Did the Bubble Burst? The Portuguese Economy During COVID-19

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Abstract. *In this paper we analyse the situation of the Portuguese Economy referring to the Covid-19. We start by contextualizing in the problematic “Bubble – Miracle” as described by Tomé, 2018. We then analyse the current situation in a Macroeconomic way, according to eight specific questions, and then we specify regarding four sectors, namely tourism, education, the public sector, and the industrial sector. We conclude that the Covid-19 is the ultimate and unexpected test to the Portuguese economy, and that it will contribute to solving the “Bubble vs. Miracle” question. Rather curiously, we believe that the Covid-19 will accelerate the change to the “Miracle” society, because solving the crisis will require changes that will direct the society towards the “Miracle” paradigm and will distance Portugal from the old and “Bubble” one.*

Keywords: Portuguese Economy, Covid-19, bubble burst.

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Introduction

In the period between 2011 and 2014, the Portuguese economy endured one of its more severe crisis ever. Because of the implementation of the so called “Troika Agreement” made between the Portuguese Government and the International Monetary Fund, the European Commission and the European Central Bank, intended to solve the currency payments crisis, the country entered a deep recession. Income dropped by 10 points, unemployment increased to impact 16.2 percent of the labour force in 2013, expatriation resumed as more than 100,000 citizens left the country every year generating a net loss of 130,000 (Pordata, 2020). The summary of this economic season is shown in column 2 of Table 1, below. Then, suddenly, starting in 2015, things got better. Indeed, from 2015 to 2019 the Portuguese economy rose steadily, unemployment decreased to near full employment levels, and the country started receiving migrants from other parts of the world, achieving a surplus of 50 000 obtained in 2019 (see column 3, Table 1) (Pordata, 2020).

Table 1 – The Portuguese Economy in the last decade

	2011-4	2015-9
Income growth	Minus 6	Plus 14
Unemployment	From 11 to 16 and then 14	From 12.4 to 6.5
Net Migration	Minus 130 000	50 000, mostly in 2019
Poverty rate	Growing by 5 pp	Stable
Debt level	Growing by 20pp	Growing 5 pp
Interest rate of debt	From 7 to 2 percent	Stable
Budget Deficit	From 11 to 2 percent	From 2 to zero

Source: Portuguese National Institute of Statistics and Eurostat and Pordata (2020)

The debate about the explanation of the turn of events and its sustainability was fierce. Basically, two theories:

- On one side there were those people who said the recovery, based on the tourism sector, was a bubble that would burst (The Portugal News, 2018):
- On the other side there were the people that even if recognizing the growing importance of the tourism sector in the Portuguese economy, believed that the recovery was a sign of a deeper change, something that could be called a “miracle” (Idealista, 2018).

In a previous paper, the authors compared the two possible situations, (Tomé, 2018).

Table 2: Summary of the Scenarios

	The Bubble	The Miracle
Demand	Decreasing	Growing
Supply	Oversized	Matching demand
Wages	Decreasing	Increasing
Skills	Low and overqualified	High and up skilling
Income	Stable	Growing
Employment	Decreasing	Increasing
Unemployment	Increasing	Reaching full employment
Society	Traditional	Cosmopolitan

Source: Tomé, 2018.

Related with each one of the mentioned scenarios, was the emergence of two very different societies, as described in Table 3 (Tomé, 2018).

Table 3 – Two types of Society

	Bubble Society	Miracle Society
Transparency	Closed	Open
Movement	Leavers	Well comers
Labour force status	Workers	Entrepreneurs
Source of revenue	Wages	Income
Way of living	One work	Several tasks
International movement	Emigrants	Immigrants

Source: Tomé, 2018

All the growth of the Portuguese economy was ongoing and after a rather good 2019, the expectations for 2020 were still positive, the forecast in the Budget for 2020 presented and approved in November last year, being of a GDP growth of 2 pp for an unemployment rate of 6 pp and a large but sustained debt of 120 pp of the GDP (Portuguese Republic, 2020).

