	
"Recycling is easy"	.786	6.228
"Recycling is convenient"	.749	
Intention (INT)		
"I plan to recycle regularly if the municipality provides the facility"	.777	
"In the next months, I will try to sort out recyclable materials"	.751	5.985
"I am willing to participate in the recycling scheme in the future"	.724	

The percentage of variance explained by the factors obtained respectively, consequences awareness 15.079, perceived policy effectiveness 13.295, subjective norm 13.257, attitude 12.443, direct behaviour 10.550, perceived behaviour control 6.228, and intention 5.985 (Table 2).

The mean scores of all factors were collected in three categories. They can be ranked as strongly agree, agree and undecided. Factors in the first category (strongly agree), having the highest positive expressions, were determined as the attitude (4.45) and the consequences awareness (4.43). It was observed that women generally have positive attitudes towards the separation of waste at the source. Because the direct behaviour score is in the indecision range, positive attitudes did not turn into direct behaviour. Consequences awareness was the most important factor explaining women's recycling behaviour. One of the components of this factor, 'recycling saves energy', was the highest standard loading. This can be interpreted women know the relationship between energy and waste (Table 3).

Table 3. Mean Score and Interpretation of Factors

Factors	Mean	Std. Deviation	Interpretation*
Attitude	4.445	.766	Strongly Agree
Consequences Awareness	4.429	.729	Strongly Agree
Intention	4.029	.688	Agree
Perceived Behaviour Control	3.826	.908	Agree
Subjective Norm	3.747	.775	Agree
Perceived Behaviour Control	3.385	.948	Undecided
Direct Behavior	3.040	1.181	Undecided

In the second category, three factors were found (agree). These factors were intent (4.03), perceived behavioural control (3.83), and subjective norms (3.75). From the items of intent, it was observed that women had willingness, plans and efforts to recycle behaviour. It was determined that, from subjective norm items, women were mostly influenced by the behaviour of their neighbours. In the third category, perceived policy effectiveness (3.38) and direct behaviour (3.04) factors were

found (undecided). The average score of these two factors in the undecided category was not desirable, but it was very important in terms of status determination (Table 3). According to results of reliability and convergent validity tests, all factors' the CR and the AVE coefficients were found appropriate (Table 4). All of the model coefficients were significant (P<0.01).

Table 4. Results of Reliability and Convergent Validity Tests

	RA	PPE	SN	AT	DB	PBC	INT
Cronbach's Alpha	.947	.922	.914	.951	.947	.746	.757
CR	.941	.934	.923	.929	.952	.819	.795
AVE	.726	.702	.669	.722	.833	.601	.564

The CR of the constructs ranged from 0.795 to 0.952, and the AVE ranged from 0.564 to 0.833. The Cronbach's Alpha coefficients of the factors obtained ranged from 0.746 to 0.951 (Table 4). Hence, all the aforementioned criteria for convergent validity were met (Fornell, 1981). In the last part of the study, it was determined that the findings complied with the Fit Indices Criteria. All factors are statistically significant, and the results of the fit indices showed that the model had a perfect fit (Table 5).

Table 5. Fit Indices Criteria and Result

| Fit Indices	Finding	Result	Fit Indices	Finding	Result
NFI	.918	√	RFI	.906	√
CFI	.956	√	IFI	.956	√
RMSEA	.050	√	TLI	.950	√
X^2/df	2.040	√			

After explaining the factors that were effective in recycling behaviour, it was important to explain their relationship with each other. Therefore, the correlation between the factors were investigated (Table 6). There was a correlation between perceived policy effectiveness and direct behaviour. In this study, it was determined that there was a weak correlation between subjective norms and direct behaviour. In addition, there was a weak correlation between subjective norms and behavioural control. A high correlation between behavioural control and direct behaviour, and a moderate correlation between behavioural control and indirect behaviour was calculated. There was a moderate correlation between consequences awareness and direct behaviour. Social pressure plays an important role on individual behaviours (Borgstede and Andersson, 2010).

Table 6. Correlations between Factors

	AT	PBC	CAW	DB	İNT	PPE	SN
AT	1.000						
PBC	0.249**	1,000					
CAW	0.567**	0.190**	1.000				
DB	-0.059	0.109*	-0.068	1.000			
İNT	0.299**	0.262**	0.362**	0.241**	1.000		
PPE	0.029	0.237**	0.057	0.266**	0.179**	1.000	
SN	0.352**	0.333**	0.180**	0.170**	0.169**	0.206**	1.000

**: P<0.01, *P<0.05.

Firstly, the effect of perceived policy effectiveness on the subjective norms of women in waste separation was determined as 0.14. On the other hand, the effect of perceived policy effectiveness on the intention was calculated as 0.13. In addition, the effect of perceived behaviour control on the intent was found 0.16. Since consumers' perceived policy effectiveness does effect consumers' intentions and the subjective norm in recycling the Çorum Municipality must pay attention to the improvement and provision of facilities for recycling. The path coefficient between consequences awareness and intention variables was 0.41. The path coefficient between consequences awareness and attitude variables was 0.51 (Figure 2).

Figure 2. The Path Analysis
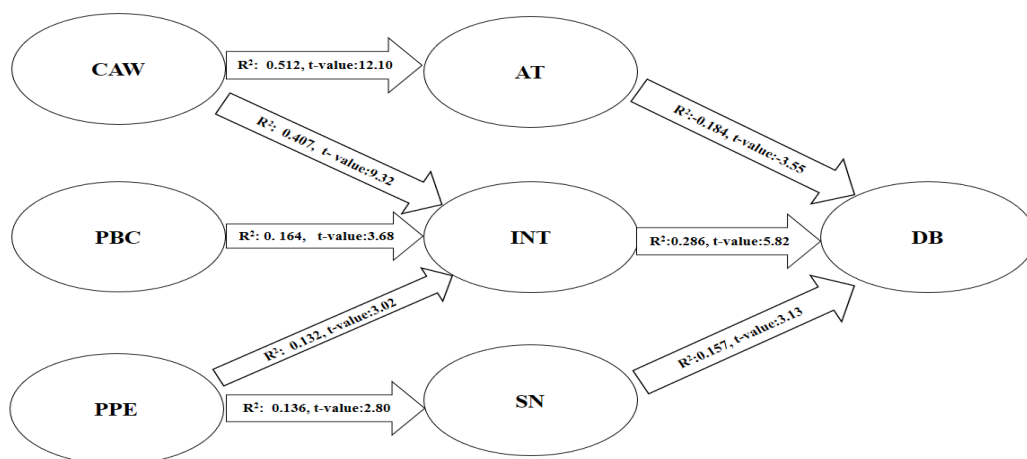
Intention, attitude and subjective norms were important in explaining women's waste separation behaviours. Although the path coefficient between attitude and direct behaviour was negative, the other two were positive. A unit increase in the woman's attitude decreased their direct behaviour of waste separation by 0.18 units. This is an indication that the necessary facilities have not been installed. In other words, although the average score of the attitude factor was 4.45, the municipality was inadequate in terms of waste separation facilities. Bernstad (2014) underlined the importance of

convenience and infrastructure for the separation of waste at the source. Stoeva and Alriksson (2017) stated that the lack of proper conditions for waste separation can lead to negative attitudes (Sorkun, 2018). In another study, it was stated that decreased distance to the drop-off point resulted in improved sorting of recyclables in Sweden (Rousta et al., 2015).

A unit increase in the woman's intention increased their direct behaviour of waste separation by 0.29 units. In a study conducted in Hong Kong, attitudes were found to have a negative effect on intent (Wan, 2014). In this study, it was determined that the path coefficient between subjective norms and direct behaviour variables was 0.16 (Fig 2). In another word, a unit increased in the woman's subjective norm increased its direct behaviour of waste separation by 0.16 units. In many studies in the literature, it was stated that subjective norms were an important predictors of the recycling behaviour (Oom Do Valle et al., 2005; Shaw, 2008; Mahmud and Osman, 2010). In another study, it was stated that social norms and consequence awareness had a strong effect on waste prevention behaviours (Corsini et al., 2018).

Conclusion

According to the results of this study, it was determined that women were both intentional and willing to recycle in the Çorum province. While the intent and willingness to recycling activities are necessary, they are not sufficient. There is no integrated infrastructure for recycling in the province. Therefore, the Çorum Municipality should provide the opportunity to achieve separation of wastes at the source.

In this research, consequences awareness for effective recycling was determined as the most important factor. The consequences awareness needs to be increased because the consequences of awareness affect the behaviours of recycling through attitudes and intents. In order to increase environmental awareness, it is of great importance that recycling is associated with energy saving, environmental quality, economic dimension, natural resources, pollution and the idea of leaving a clean environment for the children of the participants. In recent years in Turkey, rising sudden rainfall, flooding, hail and drought has caused food security. In this respect, the relationship between global climate change and waste should be highlighted.

In this study, social pressure groups that are effective in women's behaviours were investigated. The groups that women care about were; neighbours, friends, people around him, work or school friends, family and other people around him. Women were most affected by the social pressures of

their neighbours. Therefore, it can be said that neighbours were effective on women's recycling behaviour.

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Unconventional means of preventing chaos in the economy

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Abstract

This research explores five barriers, acting as obstacles to chaos in terms of policy (A), economic (B), social (C), demographic effects (D) and natural effects (E) factors for six countries: Russia, Japan, USA, Romania, Brazil and Australia and proposes a mathematical modelling using an original program with Matlab mathematical functions for such systems. The initial state of the systems is then presented, the element that generates the mathematical equation specific to chaos, the block connection diagram and the simulation elements. The research methodology focused on the use of research methods such as mathematical modelling, estimation, scientific abstraction. Starting from the qualitative assessment of the state of a system through its components and for different economic partners, the state of chaos is explained by means of a structure with variable components whose values are equivalent to the economic indices researched.

Keywords: chaos, system, Chiua simulator, multiscroll, barriers

Introduction

In the past four decades we have witnessed the birth, development and maturing of a new theory that has revolutionised our way of thinking about natural phenomena. Known as chaos theory, it quickly found applications in almost every area of technology and economics.

The emergence of the theory in the 1960s was favoured by at least two factors. First, the development of the computing power of electronic computers enabled (numerical) solutions to most of the equations that described the dynamic behaviour of certain physical systems of interest, equations that could not be solved using the analytical methods available at the time.

The second factor is the revolution in science triggered by quantum mechanics and the end of the era of Laplace's mechanistic determinism. Even though the birth of chaos theory is linked to the name of Henri Poincaré (1903), it was American meteorologist Edward Lorenz (1960) who would bring it to the attention of the scientific world. Chaos theory (the theory of complex systems) describes the behaviour of certain nonlinear dynamic systems, exhibiting the phenomenon of instability

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compared to the initial conditions, which is why their long-term behaviour is unpredictable, chaotic (Lorenz, 1984). Nonlinear behaviour allows a better understanding of complex natural phenomena. Nonlinear dynamics has introduced a set of new concepts and tools that allow the analysis and investigation of the dynamics generated by nonlinear processes. One can argue that currently there is a conceptual unification of notions (attractors, doubling of the period, bifurcations, Lyapunov exponent, sensitivity to the initial conditions). Techniques that study the concepts introduced by nonlinear dynamics are grouped under the generic label of nonlinear signal processing or nonlinear analysis (Anishchenko et al., 2007).

Chaos is a fundamental property of a dynamic system, which displays nonlinearity and sensitive dependence on the initial conditions. A small disturbance produces significant changes, while a large disturbance produces major changes - disaster. Several interconnected systems can only function if they are synchronised in the sense of graphically resulting in sharp peaks or smooth, according to the proposed purpose. The relationships established between systems feature complex links (loops) between the input and the output values, some areas exhibiting inverse links. The quantitative study of these systems is part of the chaos theory. Weather is one example of a chaotic system (storms, cyclones, hurricanes, typhoons, etc. develop over time). Weather represents the behaviour of all the molecules that make up the atmosphere. Similarly, the evolution of the human species and not only follows evolutionary leap points known as "eras". In the real world, disturbances in society of a political, economic, social nature can occur (e.g. diseases, political unrest, family disputes). From the beating of a butterfly's wings to the rhythms of the human heart, seemingly unrelated irregularities take on new meaning if one looks at them from the perspective of chaos theory. Outstanding scholars (David Ruelle, James Yorke, Michael Feigenbaum, Benoit Mandelbrot, Rene Thom, George Birkhoff, Andrey Kolmogorov, Aleksandr Lyapunov, Ilya Prigogine) have contributed to the establishment and development of a science that still has much to say in terms of understanding the complex world around us (Oestricher, 2007, p.8).