It was in this setting that, suddenly, by Christmas 2019 the country began to hear about a strange disease that had appeared in China. What happened since was as surprising as it was drastic:

- By the beginning of March, the first case was detected. By then the President of the Republic had already begun confinement.
- By the middle of March, the country went into lockdown for six weeks.
- In the beginning of May, the country began to slowly return back to normal.
- Up to the end of July, the Lisbon area was still under restrictions; in consequence the UK Government put Portugal on a list of countries that are not safe for travelling; wearing masks is compulsory in closed spaces; many hotels are still closed.
- At the time of writing (mid-August 2020) the future situation is still very problematic and enigmatic; schools are meant to reopen face to face in September; the possibility of a second wave beckons causing great concern for citizens and the government.

As a consequence of the aforementioned situation, the forecast for this year is now of a decrease of at least 7 percent of the GDP with an increase of unemployment to 10 pp at least and with an increase of debt to 140 pp of the GDP (Banco de Portugal, 2020). To make matters worse, the forecast for 2021 is still open, and nobody knows how the next year will be. As for touristic activity, it has nearly come to a standstill. The foreign tourists have not arrived yet and many companies and organizations try to rely on the Portuguese people that instead of spending the summer holidays abroad will spend vital money in the country.

Among this scenario, a big question arises, that has economic and managerial origins and consequences. The question is the following: how has Covid-19 influenced the Portuguese economic prospects, and namely, does it mean the burst of the aforementioned touristic bubble or will the miracle continue after the passing of the shock? Furthermore, we believe it is important to analyse the Portuguese macro-economy as well as some specific sectors. We chose tourism, education and the public sector.

To answer this research question, the present paper is composed by the following sections: 2. Literature review; 3. Methodology and data; 4. Data analysis; 5. Discussion; and 6. Conclusion.

Literature review - new problems and theories that apply

In this context, several problems become very important namely the following: 1) how big is the crisis?; 2) how is the crisis explained?; 3) what kind of crisis will it be?; 4) what is the economic explanation to the „new normal“?; 5) what policies should be developed ?; 6) what will happen in politics? 7) what change will happen ?; and finally 8) how does governance relate to knowledge management in the new situation and specifically will we ever trust others again ?

In relation to these problems we now remember some well known economic and management theories.

How to measure an economic phenomenon

A crisis like the one we are experiencing might be analysed by two main sets of variables, namely physical and monetary, and most important than the actual situation, what is most important to the evolution, is the impact (Tomé, 2005).

Macroeconomics

The income generated by a country depends on its demand and on the capacity of production, This value may fluctuate due to conjunctural problems but tends to be

around full capacity, generating full employment. Situations of recession may happen due to lack of demand or supply. Wars mean the destruction of the productive capacity and massive decreases in demand (Samuelson and Nordhaus, 2013).

Type of crisis

There are basically two main types of economic crises. The first one happens when the cause is endogenous to the system, such as when there is a debt crisis caused by economic inefficiency regarding foreign countries, or a public deficit crisis due to over expenditures, or even a stock exchange crisis due to over-expectations as occurred in 1929, or to over enthusiasm which lead to the subprime crisis of 2007-8 (Samuelson and Nordhaus, 2013). The second type of economic crisis happens when an exogenous event disrupts the previous existing situation. Such events may be wars, earthquakes, plagues, or invasions (Samuelson and Nordhaus, 2013). Typically the Covid-19 falls into this second category.

Microeconomics

Social goods, including education, health, or pollution have a social equilibrium (Smith, Le Grand, Propper 2008). These equilibria are defined by the point at which the social cost of each one of these situations, good or bad, is equal to the social benefit. This means that societies define themselves the socially acceptable level of education, health, pollution and any other good or service with social meaning. Of course, the equilibria change with time and some phenomena may become more or less important in a given society or societies. For example, in recent years, sustainability has become a value in many world societies and therefore it has been accepted and demanded in increased quantity so to speak, prompting social and private investments.

Some basic econometrics

Basic econometric models explain variables by their causes. Multilinear regression explains phenomena with more than one cause. Coefficients define the impact of explanatory variables in explained variables. Significance of coefficients define the quality of the defined relation (Rencher, Alvin C.; Christensen, William F. (2012).

Political and economic cycles

Politicians have to be elected and may use their policies to insure re-election. It is common that in a four-year term, the first two are more austere than the last two, as a way to capture votes in the eve of elections (Drahokoupil, 2020)

The PESTLE model

While analysing change in a macro environment several topics are important has described by the PESTLE analysis, which relates to political, social, economic, technological legal and environmental aspects of societies (CIPD. 2020).