The aim of this paper is to highlight the state of complex chaos with impact values for political (A), economic (B), social (C), demographic (D) and natural (E) factors and its representation for six countries: Russia, Japan, USA, Romania, Brazil and Australia, using the standardised values [minimum 0, maximum 1] integrated in an original program with Matlab mathematical functions. The standardised values [minimum 0, maximum 1] were highlighted by 2 Chua simulators, which include fixed and variable (nonlinear) electro-technical elements enabling the representation in Matlab of the state of chaos and catastrophe. Within the global system, by using the six-stage resonance state, the chaos interactions for the six countries are highlighted.

1. Chua's chaos simulator

The Chua chaos simulator (Chua circuit) has multiple applications - in policy, economy, telecommunications, technical physics, nanomaterial synthesis, biology. It is of interest due to the multitude of adjustment parameters in the simulation processes. The Chua chaos simulator generally consists of two capacitors, an inductor, resistor and nonlinear resistor. It presents a variety of chaotic phenomena exhibited by more complex circuits, which makes it popular. It can be built easily at low cost using standard, reference electronic components. The process of investigating the dynamic modes of the Chua simulator consists of (Chua et al., 1993):

- determining and studying the possible constant movements corresponding to the ways of generating oscillations of different types;
- studying the mechanisms of occurrence of self-oscillations in the simulator;
- finding specific types of movements and researching their evolution the parameters of the studied system change;
- researching the bifurcations of movements, determining the values of parameter bifurcation;
- researching the mechanisms of triggering chaos in regular oscillations;
- building the elements of the bifurcation diagrams (parametric portraits) according to the parameters of the studied model.

The solution to each of the formulated problems is a separate stage in the process of modelling the nonlinear dynamics of the Chua simulator.

2. Literature review

Chaos is encountered in systems as a complex in electrical circuits, lasers, plasma physics, molecular and quantum physics, fluid flow, electrochemistry, in the process of chemical reactions as well as in systems such as the pendulum. In other words, chaos theories have recently found applications in almost all branches in the technical, medical, social, arts fields, etc. Elements of chaos theory can be applied to systems in order to be directed, controlled, manipulated. Lately, chaos theory has been successfully applied in economic, financial and social systems characterised by complexity. The analysis of these complex socio-economic processes helps above all to anticipate the uncertainty of chaos at certain stages and secondly to identify the factors that determine the state of chaos (Kenedy, 1993). The application of chaos in the field of social sciences is still in its early stages. From the *butterfly effect* discovered by Edward Lorenz to the *calculation of the universal constant* of

Mitchell Feigenbaum and the *concept of fractals* developed by Benoit Mandelbrot, who created a new geometry of nature, the science of chaos has become one of the most important scientific innovations of our time (Gleick, 2020). Edward Lorenz noted: "*A phenomenon that seems to occur randomly, in fact has an element of regularity that could be described mathematically. The flapping of a single butterfly's wing today produces a tiny change in the state of the atmosphere. Over a period of time, what the atmosphere actually does diverges from what it would have done. So, in a month's time, a tornado that would have devastated the Indonesian coast doesn't happen. Or maybe one that wasn't going to happen, does.*" (Lorenz, 1972). Hense, in everyday life, we can see complexity in the flow of traffic, weather changes, population changes, organizational behaviour, changes in public opinion, urban development, etc. Complexity is also more common under the name of **the edge of chaos** (Alligood, 1997, pp.31-67).

Thus, the development of creative imagination, invention and innovation are of interest for individual and social transformations, which are inherent in creativity, in the state of wakefulness and, respectively, of creative dreaming, in self-organisation processes, in psychopathology, in artistic creation (chaotic music). It is appropriate to break down applied research into chaos into scientific and technical (engineering) applications. Work on engineering applications demonstrates the use of chaos and methods of controlling chaotic systems particularly for practical problems or at least demonstrates their feasibility. Scientific applications (in physics, chemistry, biology, economics), are vectorised in control theory and the use of methods to discover new properties and regularities in physical, chemical, biological behaviour in certain applications.

3. The initial state of systems

A chaotic system exhibits three simple defining characteristics (Cloyd, 2002; Dao, 2014):

- *Chaotic systems are deterministic* (they feature a determining equation that drives their behaviour).

- *Chaotic systems are sensitive to the initial conditions* (even a slight change in the starting point can lead to significantly different results).

- *Chaotic systems are neither random nor disordered*. Truly random systems are not chaotic, as chaos does involve order and patterns. Although it is a field of study in mathematics, chaos has applications in several other disciplines, including sociology and other social sciences. In social sciences, it involves the study of complex nonlinear systems (of social complexity). It does not imply disorder, but rather very complicated ordered systems. Nature, including certain cases of social behaviour, is extremely complex and the only

prediction we can make is unpredictability. Chaos theory concerns this unpredictability of nature and tries to make sense of it

A deterministic system is chaotic whenever its evolution depends significantly on initial conditions. The simulation model involves the construction of mathematical structures, which should represent, by analogy, the evolution of the investigated phenomena (in our case the induction of the chaos state) (Doncean, 2012, pp. 55-129). Based on the model of chaos induction and simulation through RLC components - resistance, inductance, capacitance - the determining factors in each barrier or obstacle are highlighted along with the implications on the general state of a system:
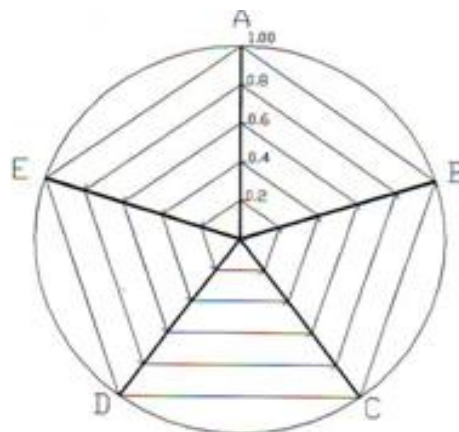
$$H= \sum H_i \, c_i^{\,k}$$

Where:

H – overall chaos

H_i – component chaos

c_i – importance coefficient

k – exponent

Figure 1. Geometric representation of chaos components with standardised minimum-maximum values in the [0; 1] interval

Source: Data processed by the authors

Assuming that for each country the impact of factors A, B, C, D, E is assessed based on qualitative estimated data. (Table no. 1, Figure no.1), then the state of components 1-5, labelled as j, is expressed by the following relation:

$$H_j=\sum \alpha_j \, C_j$$

(1)

Where H_j - extent of impact for component i (1…..5)

$\quad$ C_j - score of criterion j

$\quad$ α_j - importance coefficient

**Table 1. Values of A, B, C, D, E impact factors with standardised values
in the [minimum 0; maximum 1] range**

No	Area	Values of impact factors				
		A. Political factor	B. Economic factor	C. Social factor	D. Demographic factor	E. Natural factors
1	**Russia (RU)**	0.2	0.8	0.5	1	0.2
2	**Japan (JPN)**	0.3	0.6	0.6	0	0.9
3	**USA**	0.5	0.8	0.4	0.4	0.5
4	**Romania (RO)**	0.4	0.3	0.3	0	0.1
5	**Brazil (BR)**	0.2	0.2	0.4	0.3	0.1
6	**Australia (AUS)**	0.2	0.8	0.9	0	0.3

Source: Qualitative data estimated by the authors

Initially, the factors with the values assessed qualitatively by the authors were estimated so that subsequently the state of chaos could be extended in the [0, 1] range by using 2 Chua chaos simulators with standardised values (see Annex 1).

Figure 2. Representation of chaos components by areas - countries (Russia, Japan, USA, Romania, Brazil, Australia) with the values of the standardised impact factors [0: 1]
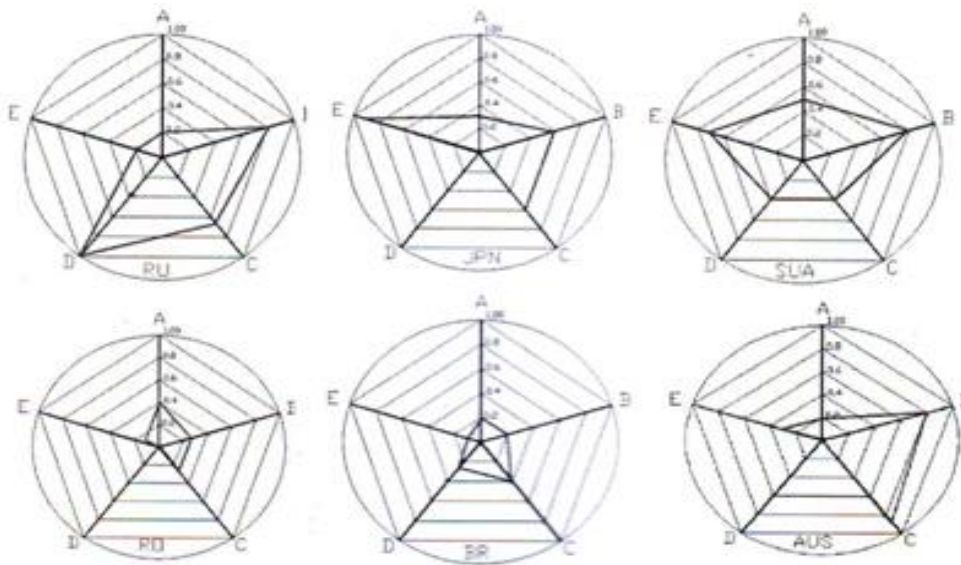
Source: Data processed by authors (A - economic factor, B - economic factor, C - social factor, D - demographic factor, E - natural factor)

Table 2. Weight in overall chaos

No.	Chaos component	Proportion
1.	A. Political factor	**0.25**
2.	B. Economic factor	**0.25**
3.	C. Social factor	**0.20**
4.	D. Demographic factor	**0.15**
5.	E. Impact of natural factors	**0.15**
	TOTAL	**1**

Source: Data estimated by the authors

From the estimated data in Tables 1 and 2 respectively, following mathematical modelling and the Matlab user method we obtain the matrix consisting of five components of chaos: political (A), economic (B), social (C), demographic effects (D) and natural effects (E) for six systems: Russia, Japan, USA, Romania, Brazil, Australia, as follows:

$$
A= \begin{bmatrix} 0.2000 & 0.3000 & 0.5000 & 0.4000 & 0.2000 & 0.2000 \\ 0.8000 & 0.6000 & 0.8000 & 0.3000 & 0.2000 & 0.8000 \\ 0.5000 & 0.6000 & 0.4000 & 0.3000 & 0.4000 & 0.9000 \\ 1.000 & 0 & 0.4000 & 0 & 0.3000 & 0 \\ 0.2000 & 0.9000 & 0.5000 & 0.1000 & 0.1000 & 0.3000 \end{bmatrix}
$$

Where the columns include the estimated values for the political (A), economic (B), social (C), demographic (D), natural (E) factors, while the rows represent the six systems: Russia, Japan, USA, Romania, Brazil, Australia (related to table 3).

$A = A\text{'}$

$B = [0.2500\ 0.2500\ 0.2000\ 0.1500\ 0.1500]$, represents the weight of each factor in the overall total (pertaining to table 2).

Using the mathematical relation (1), and the relevant data in tables 1 and 2, we calculate for the relative chaos each country (table 3), and will obtain:

$C=B*A$ $C=[0.5300\ 0.4800\ 0.5400\ 0.2500\ 0.2400\ 0.4750]$

Table 3. Calculation of relative chaos

No.	Area	Chaos
1	**Russia**	0.2x0.25+0.8x0.25+0.5x0.2+1x0.15+0.2x0.15=**0.53**
2	**Japan**	0.3x0.25+0.6x0.25+0.6x0.2+0x0.15+0.9x0.15=**0.48**
3	**USA**	0.5x0.25+0.8x0.25+0.4x0.2+0.4x0.15+0.5x0.15=**0.54**
4	**Romania**	0.4x0.25+0.3x0.25+0.3x0.2+0x0.15+0.1x0.15=**0.250**
5	**Brazil**	0.2x0.25+0.2x0.25+0.4x0.2+0.3x0.15+0.1x0.15=**0.240**
6	**Australia**	0.2x0.25+0.8x0.25+0.9x0.2+0x0.15+0.3x0.15=**0.475**

Source: Data processed by the authors

When analysing the above data, one can observe that for countries such as Russia, Japan, USA and Australia the values of general relative chaos H are in the range of 0.33 … 0.66, which corresponds to an average potential for chaos, tending to instability. For Romania and Brazil, their close values of general relative chaos H in the range 0 … 0.33 correspond to a small potential for chaos, considered closer to stability and balance. If the values of chaos were in the range of 0.66…1, then a high potential for chaos would result, with a high risk of catastrophe.

4. Mathematical modelling for the production and control of chaos

Based on the preliminary data in the first part of the paper, subsequent experiments (practical laboratory research) focus on the dynamic systems, the use of models based on chaos production and control, which could verify the data in previous tables (tables 1 and 2) .

The mathematical algorithm of chaotic control used presents certain distinct advantages in nonlinear dynamic economic simulation. (Figure no. 3). The key advantages are the constructive simplicity and the anticipation of the dynamic evolution of the state of chaos in the standardised interval [0,1].

Figure 3. Basic diagram of the Chua simulator
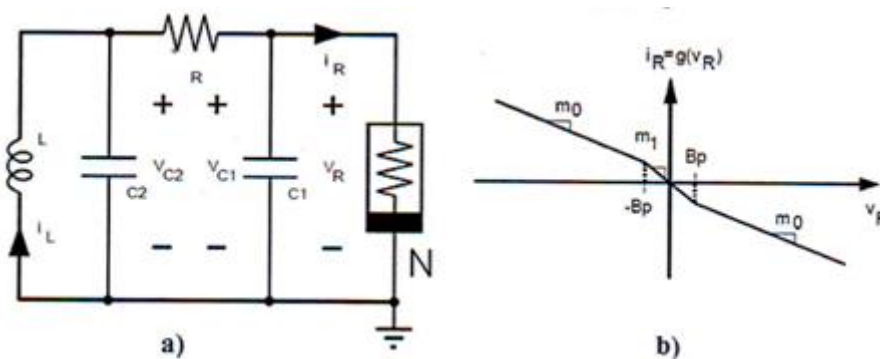
Source: Chua, (1992), The Genesis of Chua's Circuit pp.250-257

3. a) the Chua simulator (designed in 1983), where:

L - inductor,

R - linear resistance,

C_1, C_2- linear capacitors,

N - memistor (nonlinear resistance).

3. b) Representation of the v_i feature of the nonlinear resistor in the Chua simulator with m_0 slopes in the outer region and with m_1 slope in the inner region (+, -)

B_p - points of change in slope.

The Chua simulator in figure 3 a. is a simple oscillator that generates chaos and bifurcation. The simulator contains three linear energy storage elements (one inductor and two capacitors), a linear resistor and a single nonlinear resistor. Diodes, transistors, operating circuits, amplifiers can be used to make the nonlinear resistor.

The mathematical system for the Chua simulator consists of three ordinary differential equations, namely:

$$C_1 \frac{dv_{C_1}}{dt} = G(v_{C_2} - v_{C_1}) - g(v_{C_1})$$

$$C_2 \frac{dv_{C_1}}{dt} = G(v_{C_1} - v_{C_2}) + i_L \qquad L\frac{di_L}{dt} = -v_{C_2}$$

$$g(v_R) = m_0 v_R + \frac{1}{2}(m_1 - m_0)[|\, v_R + B_p \,| - |\, v_R - B_p \,|]$$

Where G = 1/R represents the equivalent conductance and $g(v_R)$ - linear representation.

According to Leon O. Chua, the following values are used for lab experiments (Chua et al., 1993):

L=18mH,

C_1=10nF,

C_2=100nF,

m_1=-(50/60)mS,

m_0=-(9/22)mS,

 E=1V,

R=0….2kΩ .
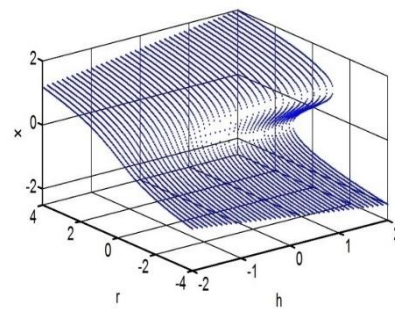
For R = 1.73kΩ the x-y dependence is obtained which mimics the state of chaos (Chua, 1992). The following syntax are used in the Matlab processing environment: **chua_oscillator.m** and **run_lyap.m**.

Figure 4. Representation in Matlab of the state of chaos and the state of catastrophe
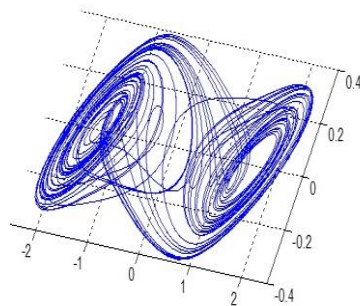
|	
a. *chaos*	*b. catastrophe*

Sursa: Doncean Ghe. (2015), The acoustic characterisation of Chua's chaos circuit, p.233

In order to simulate the states of chaos and catastrophe, respectively, one should use ***relatively low-cost*** electro-technical circuits (chaos simulators), which would render for a macro-economic system the state of chaos or catastrophe (e.g., for political factors A, economic B, social C, demographic D and natural E and representation for six countries: Russia, Japan, USA, Romania, Brazil and Australia). This prevents disasters, which involve high costs and financial efforts.

In chaos theory, Lyapunov coefficients (exponents) are the most commonly used. *They represent asymptotic values that characterise the divergence or convergence of the neighbouring paths in the areas of dynamic system phases*. In other words, Lyapunov exponents refer to how two initially adjacent paths, separated by an infinitesimal interval, separate over time (Figure 5).

Figure 5. Determining the state of chaos using Lyapunov exponents
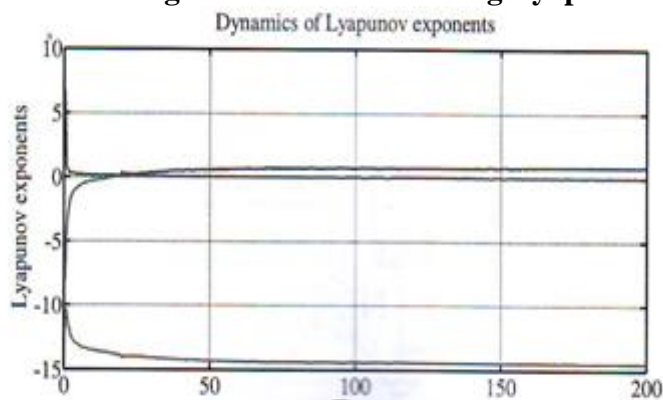
Source: Alligood, Kathleen, et al., (1997), Chaos: An Introduction to Dynamical Systems, p.49

This path exposes within a short period of time the expansion points of chaos. If one of the factors used exhibits impact disturbances, a chaos state develops. Technical solutions using several Chua simulators can be synchronised to obtain an image of a dynamic complex. Figure 6 shows the characteristics for five resistance levels (corresponding to the impact factors studied).

Figure 6. Graphical representation of the resonant state for 5 levels
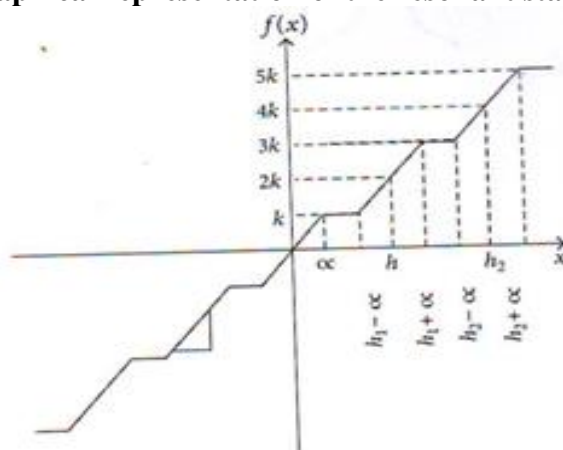
Source: Data processed by the authors

The figure shows that 5 transition stages with interferences (corresponding to impact factors) and 6 stationary stages of a constant level (corresponding to the 6 countries).

The related mathematical relations on these states are:

Stationary state	*(2q+1)k, x >qh + α*
Growth state	*s(x-h)+2k, h- α ≤ x ≤ h+a*
Stationary state	*s(x-2h)+4k, qh- α ≤ x ≤ qh+ α*
Growth state	*sx, - α ≤ x ≤ α*
Stationary state	*s(x+2h)-4k, -qh- α ≤ x ≤ - qh+ α*
Growth state	*s(x+h) -2k, -h- α ≤ x ≤ -h+ α*
Stationary state	*-3k, -qh+ α < x < - h- α*
Growth state	*-k, h-a < x < - α*
Stationary state	*k, α < x < h- α*
Growth state	*3k, h+ α < x < qh - α*
Stationary state	*-2+1k, x< -ph- α*

where f(x; α, k, h, p, q) represent regulation variables that can be studied on this system.

Based on Figure 2, we argue that at the macroeconomic level connections emerge between the six countries, so that the simulation can present interlinks at the global level, establishing five transition stages with interferences presented in Figure 7.

Figure 7. Resonance study for five stages of transition with interferences
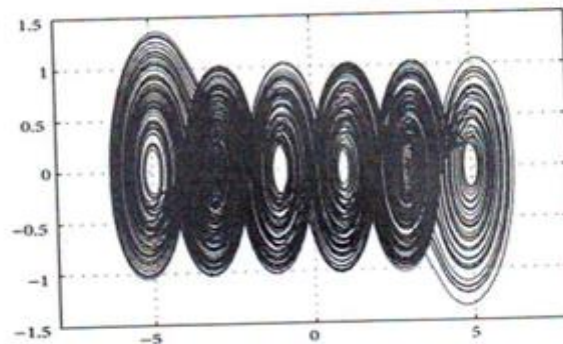
Source: Data processed by the authors

5. Block diagram of a simulation system

For the five barriers or obstacles to chaos, presented in the first part of the study, i.e. political (A), economic (B), social (C), demographic effect (D) and natural effects (E), Chua modules can help to create various connection schemes. Next, the Lyapunov coefficients (exponents) are calculated for each scheme. Finally, to indicate the state of chaos, the circuit itself is built and the simulation is then performed. For a given combination, the destruction of the system (Figure 8 above) or the linearisation with small disturbances (Figure 8 below) can be achieved.

Figure 8. Block diagram according to Lyapunov importance coefficients
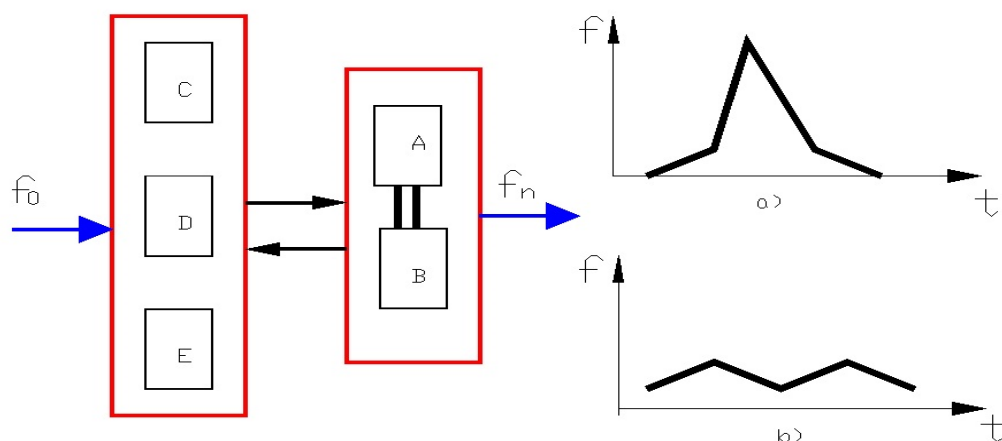
Source: Data processed by the authors

In the graph one may note an F_0 - impact factor which when acting on a system determines a whole series of interconnections (feedback). The result F_n leads to solutions a (destruction of the system) or b (linearization with small disturbances).

Conclusions

The present paper deals with notions of the theory of nonlinear dynamics of chaotic and stochastic systems. It provides both an exhaustive introduction to the topic and a detailed discussion of the fundamental problems and the experimental results of the research. The aim of the paper is to highlight the state of complex chaos corresponding to the impact factors for six countries: Russia, Japan, USA, Romania, Brazil and Australia, using the standardised values [minimum 0, maximum 1] integrated in an original program with Matlab mathematical functions. The standardised values [minimum 0, maximum 1] were highlighted using two Chua simulators (entailing low costs), which include fixed and variable (nonlinear) electro-technical elements, allowing the representation in Matlab of the states of chaos and catastrophe. This prevents disasters that involve very high costs and financial efforts.

Chaos can be understood using basic knowledge of linear algebra and differential equations. The Chua chaos simulators presented are simple and provide a rich variety of phenomena: equilibrium points, periodic orbits, bifurcations and chaos. Such simulators have multiple applications - in politics, economics, telecommunications, technical physics, nanomaterial synthesis, biology - and are of interest thanks to the many adjustment parameters in the simulation processes.

In conclusion, starting from the qualitative assessment of the state of a system through its components: policy (A), economic (B), social (C), demographic effects (D) and natural effects (E) and for different economic partners*:* Japan, USA, Romania, Brazil and Australia and proposes a mathematical modelling, the state of chaos may be explained through a structure with variable components whose values are equivalent to the explored economic indices. Chua modules can help to create various connection schemes. Finally, to indicate the state of chaos, the circuit itself is built and the simulation is then performed.
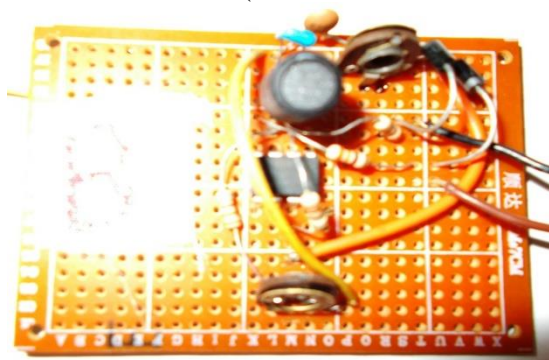
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Appendix 1. Experimental laboratory models

Each area features specific oscillations of environmental resonance. This experiment determines the specific features of the oscillation. The goal is the maximum wave of intervention to sustain a certain type of reaction to resonance with minimum cost and energy.

Chaos simulator A (electro-technical circuit)   Chaos simulator B (electro-technical circuit)
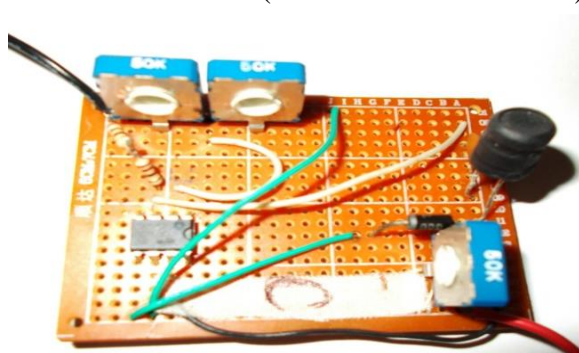
3D graphic renders the spatial scattering and the emergence of chaos
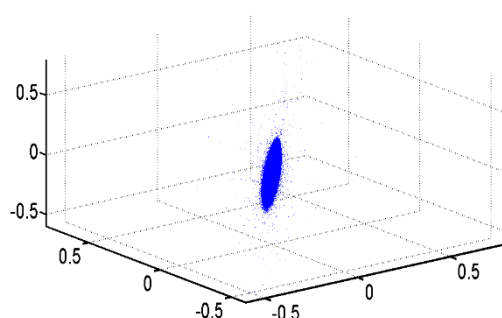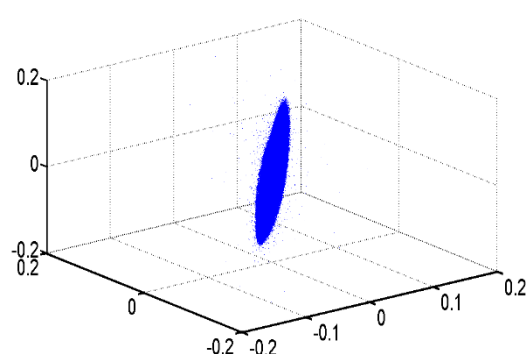
Chaos state for simulator A   Chaos state for simulator A

The change in amplitude and acoustic signal was highlighted.
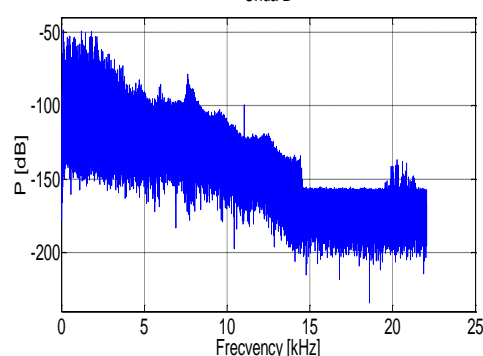
Specific features for simulator A   Specific features for simulator B
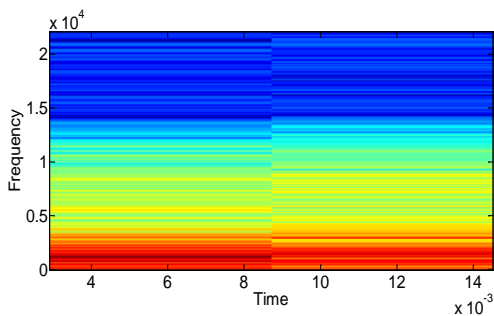
Sonogram for simulator A

Sonogram for simulator B

Different oscillations for simulator A

Different oscillations for simulator B

Source: Experimental data processed by the authors.

Redefining British policy at the beginning of the Cold War. South-East Europe in London's foreign policy strategies

Alexandru Dumitru AIOANEI[*]

Abstract

Great Britain played a significant part in the endeavours directed at organizing the peace process in the aftermath of the Second World War. A series of myths were consequently associated to its actions and foreign policies-related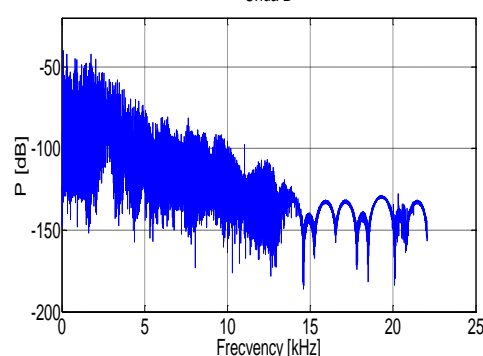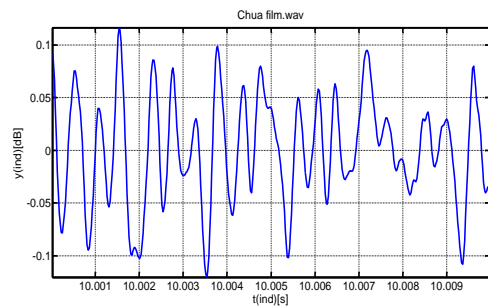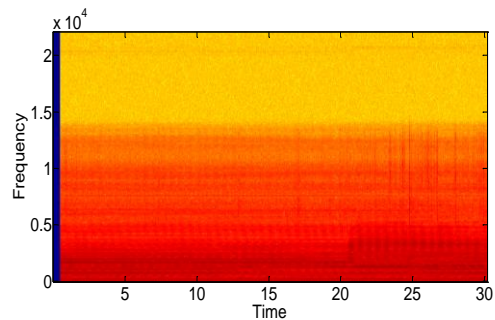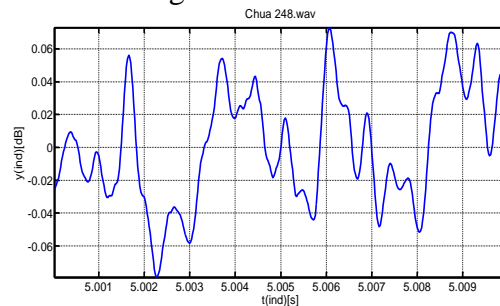 decisions, myths that still surface to the present day in some areas, especially with regard to London's attitude towards Eastern-European countries. Our study proposes a more nuanced approach of the events of the first post-war years, focusing primarily on the impact the domestic situation of the Empire had upon its foreign policy decisions. Our research is based on the recent contributions of several British and Eastern-European researchers who shed new light on Great Britain's attitude towards South-Eastern Europe. Our study discusses the factors that influenced the foreign policy decisions taken by London with regard to that region, by attempting to analyse the general framework from less explored perspectives.

Keywords: British foreign policy, Cold War, Eastern Europe, Ernest Bevin

Introduction

Stefano Dejak, an Italian journalist specialized on the British area, wrote in 1993 that it was the right time for the history of Great Britain to open towards the public (Dejak, 1993, p. 47). In Romania, after three decades of free access to the western literature, there still exists a series of myths related to the end of the Second World War and its aftermath. "The Western betrayal" associated with the Yalta Conference is one of those myths nurtured by this refusal of British historiography to open towards the public. In February 1945, at the meeting of the Three Great Powers in the beautiful Crimean resort of Yalta, Great Britain allegedly consented to the division of influence in Europe, leaving Romania and the rest of Eastern Europe in the area of Soviet interests. When I talk about Eastern Europe, I am referring in particular to Romania, Bulgaria, Greece and Balkan countries. Great Britain's interests and attitude of in this part of Europe made historians reconsider their positions. A

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country's foreign policy, especially during the challenging aftermath of a great war, is directly influenced by the internal, political and economic difficulties that the respective country must face. Much has been written in Romania about Britain's role in South-Eastern Europe after the Second World War, yet little attention has been paid to the domestic realities of the British Empire. This is to say that London's foreign policy and attitude towards the Soviet Union was insufficiently contextualized in Romanian research on history and international relations. Our study aims at revisiting the objectives of Great Britain's foreign policy at the beginning of the Cold War, as well as the attitude London displayed towards Eastern Europe in this context.

Romania was one of the countries which felt betrayed following the peace process established in the first post-war years. The anti-communist political elite in the South-Eastern European countries had great expectations with regard to London's involvement in blocking the extension of the Soviet influence. They were thus disappointed when Great Britain allowed Moscow to take political control, hoping to rescue its economic interests in the region. At the time, many people did not understand that Britain was forced to act on several levels and its resources, as well as its capacity to take action more firmly were strongly affected. Great Britain was confronted with a domestic economic crisis, had to face the Soviet Union's expansionist policy and to deal with the conflicts arising in its colonies, all these events taking place in a more and more polarized context. Our study aims at pointing out that Great Britain withdrew from areas it regarded as strategic not because it wanted to, but because it no longer had the financial and logistic capacity to defend its interests in those areas.

Our study is structured into three sections, in an approach that starts from a general perspective and advances towards a particular one. Thus, in the first section we discuss Great Britain's domestic situation, marked by the change of government in 1945 and various attempts to identify solutions for post-war economic and financial recovery. The second section focuses on the challenges brought by the international context, which London had to face, as well as on its efforts to save its great power status. The third section is dedicated to Great Britain's attitude towards South-Eastern Europe, where it had both political and economic interests and where it acted differently, depending on each particular country. Our study aims at providing a thorough analysis of the factors that determined the British policy in the area, inviting to a whole new perspective upon the events.

1. Great Britain – a country facing a crisis at the end of the war

Dean Acheson, former State Secretary of the American government stated in his discourse at United State Military Academy West Point *that "Great Britain has lost* an *empire* and not yet found

a role" (Barker, 1971, p. 3). This is by far the most accurate and concise depiction of Great Britain's position on the international stage in the first decades after the war. At the end of the Second World War, Great Britain was forced to reconsider its entire foreign policy. Coming out of the war more fragile than ever, London became dependent on the United States, both economically and militarily. According to Anne Deighton (1993, p. 10), the relationship between Great Britain and the United Stated was extremely complex and went far beyond London's pursuit for American protection.

At the end of the Second World War, Great Britain found itself in very different situation than the one in 1939. For Gladwin Jebb, the head of the Foreign Office Economic and Reconstruction Department, London's objectives after the war were: reviving the exports, limiting the power of Germany and Japan, consolidating the army forces with the aim of increasing collective trust and security, maintaining its authority in the colonies, and free trade (Kent, 1993, p. 1).

However, a new competitor for Britain's maritime and commercial status was looming at the horizon. After 1941 the United States gradually began to overtake Britain in exports to the Middle East. Washington's economic interests in Asia and Africa threatened the British authority in the area (Kent, 1993, p. 5). Ever since the war, there had been rumours within the Foreign Office that it would be difficult for Britain to regain its position in areas such as Southeast Asia. While some officials claimed that Britain should give up some of the Asian colonies for the sake of a more liberal image of the country, others believed that London should not give up the empire since that was, in fact, the very reason of the fight against Hitler (Kent, 1993, p. 3-4).

Towards the end of the war, British officials were debating several scenarios regarding Britain's post-war evolution and the contradictions between different centres of power became obvious. The soldiers were already showing signs of an anti-Soviet attitude and started to put pressure on political decision-makers to adopt a firm position against the Soviet Union (Kent, 1993, p. 69). Whereas the British officers were impressed with the military capacity of the Soviet Union, the diplomats were rather preoccupied with a reviving Germany (Nistor, 2016, p. 232). Political groups in London carried out discussions about how close the connection with the Soviet Union should be and how much reconstruction help should be granted to Germany (Greenwood, 2000, p. 10-13). After 1945, more and more information provided by the army and the secret services indicated that Britain's next adversary would be the Soviet Union rather than Germany (Nistor, 2016, p. 235). In this new context it became increasingly obvious that the alliance concluded with the United States during the war should be consolidated, as the American power was needed for the preservation of the empire and the Commonwealth (Kent, 1993, p. 11).

Right after 1945, one of the priorities of the British government, whether Labour-oriented or conservative, was to maintain the great power status in the context of rapid political and ideological changes (Deighton 2010, p. 113). Before the Potsdam Conference, Orme Sargent warned with regard to the tendency of the United States and the Soviet Union to treat Great Britain as a secondary partner and close deals behind London's back (Kent, 1993, p. 53). According to him, the relation between London and Moscow was essential for the preservation of the Empire and for the British interests in Europe. However, the attempt to preserve the Great Power status required new diplomatic initiatives. In 1945, the idea of establishing tighter economic relationships with France and Western Europe started to gain ground. Moreover, colonies belonging to other countries were perceived by the British diplomats as areas of potential interest. Duff Cooper considered that the African and European connections established by London and Paris were helping the imperial strategy, whereas Edmund Hall Patch regarded the overseas territories belonging to Holland, Belgium and France as good markets for Great Britain. The American claims with regard to the free trade and the conditions they imposed for the loan granted in the summer of 1945 actually reset the imperial policy, orienting it towards the collaboration with Western Europe (Kent, 1993, pp. 116-117). This aspect raised the issue of correlating the economic interests in the colonies with the new political orientation (Kent, 1993, p. 121). Some important institutions, such as *The Tresury*, supported the idea of closer relations with the colonies, for two very clear reasons. First of all, goods that were urgently needed could be found there and secondly, those overseas territories had significant financial liquidity in pounds (Kent, 1993, p. 125). The Commonwealth Relations Office was convinced that a European trade union was not in the best interest of the dominions, whereas Colonial Offices favoured an arrangement either between the colonies and Great Britain or between the colonies and European Customs Union (Kent, 1993, p. 140).

Churchill's response to the social provisions of the Beveridge Report and his overall narrow-mindedness when it came to social reforms resulted in the creation of an anti-conservative front in Great Britain which proved to be strong enough to produce surprises in the first post-war elections. According to David Howel, "Bread and butter plus a dream" was the central message that ensured Clement Attlee's victory in July 1945 (Jefferys, 1992, p. 5). The new Labour government, which carried out a programme that focussed on reconstruction, had to deal with serious challenges from the very beginning: the domestic economic crisis, the endeavour to save the country's interests in the colonies and the attempt to limit the spread of communism (Deighton, 2010, p. 117). Hugh Dalton, an important Labour-oriented economist, identified at the time six main directions of action for the British government: bringing the industry back to the stage of production in times of peace,

maintaining a high rate of employment without inflation, implementing a series of social reforms, relaxing the fiscal pressure specific to the war period, nationalizing a series of important industrial branches and rebuilding commercial relations. Yet, as they were about to discover, the price they had to pay for defeating Hitler was an enormous one (Jefferys, 1992, p. 15).

In 1944, Great Britain directed 53.4% of the total expenses to support the war effort (Howlett, 2004, p. 2). Britain came out of the war with a significant deficit in the external balance, a current account deficit of 1/6 of the GNP, a budget deficit of 1/6 of the GNP and a debt that was double the budget (Howson, 2004, p. 142). The British government responded to the situation with a two-fold strategy. First of all, they tried to maintain the interests at a low level through the so-called "cheaper money policy". This strategy generated consumption growth and actually put extra pressure on the current account deficit. The strategy was thus abandoned in 1947 (Howson, 2004, pp. 147-148). Jim Tomlinson (2004, p. 192) claimed that the Labour's obsession with keeping the interest rates low turned the issue of payments into an issue of exchange rates.

The other form of response to economic challenges was the transfer of a series of important economic units to state ownership. The victory of the Labour Party in July 1945 paved the way for the most important transfer of ownership from the private area to the state in the modern history of Great Britain. This decision did not face any strong opposition, as both parties believed that certain economic companies were too important to be allowed to go bankrupt. Moreover, some believed that such measures would help these companies become increasingly efficient and thus resources would be distributed more equitably (Hannah, 2004, pp. 88-90). The aim of the Labour Party in the period 1945-1951 was to increase the efficiency of entire economic systems, a fact that had a major impact on the whole economy. Nationalization meant, first and foremost, the radical reorganization of companies from a managerial viewpoint, an aspect which placed most small companies into a difficult situation (Hannah2004, pp. 93-94). Some authors consider that starting with 1945 one can speak of semi-planned economy in Great Britain (Tomlinson 2004, p. 189).

In the fall of 1945, England had very few solutions for the economic problems threatening it and consequently, in the attempt to maintain its global position, resorted to the help of the United States (Geiger, 2004, p. 62). Washington granted England a loan of approximately 4 billion dollars with 2% interest, but the loan came with a series of conditions: the rapid convertibility of the pound, the sponsorship of an economic conference and the elimination of discrimination against importers in dollars (Geiger, 2004, p. 65). The loan helped the Americans impose their own perspective on international trade (Geiger, 2004, p. 71). On the other hand, Britain's reputation overseas was not exactly flattering, the Americans perceiving it as an old, obsolete empire that actually intended to use

its resources to save its influence (Childs, 2005, p. 11). John W. Young (1997, p. 154) claimed that during the war Britain and the United States shared the same values, but had different interests.

John Maynard Keynes stated that once the "Lend and Lease" programme stopped, Great Britain was facing a "financial Dunkirk". The effects of the American loan were actually insignificant and the convertibility of the pound proved to be a failure. In addition, the fuel crisis in 1947 deepened the crisis the United Kingdom was challenged with at the time (Jefferys, 1992, pp. 15-19). Meanwhile, the conflicts at the top of the Labour Party and a failed attempt to replace Attlee with Ernst Bevin, the minister of Foreign Affairs, significantly diminished the population trust in the government (Jefferys, 1992, pp. 27-32).

In search of a middle ground

Some historians, such as Elisabeth Barker (1971, p. 54), believe that Ernest Bevin and Clement Attlee made great efforts to keep the secret of the domestic economic problems, attempting thus to play the part of a great economic power in Europe, even if London had a very feeble economic position. Bevin was convinced that Great Britain's economic recovery depended on its ability to preserve its Great Power status (Kent, 1993, p. 132). The war experience forced the Labour Party to adopt a non-ideological policy aimed at preserving the country's great power status. In this respect, Bevin drafted the plan for an alliance of the western states under London's economic leadership (Greenwood, 2000, pp. 35, 41).

The idea of a "third force" started to come up in the discussions of the British cabinet as early as 1944; it referred to a form of organization of the Western European countries that would counterbalance the increasing influence of both the United States and the Soviet Union. At the time, it was not very clear how far the Soviet influence would go and a confrontation between East and West could not be clearly predicted. British political leaders were simply expressing concerns with regard to the lack of a Western power able to counterbalance the events taking place in the East under Soviet patronage. The main concern was the fact that the lack of a power that could ensure stability in Western Europe would actually increase the level of attractiveness for the Soviet Union (Greenwood, 1993, p. 57).

Klaus Larres claims that Great Britain was reluctant to the idea of a Western Europe Union (Lares, 1993, p. 72). However, the involvement in the organization of a Western block was an opportunity for Great Britain to prove to the United States, the Soviet Union and the Dominions not only that it was willing, but also that it was perfectly capable of getting involved in the peace process

(Greenwood, 1993, p. 57). At the same time, Ernst Bevin was worried about the Soviets' possible reactions to his policies towards Western Europe (Greenwood, 1993, p. 57). According to the British perspective, France was on of the pillars of the future western block. In September 1947, Ernest Bevin told the French prime-minister, Paul Remadier that if their countries coordinated their actions and considered the common use of the resources from their colonies, they could occupy a place on the international stage that would be comparable to that held by the United States or the Soviet Union (Greenwood, 1993, p. 65). The main objective was for Britain to become less dependent on the United States. The Dunkirk Treaty concluded in April 1947 was also perceived as an alternative in case the United States retreated from Europe into a new wave of isolationism (Lares, 1993, p. 72). Despite his efforts, Bevin's European plans were hampered by the tensions between the allies, the political situation in France, which was on the verge of surrendering to communism, and the domestic economic crisis (Greenwood, 1993, p. 65).

Although in the first months of 1946, Bevin seemed willing to justify the behaviour of the Soviet Union in the occupied countries, the destructions that occurred during the war, Moscow's pressures targeted at Turkey, the desire to impose a base in the straits and the actions in Iran subsequently made him reconsider his attitude and perceived these challenges as a possible *casus belli* (Greenwood, 2000, p. 15). In April 1946, the *Russia Committee* was established within the Foreign Office with the aim of analyzing the Soviet Union's intentions and the way in which these intentions could affect the global interests of Great Britain (Greenwood, 2000, p. 18). The British government also directed a series of actions towards the relationships between the political parties, in the attempt to design policies that would limit the spread of communism. After January 1948, Bevin tried to turn London into the capital of social-democracy, blocking the ascension of communists in the syndicates. Reformed social-democracy was to offer an alternative to communism, not only in the British Isles, but also worldwide (Deighton, 2010, pp. 123-124). Ernst Bevin is regarded by some historians as one of the most important heads of the Foreign Office, as he was able to deal with the imperial problems and the beginning of the Cold war although the resources were seriously diminished (Young, 1997, p. 147).

Whereas Churchill was a prime-minister who had full control over the foreign policy, Attlee gave all the freedom of action to Bevin, his foreign minister. The latter was a former union member with no sympathy for the Soviet Union. He hated his meetings with Molotov, whom he held responsible for the death of a huge number of peasants. During one of these meetings the British official allegedly showed his worker's hands to the Soviet foreign minister, probably trying to

humiliate him by implying that the latter had never worked with his bare hands and could not grasp the meaning of hard work (Rothwell, 1982, p. 233).

The council of foreign ministers held in Moscow at the end of 1947 somehow sealed the cold relations established between the three great powers. The meeting was adjourned on the 15th of December without a clear decision with regard to Germany and without setting the date for the next meeting. After the split in December 1947, the collaboration between Great Britain and Western Europe gained a strong military dimension (Kent, 1993, p. 156-157). The tensions soon contaminated the economic level and smaller states began to feel the repercussions. The unification of the Anglo-American areas and Germany's industrial reconstruction were perceived in Moscow as serious threats for the very existence of the Soviet state as a great economic power (Pechatnov, 2010, p. 106).

Besides the problems in Europe, London was dealing with a series of challenges in the colonies. In the Near East, the Labour Party agreed with the division of Palestine (Childs, 2005, p. 27). In India, violent events occurred more and more often, with numerous revolts of the soldiers of the new Indian marine forces recorded in 1946. In this context, the official transfer of power was sealed on the 15th of August 1947, and the last British troops left in February 1948 (Childs, 2005, p. 28). Although their promise to the colonies had been unprecedented development, once they got the power, the Labour party realized that the financial situation would prevent them from achieving their initial plans (Childs, 2005, pp. 29-30). As far as the overseas territories were concerned, British politicians shared the same views. Even the English communists, despite the criticism they occasionally directed against the post-war colonial policies, organized no campaigns against it (Redfern, 2004).

This adaptation of the idea of Commonwealth to the new post-war realities represented, according to some authors, a "nation-building" process. The new image of the empire involved an attempt at establishing a series of partnerships between the former mother country and the new countries belonging to the Commonwealth, which was at the same time part of a global mechanism of resistance against the spread of communism (Deighton, 2010, p. 114). According to some historians, the war effort and the initiation of the de-colonization process created a new state. The United Kingdom of Great Britain and Northern Ireland can be perceived, as David Edgerton (2019, p. 26) remarked, as a new country, born after the dissolution of an empire. Great Britain was alone in the period 1940-1941 and this resulted into a rewriting of the war history from a national perspective. The political class redefined its policies in terms of national interest. Both parties considered themselves national by nature; the conservatives aimed at reinstating authority and had an imperial agenda, whereas the Labour party claimed to represent all social classes, namely the entire nation (Edgerton 2019, p. 43). Even the economy was regarded from a national perspective after 1945.

British economy became at the time a system that produced instead of just importing or exporting goods.

2. Great Britain and South-Eastern Europe at the end of the war

Elisabeth Barker describes Great Britain's policy in South-Eastern Europe as "a story of last-minute improvisations". London's actions in this part of Europe have always been shadowed by a feeling of fear: the fear of provoking Hitler, the fear of annoying Mussolini, the fear of irritating Stalin (Barker, 1976, p. 5). The war had greatly diminished Great Britain's capacity to carry out military actions in the area, despite its efforts to support guerrilla troops or espionage actions (Barker, 1976, pp. 41-50). After the war, Greece remained the main pillar of the British policy in the area.

The main issues regarding South-Eastern Europe were clarified from the beginning of the war. The Soviet Union had requested a military base and the guarantee of friendly relations with Romania since 1941, when Stalin asked Anthony Eden that Britain acknowledged the territorial changes in the area. Despite the fact that the British diplomats insistently pleaded against discussing border-related-issues before the end of the war, Moscow's claims were eventually accepted (Rothwell, 1982, pp. 88-89). The attention paid by the Soviets to territorial issues in Eastern Europe was accurately interpreted by many of the Foreign Office official as an increased Soviet influence in the area (Rothwell, 1982, p. 97).

Romania was one of the Balkan countries where Great Britain had the best political contacts, doubled by economic interests (Barker, 1976, p. 224). The insistence with which during each meeting the Soviets raised the issue of border recognition and the interest in establishing military bases in Romania made the British realize that they would not be able to act in this area without Moscow. At the beginning of the following year, London announced Washington that no action was possible in Romania without Russia's involvement. At the end of August 1943, Ivan Maisky, in a discussion with Eden, raised the issue of establishing areas of influence (Barker, 1976, p. 135).

Churchill's plan to bring Anglo-American troops to the Danube through the Balkans before the arrival of the Red Army was rejected in Tehran (November 28 - December 1, 1943) (Pearton, 1998, pp. 121-122). At the end of 1943, the Foreign Office presented the British government with a document entitled "Soviet Policy in Europe", which stated that the Soviet Union would not provoke Western powers and that Britain would have to maintain its influence in several European countries. The document suggested that London was forced to conclude an alliance with the Soviet Union in order to stop Germany (Kent, 1993, p. 13).

In February 1944, the Foreign Office was presented a document outlining the Soviet foreign policy and its possible impact upon the British interests, especially in the areas of Turkey, Bulgaria, and the straits (Kent, 1993, p. 15). A Soviet occupation of the straits would have provided Russia with the opportunity to reach British territories in the Suez Canal area and the North African coast very easily, by air. However, Churchill was willing to give the Soviets free access to the straits. In order to partially limit the Soviet expansion, the British also considered the occupation of Bulgaria. The idea was quickly abandoned, as it would have been difficult to justify since Turkey was not at war. In the spring of 1944, Churchill began to fear isolation and was worried about the bilateral agreements between the United States and the Soviet Union. Furthermore, Moscow's insistence in organizing popular fronts in the freed areas, even in Italy, made his fears more acute. The entry of Soviet troops into Romania gave Churchill dark premonitions about the Soviets' behaviour in the East. For this reason, the core objective of the percentage agreement concluded in October 1944 was to delimit the spheres of Soviet influence and to make sure that Greece would remain in the British area of interest (Kent, 1993, pp. 23-24). The British needed to preserve their position in the Mediteraneean Sea and Middle East and the fastest answer Foreign Office was able to provide to the speedy evolution of things in that part of Europe were those percentages written on a piece of paper (Paraskevov, 2011, p. 245).

Foreign observers could clearly see the path Romania was forced to follow. For Mark Ethridge, the attitude displayed by both Great Britain and the United States in Moscow in 1944, gave the Soviets the impression that Romania and Bulgaria had been abandoned to the Soviet Union. After the Yalta Conference, both powers attempted to re-establish the balance, but they succeeded only partially in defending the interests of the two countries (Burger, 2000). Many telegrams presenting the situation in Romania and the Soviet actions received the same answer, as London's policy towards Bucharest was subsumed to the percentage agreement (Percival, 1997, p. 48). Dennis Deletant maintains that the British Legations in Romania were unaware of the agreement between Churchill and Stalin. On the 4th of November 1944, the British prime-minister wrote to his foreign minister, Anthony Eden that the British could be no more than "spectators" in Romania and he complained that Le Rougetel "evidently does not understand that we have only a ten percent interest in Roumania" (Deletant, 1995, p. 136).

According to Marc Percival, the percentage agreement was a personal project of Churchill's, who wanted to impose clear limits to the Soviet offensive. The British Prime Minister agreed to expand the influence of Kremlin in the neighbouring countries as long as he was allowed to have friendly relations with the Turkish and Greek governments. London agreed to treat Romania as a

defeated enemy, as the Soviets did. On August 24, 1944, London officials suggested to the BBC to refrain from referring to the Romanians as allies or showing much enthusiasm when mentioning them. Percival points out that after May 1945, no British document referred to the percentage agreement. Furthermore, after Churchill left the position of Prime Minister, this agreement was never invoked as a justification of British policies in Romania (Percival, 2005, pp. 92-98).

At the end of 1944, the British military and diplomats accepted the idea of Soviet domination over Eastern, Central and Balkan Europe, with the exception of Greece. (Percival, 1997, p. 39). In the summer of 1945, it became increasingly clear that the British had to keep Turkey in their sphere of influence, as a connection to the Middle East. While opposing any Soviet claim in the area, London held control over the Suez Canal and had 10,000 troops in Egypt. Any concessions made to Russia in the straits could later impact on the situation in Suez and Gibraltar (Percival, 1997, p. 62). In fact, as Vasil Paraskevov rightfully pointed out, Soviet actions such as the communization of Bulgaria strengthened London's desire to save Greece and Turkey. The main response of the British to Moscow's aggressive policies to impose the Soviet system in Bulgaria was to postpone the resumption of diplomatic relations and to recognize the Bulgarian government until after 1947 (Paraskevov, 2011, p. 249).

Ivor Porter, witness and participant in the events of 1943-1945, describes England's policy in South-Eastern Europe and especially in Romania as lacking consistence. On the one hand, London had to accept the idea of unconditional surrender, as proposed by Roosevelt and immediately embraced by the Soviets, and on the other hand, Churchill asked the satellites to recover and help bring the war to an end. According to Porter, the idea of unconditional surrender was a wrong decision in the case of Romania, especially taking into account that the British chiefs of staff were willing to accept a rehabilitation of our country (Porter, 1991, pp. 131-133).

The evolution of the political situation in Romania presented Churchill with further challenges. He repeatedly demanded Anthony Eden to ensure that the British representatives in Romania did not open an anti-Russian front in Romania, as this could affect the British interests and actions in Greece (Chiper et al, 1993, pp. 122-124). Churchill did not need trouble in Romania. He accepted Russia's freedom of movement in Eastern Europe in order to prevent its interference in other areas (Deletant, 1995, 110). When the Moscow newspapers started to publish critical articles with regard to the situation in Greece, British diplomats seemed taken aback, since, as they claimed, London remained neutral in Romania (Chiper et al, 1993, pp. 134-135).

The change of government in London in the summer of 1945 also brought a new perspective on foreign policy. Since the war, Bevin had been campaigning for British influence in Greece and the

Eastern part of the Mediterranean Sea. His imperial strategy was marked by the idea of an equal relationship between the mother country and the colonies and an accentuated anti-Russian sentiment, rooted in his trade union activity (Kent, 1993, p. 77). The Labour supporters hoped for a foreign policy that would be closer to the Soviet Union rather than to the United States. In fact, when he received the news from Potsdam, Stalin was less than happy about the result of the British elections. Ernst Bevin confirmed his worries on the 20th of August 1945, when, in his first parliament discourse as the head of the Foreign Office, he declared that the governments established in Bucharest, Sofia and Budapest were not representative and a totalitarian system had been replaced by another (Barker, 1971, p. 45). Bevin's tough line of action was frowned upon by certain members of the Labour Party. He was labelled as "the Americans' servant" by some of his party members who sought to cast a no-confidence vote against the British Foreign Minister in November 1946 (Deighton, 2010, p. 122).

In their effort to turn London into a European capital of social democracy, the Labour Party tried to cultivate a certain independence of Romanian socialists from the communists. Some leaders of the Labour Party visited Romania in the period 1946-1947, hoping that the Romanian social-democrats would adopt a more independent attitude and oppose the communist policies that affected the property rights and the business of the British companies. All these attempts were, however, in vain (Dudoi, 2012).

The main discussions at the Potsdam conference focused on issues related to compensation, the straits and joint agreements regarding the Mediterranean area. The results were far from spectacular. Anthony Eden had become aware that London had a diminishing capacity to influence things and had high hopes for the United States, although he acknowledged that the interests of the two countries did not always overlap. (Neiberg, 2018, pp. 273-274). Truman allegedly declared afterwards that he was in quite good terms with Stalin and there were no major tensions during the discussions, except for those caused by the issue of American political representatives in Romania and Bulgaria (Neiberg, 2018, p. 392). However, Washington and London refused to acknowledge the pro-communist governments in Sofia and Bucharest unless they accepted to include members of the opposition. This aspect, correlated with the tensions in Iran, made the Soviets feel threatened by a new American offensive. Consequently, at the Foreign Ministries Conference in London, Moscow decided to consolidate its power in the Balkans and Molotov was assigned the mission to hold his position and allow no concessions with regard to Romania (Pechatnov, 2010, p. 106).

Anglo-American cooperation was not particularly close at the Moscow Conference of Foreign Ministers in December 1945. Bevin was afraid that James Byrnes was going to be very conciliatory with the Soviet Union and tried to make Truman was aware that Moscow was going to ask for its

rights in Eastern Europe to be respected before promising to respect the Anglo-American interests in other areas (Rothwel, 1982, p. 241). The British foreign minister was eventually forced to adjust his policies towards Romania and Bulgaria according to the perspective of the United States. The Iranian crisis at the beginning of 1946 would subsequently lead to a more unitary vision of the two states in their relation with the Soviet Union (Kent, 1993, p. 93-94). Any confrontation between Great Britain and the Soviet Union on particular issues such as the Mediterranean Sea consolidated the hypotheses concerning the spheres of influence. While the Soviets abandoned their imperialist claims in the Mediterranean and the Far East, they became more and more determined to make no concessions in Bulgaria, Romania and Poland (Kent, 1993, p. 89).

The Balkans occupied a special place in the post-war British policy. Greece was essential for the control over the Mediterranean Sea. At the same time, the other states could become important elements in the attempt to limit the spread of the Soviet influence. This was the reason that motivated London to support federative projects. Despite the fact that in 1942 the exiled governments of Greece and Yugoslavia signed an agreement in this respect, things remained unresolved because of the evolution of the war and the territorial claims formulated by each state (Rothwel, 1982, pp. 195-196). The presence of the Soviets in Bulgaria starting with the fall of 1944 brought them too close to the straits and allowed them to threaten the British influence in Turkey and Greece (Rothwel, 1982, p. 210).

The British government tried to preserve its economic interests in South Eastern Europe, where the English capital was consistently present in the interwar period. Romania was one of the countries where London wanted to regain its economic positions, a fact that became obvious as early as the autumn of 1944. The British Legation in Romania had a significant number of specialists in oil and agricultural issues. First of all, the British wanted to reopen the English oil companies, as oil represented a strategic resource in the new international context. Last but not least, London has always viewed Romania as a possible source of agricultural products that would constitute essential supplies not only for the British population at home, but also for the colonies. Oil was one of the issues that impacted deeply on the relation between Great Britain and Romania, respectively the Soviet Union in this part of Europe (Aioanei, 2020).

In March 1946, the British army was against any concession made for the Soviet Union with regard to the straits, whereas the Foreign Office already doubted London's capacity to save Turkey (Kent, 1993, p. 96). Clement Attlee's belief that the Mediterranean Sea was one of the three defence pillars of Great Britain was regarded as a victory of the supporters of the imperial view. However,

the financial issues Attlee was confronted with made him think very seriously about the withdrawal from the Mediterranean (Kent, 1993, p. 97).

Some analyzes of the time are very critical against Britain's foreign policy after the Second World War. In 1959, Peregrine Worsthorne wrote in the famous magazine "Foreign Affaires" that one could hardly identify a period in history when Britain was as passive in its global role as it was after the Second World War. The author tried to provide a series of explanations: the polarization of the international context, the loss of the empire, the difficulty of accepting a secondary role on the new global stage (Peregrine, 1998, p. 420). Worsthorne speaks about a bias towards compromise that could be identified in both political groups. After the war, the socialists no longer believed that they could build a new world, while the conservatives had no hope that the old world could revive. Both parties focused on the foreign policy, being interested in what other countries could do for Great Britain rather than in what Great Britain could do for other countries (Peregrine, 1998, p. 429).

Conclusions

Great Britain was one of the countries that South-Eastern European states hoped would protect them against the Soviet expansion. Despite being the only Western European country that fought against Hitler for more than three years, Great Britain was unable to use this symbolic capital to defend its strategic objectives once the war was over. In the aftermath of the Second World War, Britain went through a challenging period in which it tried to redefine and reinvent itself from several perspectives. First of all, London was facing the loss of its status as a great power and was forced to assume its position as a country with a secondary role in international politics. Secondly, the end of the war brought substantial economic changes, which structurally transformed the British economy, changed its objectives and brought unprecedented challenges. All these aspects had a major impact on the way it managed its interests overseas.

At the end of the war, Britain no longer had the resources or the capacity to defend its interests in all parts of the world. London was forced to retreat from several regions of the world and make consistent efforts for the defence of a few key points that would ensure the survival of the empire and would secure its economic recovery. Eastern Europe was one of those areas it had to give up. Despite not being one of the first-rank regions from a strategic point of view, the British capital had a consistent presence in the area, and London hoped to regain its former economic position. However, the evolution of events rendered this endeavour fruitless. The economic crisis and the financial dependence on foreign aid, the problems that occurred in the colonies and the American suspicions

of "British imperialism" seriously affected the British Empire's ability to interfere in areas that were under Soviet control. The challenges Great Britain faced in the first years after the war exceeded by far its resources. The British political leaders tried to preserve the country's great power status and impose London as an important pillar in the peace organization process. Yet, Great Britain continued, for a long period of time, to be a great power seeking a path to follow in the new post-war world.

In the aftermath of the war, both Great Britain and the South-European countries passed through a series of systemic transformation processes. England was forced to reconsider its role on the international political stage, by applying economic measures previously unheard of, such as the nationalization of entire industrial sectors, thus rethinking its relations with its overseas territories. At the same time, most Southern-European countries entered the Soviet area of influence, being thus subject to accelerated communization processes. Greece, in turn, was caught in a civil war that was to represent a huge impediment in the after-war reconstruction process. All these realities represented challenges for Great Britain in terms of its relations with the countries in the area, forcing the British government to adopt different strategies. As a result, Great Britain retreated sooner from countries such as Bulgaria, while still trying to defend its economic interests in Romania, for instance, or employing all means to defend its political and economic position in other countries, such as Greece.

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The behaviour of airlines' passengers in the context of COVID-19 pandemic

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Abstract

The COVID-19 pandemic has negatively been influencing the air transport industry. The devastating impacts, which started to be felt since the first months of 2020, consisted in rationalizing the fleet, reducing staff number and reconfiguring their networks and capacity. Therefore, understanding passengers' attitudes towards travelling during a global pandemic may strengthen aviation industry practices and minimize the costs in the downturn period. Considering these aspects, the purpose of the present paper is to analyse the behaviour of airlines' leisure and business passengers in the context of the COVID-19 pandemic, by underlying those factors that may have a strong impact on their travelling attitudes. In order to achieve this purpose, we have conducted an online survey on a sample of 146 respondents from Romania.

Keywords: airlines' passengers, COVID-19 pandemic, behavioral predictors

Introduction

It is known that the airline industry is very sensitive to the global downturns, such as economic crisis, natural disasters, political instability or pandemics (Sadi and Henderson, 2000). Therefore, the fact that the air transport industry has been severely impacted by the COVID-19 pandemic came as no surprise. The devastating consequences, which started to be felt since the first months of 2020, consisted in rationalizing the fleet, reducing staff number and reconfiguring their networks and capacity (Wenzel *et al*., 2020). All these measures have been taken in the context in which the governments imposed various travel bans and restrictions in order to limit the spread of the virus. Meanwhile, the demand diminished due to both economic factors, such as income decrease, and behavioural aspects: concerns for own health or health of the others, fear of imposing new restrictions or fear of being close to others, especially in airports and on aircrafts (Lamb *et al.*, 2020).

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The demand for airlines' services is, by its nature, a derived one: it results from the fact that passengers and goods need to move between different places in an efficient manner, from cost and time perspectives. Therefore, understanding passengers' attitudes towards travelling during a global pandemic may strengthen aviation industry practices and minimize the costs during the downturn period.

Considering these aspects, the purpose of the present paper is to analyse the behaviour of airlines' leisure and business passengers from Romania in the context of the COVID-19 pandemic, by underlying those factors that may have a strong impact on their travelling attitudes. Therefore, the initial sample included 146 Romanian travellers, which were subsequently grouped into leisure and business passengers. We divided the respondents into these two groups because, based on the findings of previous studies (Sonmez and Graefe, 1998), we assume that leisure passengers who fly to vacation destinations or to visit family and friends are more skeptic about travelling by airplane, due to the increased risk of contracting the virus. Meanwhile, the business travelers are flying more frequently and, since they are more familiar to the exposure to air travel, they may perceive less risk (Goodrich, 1991). Moreover, since the new pandemic led to an increased online activity in many business fields, we consider important to analyze how the preferences regarding the purpose of travel can be changed in the conditions in which the job's activities can be carried out remotely.

The findings of this research might present importance for airlines and government agencies, which could use them in order to identify the proper messages transmitted to customers to ensure about the actions taken to provide a safe environment for air travelling even in the context of a major health crisis. Yet, considering the fact that this study included participants only from Romania and taking into account that the nowadays health crisis is a global one, future studies on travelers from other countries affected by COVID-19 are required in order to generalize the results regarding the factors which influence the behavior of airlines' passengers in the context of the pandemic.

The rest of this paper is structured as follows: the next section briefly summarizes the literature on the behavior of the airlines' passengers, in general, and during the downturns, in particular. The third section presents the methodological approach and the last sections highlight the results of our analysis and the conclusions.

1. Theoretical background

In the literature, studies on evaluating the expectations and perceptions of airlines' passengers have been conducted with regularity. Depending on the purpose of the research, the methodology that was used varied from one study to another. For example, in order to identify factors that determine

the choice of airports and airlines, most of the researchers applied the logit analysis (Ong and Tan, 2010; Lee *et al.*, 2016).

Structural equation models have been used to investigate especially the quality of the airlines' services through passengers' satisfaction and loyalty (Mikulic and Prebežac, 2011; Forgas *et al.*, 2012). Bogicevic *et al.* (2016) found that passengers' satisfaction is related to airport design characteristics and cleanliness. Meanwhile, Chen and Chao (2015) concluded that passengers' loyalty is related to five factors: ground services, convenience, in-flight services, price and travel availability.

To identify the changes in the passengers' choices in different downturns periods, the most used research techniques were the comparative analysis of travelers' behavioral patterns through cross-cultural studies (Lee and Lee, 2009) or the intervention model. The last one was used particularly to identify the changes occurred in the purchasing decisions of the travelers after the September 11 terrorist attacks. For example, Lirn and Sheu (2009) investigated behavioral particularities in Taiwan and Lai and Lu (2005) looked into the impact of on air transport passenger demand in the US.

Since understanding passengers' perceptions and expectations regarding the services' quality under pandemic times is very important for future airlines' outcomes, Tsaur *et al.* (2002) proposed to introduce surveys based on fuzzy set theory. Yet, the already conducted airlines' passenger surveys, while very detailed, are not representative and clarifying for the current COVID-19 pandemic (Monmousseau *et al.*, 2020), because of the complexity and the magnitude of its consequences. Impacting 209 countries and overseas territories or communities, the airline sector has suffered the most devastating shock ever (OECD, 2020). Only one previous study, which measured passengers' perceptions of preventive measures against influenza H1N1 (Chou and Lu, 2011), may offer only partial theoretical support for estimating travelers' behavior during and after COVID-19 pandemic.

However, several studies have been conducted in the context of COVID-19, analyzing the relationship between the pandemic and airlines' industry from three main perspectives. One approach was related to the impact the airline travel on the spread of the virus. Lau *et al.* (2020) concluded that the air travel bans significantly slowed the spread of COVID-19 in China. Yet, not any kind of restriction had the same efficiency. For example, Chinazzi *et al*. (2020) found that the embargo would only delay the spread of the virus among China's regions by 3–5 days, while international travel restrictions are more effectively in delaying its spread from China to the rest of the world. Meanwhile, Zhang *et al*. (2020) investigated the effects of different means of

transportation on the spread of COVID-19 and they concluded that the air transport had the highest impact on the virus transmission.

The second investigation perspective was focused on the impact of the pandemic on the airlines' industry activity and, implicitly, revenues. All the restrictions and lockdowns led to a severely contraction of the supply of air services starting from the early months of 2020. In this context, until the end of 2020, over 60% of the world's commercial aircraft has been grounded (Hollinger, 2020), which led to a revenue drop by US$314 billion for the whole industry (IATA, 2020).

The third approach revealed the inhibitory effect of the pandemic on air travel, from the point of view of passengers' behavior. One of the first studies was conducted by Graham *et al.* (2020) on older passengers (65+) from China and Taiwan. They found out that the respondents not only intended to significantly reduce the air travels and replace them by other means of transportation, but also that they will focus more on the domestic trips than on the international ones. Similar conclusion was reached by Hensher *et al.* (2021), who considered that the pandemic led to a greater shift in travel from public transportation to cars.

In the case of airlines' leisure passengers, the COVID-19 pandemic determined them to be more concerned about their health and, thus, to become fearful and anxious about being close to the others (Lamb *et al.*, 2020), so that they no longer perceived flying as unique and fun. In the case of the business travelers, they drastically reduced the number of their trips due to the fact that the majority of the meetings were conducted through various online platforms and they could work remotely (Hopkins *et al.,* 2020). All these aspects, together with passengers' changing preferences (Forsyth *et al*., 2020), are significant enough to raise concerns about the long-term evolution of the airlines' industry (Tuchen *et al*., 2020).

Considering all these aspects, we have developed the following research question:

Q: What are the factors that are mainly influencing Romanians' decisions of traveling for pleasure and business in the context of the pandemic?

2. Research methodology and data

In order to achieve the established purpose, we have conducted an online survey on a sample of 146 respondents from Romania. The survey was conducted between March and April 2021 and the final sample included 142 respondents because 4 questionnaires were invalid (for sample characteristics see Table 1).

Table 1. Sample characteristics

Characteristic	Groups	%
Travelling purpose	Business	47.18
	Leisure	52.82
Gender	Female	37.32
	Male	62.68
Education level	Primary education	1.41
	Lower-secondary education	8.45
	Upper-secondary education	19.01
	Tertiary education	71.13
Age	18-30 years old	35.21
	31-50 years old	41.55
	51-65 years old	18.3
	Over 65 years old	4.94

The questions addressed to the respondents were focused on identifying 18 predictors that may influence a passenger's willingness to fly for either business or pleasure: education level, age, gender, number of at-risk COVID-19 family members, current health level, level of religiousness, primary purpose of travel pre-coronavirus, pre-COVID-19 flight anxiety, perceived threat from COVID-19, satisfactions with health insurance, anticipatory flight anxiety, annual frequency of travel, extraversion, agreeableness, conscientiousness, neuroticism, risk taking propensity, affect and level of fear. We have chosen these predictors based on the findings of other studies which indicated that they may influence passengers' willingness to fly (Rice *et al*., 2019; Winter *et al*., 2018). Considering the nature of the 18 predictors, the questions of the questionnaire were grouped into five major categories: personality aspects, socio-demographic issues, affect or emotional related questions, health aspects and air travel particularities.

Personality type is considered to be a good predictor for both personal and professional behaviors (Riaz *et al*., 2012). The literature indicates five categories of personality traits, known as "the Big Five" (John and Srivastava, 1999), which recently have been associated with the willingness to fly during and after the COVID-19 pandemic (Lamb *et al*., 2020): extraversion, openness, agreeableness, neuroticism and conscientiousness. We have assessed personality by using the Ten-Item Personality Inventory, which is a very brief measure of the Big-Five personality aspects (Gosling *et al*., 2003). For each item, we assessed whether we could argue the relationship between that personality trait and the willingness to fly in the current pandemic context. We evaluated the responses on a five-point Likert scale, ranging from 1 "strongly disagree" to 5 "strongly agree". Apart from these personality issues, we have also included in the current study the risk-taking propensity, because we consider it an important predictor of the willingness to fly during the current pandemic. Risk taking was measured by the General Risk Propensity Scale, developed by Meertens and Lion

(2008) to evaluate different risk-taking behaviors, such as selecting a risky traveling destination. The scale includes nine items to assess different aspects of risk, on a nine-point scale.

The socio-demographic aspects, such as education level, age, gender and level of religiousness, were found to be important determinants of risk-taking propensity in the context of the current pandemic (Mitchell and Oliphant, 2020).

Apart from the fact that emotions strongly influence the decision-making process, in matters related both to work and to personal aspects (Sayegh *et al.*, 2004), it is known, from previous studies, that affect can impact the willingness to fly (Anania *et al.*, 2018). In the current research, we are particularly interested in the flight anxiety, generated by the current health crisis. Therefore, the questions referred to pre-COVID-19 flight anxiety, perceived threat from COVID-19 and anticipatory flight anxiety. The responses were assessed on a five-point scale, ranging from 1 "no flight anxiety at all" to 5 "extreme flight anxiety".

In this research we investigated three health-related predictors, which we considered to be the most relevant in the context of current pandemic: current health level, satisfactions with health insurance and number of at-risk COVID-19 family members. In order to asses these three predictors, we relied on the Perceived COVID-19 Threat Questionnaire, developed by Conway *et al.* (2020). We have adapted it, including only five items that are measured with seven-point Likert scale, ranging from 1 "not true at all" to 7 "very true for me".

The air travel aspects were assessed through seven items considered by Rice *et al.* (2020) in the development of the Willingness to Fly Scale. The responses were measured through a five-point Likert scale, ranging from 1 "strongly disagree" to 5 "strongly agree". In this part, we have also included the frequency of air travel in order to see if the frequent business travelers would indicate different willingness to fly than the leisure travelers or those who travel less in the context of the nowadays health crisis.

Multiple linear regression was used for processing and analyzing the data. While the independent variables were related to the 18 predictors mentioned before, the dependent variables referred to the purpose of the travel and, thus, they were: the willingness to fly for business and the willingness to fly for pleasure.

3. Results and discussions

The results of the regression analysis indicate two statistically significant models corresponding to the two types of passengers: business and leisure (see Table 2). The coefficients can be seen in Table 3 – for business travelers and, respectively, Table 4 – for leisure travelers.

Table 2. Regression analysis – summary

	Business travelers	Leisure travelers
N	67	75
R^2	0.685	0.691

In the case of the business passengers, only 6 from the 18 predictors were significant (see Table 3): perceived threat from COVID-19, annual frequency of travel, risk taking propensity, level of fear, current health level and extraversion. These findings suggest that in the case of those persons with increased perceived threat from COVID-19 and level of fear, the willingness to travel for business purposes decreases. On contrary, for those whose propensity of risk taking, annual frequency of travel and extraversion level are high, the willingness to fly for business increases. Meanwhile, the passengers with current health problems tend to be more skeptics about travelling in future.

The model was statistically significant, $F(6, 142) = 117.32$, $p < 0.001$.

Table 3. Regression coefficients for business travelers

Predictors	M(SD)	Beta	t	SE	Sig.	β
Perceived COVID-19 threat	3.29	-0.243	-3.74	0.030	< 0.001	-0.212
Annual frequency of travel	-0.63	0.178	4.23	0.032	0.001	0.239
Risk	-1.78	0.323	4.17	0.042	< 0.001	0.488
Fear	2.98	-0.080	-2.81	0.029	< 0.001	-0.430
Current health	3.17	-0.367	-2.12	0.041	0.002	-0.471
Extraversion	-1.24	0.410	5.10	0.018	0.002	0.311

For the pleasure passengers, 8 predictors were significant for the willingness to travel (see Table 4): primary purpose of travel before COVID-19, perceived threat from COVID-19, fear, propensity of risk taking, current health status, extraversion, satisfactions with health insurance and affect. These results indicate that as a person's risk-taking propensity, satisfaction with health insurance, extraversion level and affect increase, their willingness to fly for pleasure will also increase. On contrary, when the perceived threat from COVID-19 and fear increase, the passengers will have a lower desire to travel for pleasure. Moreover, as in the case of the business passengers, those respondents with current health problems tend to be more skeptics about travelling in future.

The model was statistically significant, $F(8, 142) = 115.22$, $p < 0.001$.

An interesting finding was related to the fact that the persons which primarily travelled for business before the pandemic, now they are more willing to fly for pleasure. This change could be explained through the fact that the level of fear increased in their case. Meanwhile, they wanted to diminish the frequency of travel and found more suitable for them to work remotely.

Table 4. Regression coefficients for leisure travelers

Predictors	M(SD)	Beta	t	SE	Sig.	β
Perceived COVID-19 threat	4.31	-0.332	-4.85	0.023	< 0.001	-0.199
Affect	-0.82	0.238	6.23	0.033	< 0.001	0.101
Risk	-2.28	0.641	3.07	0.039	< 0.001	0.238
Fear	3.88	-0.065	-1.01	0.041	< 0.001	-0.320
Current health	3.17	-0.442	-2.56	0.021	< 0.001	-0.415
Extraversion	-1.14	0.327	6.09	0.023	0.002	0.419
Satisfactions with health insurance	-0.90	0.510	1.54	0.043	0.001	0.365
Primary purpose of travel before COVID-19*	N/A	0.211	2.81	0.100	0.026	0.093

*The values of the "primary purpose of travel before COVID-19" were nominal and, therefore, mean and standard deviation were not calculated.

By identifying some of the factors that are mainly influencing Romanians' decisions of traveling for pleasure and business in the context of the current pandemic, we have responded to our research question. Thus, according to our findings, 5 predictors were similar for both business and travel passengers: perceived threat from COVID-19, risk taking propensity, level of fear, current health level and extraversion. These results show that, no matter what the purpose of the travel is, when the perceived threat from COVID-19 and level of fear increase, the willingness to fly decreases. These results are not surprising, taking into account the fact that fear is often related to the perceived threat. Meanwhile, passengers with increased propensity of risk taking, current health level and extraversion level have a higher willingness to fly than the others. These results can be explained through the fact that those that are healthier are more energetic and socially focused. Therefore, they tend to have a higher risk propensity and be more willing to fly even under COVID-19 situation.

In the case of the business passengers, the annual frequency of travel was also a significant predictor, suggesting that if the number of travels is higher, the willingness to fly will be higher. This is explainable if we think to the fact that a higher number of business flights involves higher revenues and, thus, a higher risk-taking propensity.

In the case of the pleasure passengers, 3 more predictors were significant for their willingness to travel: primary purpose of travel before COVID-19, satisfactions with health insurance and affect. Those leisure travelers with a better health insurance, doubled by a good level of health, considered that they have nothing to worry about travelling in the pandemic context. Meanwhile, those with positive thinking and emotions were more enthusiastic at the idea of flying than the others. Yet, it is interesting that those that were traveling more for business purposes before COVID-19 are more tempted now to work remotely and travel for leisure. This result is explainable if we relate it to the other seven predictors found in the case of the pleasure passengers.

Conclusions

It is known that all the measures imposed by governments to limit the spread of COVID-19 virus are reducing the travelling motivation. Moreover, the increased public risk perception enhances passengers' health-protective behavior, which leads to a diminished willingness to fly or to changes in travel preferences. This last aspect may include a switch in the type of the risky trip: from business to leisure travels. Due to the COVID-19 pandemic, the airlines were forced to make various operation adjustments, including the reduction in the number of flights, aircrafts' occupancy and even destinations. Therefore, all these measures impacted the willingness to fly both for business and leisure purposes.

Since current health status and perceived threat from COVID-19 are influencing the willingness to fly of all types of passengers, both policy-makers and airlines should consider increasing passengers' trust. First of all, governments and especially the airlines should implement proper measures in order to meet travelers' expectation of health safety. Secondly, in order to avoid a rebound of the pandemic, the policy-makers should take into account the increase in the willingness to fly when the situation gets better. Moreover, they could work out a sustainable financial aid plan for the airlines, designed for short periods, so that the companies do not take drastic measures that could diminish the trust of the passengers and, implicitly, their willingness to fly.

The findings of this paper have two limitations in terms of generalizability: we used a convenience sample and the travelers were only from Romania. Therefore, in a future research, we intend to expand the investigation on other European countries and consider a systematic sampling, with a much larger pool of participants.

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