Knowledge Management Science

Knowledge Management (KM) science is based in basic concepts such as data, information, knowledge and wisdom (Tomé, 2012). One idea is that KM models are based in three different components, namely technology, people and processes (Edwards, 2011). It is also understood that typically, in the scope of the implementation of any KM system, the technological part is the easiest one; furthermore to find the right persons to work with the systems is much harder; but in fact, the decisive question

about KM Systems is how to manage people to use the best processes so that they can produce the best benefits from the use of the mentioned technology. In this paper we assume that during the Corona vírus crisis the world became like a single organization. And it is the way the technology, people and processes were managed within that 7 billion people organization that interests us.

Specifically, in Knowledge Management, trust is a frequently studied topic (Blomqvist, 1997). We may have trust in others for many reasons: love, friendship, competence, respect, authority, need to follow a leader, wish to become a member, among the more important. Fundamentally, trust is essential for transmitting information, for effective collaboration and for business continuation.

We now proceed to analyse some of the major facts known about the COVID-19 crisis in Portugal, using the ideas that we just exposed.

Methodology and Data

We perform two kinds of analysis. In section 4.1 we analyse the Covid-19 in Portugal in relation with the nine questions posed in section 1. In section 4.2 we describe some details related to specific sectors, namely, the tourism sector, the public sector, the educational sector, and the industrial sector. We use data published on the internet and for which we provide the sources. We believe we provide a wide ranging and in-depth description of the Covid-19 situation in Portugal based on these data and the forementioned methodology.

Analysis

General analysis

In this section we analyse the situation in Portugal related to Covid-19 in light of the framework defined in section 1.

Basic variables

The forecast for the Portuguese economy in the next two years is rather gloomy. For 2020 it ranges from minus 9 percent to minus 15 percent in what concerns the GDP (Banco de Portugal, 2020; IMF 2020; European Commission, 2020). This is accompanied by an increase of the unemployment level to 10 percentage points (Banco de Portugal, 2020; IMF 2020; European Commission, 2020). Also, the budget deficit is expected to increase to seven percent of the GDP (Trading Economics, 2020). This situation is very bad in accordance to basic economic standards; indeed in “normal” times any recession is seen as a catastrophe. The situation seems to be happening because the data for the first semester in the country show a decrease of the GDP of -14 percent (Trading Economics, 2020), unemployment decreasing but labour population decreasing sharply (Trading Economics, 2020), and public deficit also increasing; finally, exports are increasing, after a fall of 30% a sign of economic recovery looming (National Institute of Statistics, 2020) – imports had fallen even more (34 %). Quite amazingly, there are two very significant comments to be made to all these rather gloomy numbers, that would seem quite impossible in any economic text book. The first is that compared to other countries, they are normal if not small – the EU had a decrease in income of 14.4% (Trading Economics, 2020a) and forecasts a decrease of 8%. (European Commission, 2020a); the USA had even worse figures noticeably with a reduction of activity of 32.9% (Trading Economics, 2020b) which makes the Portuguese data sound good in comparison. Furthermore, quite interestingly, and moreover, it is the debate about the

causes and the duration of the Covid-19 crisis in Portugal and in the rest of the world that is decisive, and we will deal with the question in the next sub-sections.

Macroeconomics

But, in reference to the topics defined in 2.2 and 2.3, this one is a very special type of crisis. First of all, from the point of view of macroeconomic equilibria, Covid-19 represents a massive reduction of demand, because first the lockdown and afterwards the restrictions to transit represented by quarantine and closure of borders, meant that consumers do not search for goods and services as they used to be. This fact has a massive effect in the economy and in the short to middle term may lead to the closure of shops and other businesses. This chain of events leads to recession and to an economic equilibrium of a lower level of activity as the previous one. This situation is happening in Portugal and around the world and explains the recession. First of all, and most dramatically, the lockdown meant that during six weeks Portugal was almost stopped, a fact that was reflected in the decrease in the GDP mentioned above. Then, even when restrictions were eased, fear prevailed: actually, many businesses are in trouble because, even when wearing the mandatory mask, costumers are afraid of visiting them (Galha, 2020). Finally, demand also fell because foreigners did not show up, and the problem with the “British black list” was a massive one (CNN, 2020).

Types of crisis

However, Covid-19 is a very specific type of crisis. Some people, noticeably President Macron (Le Monde, 2020) and President Trump (BBC News, 2020) have compared it to a war. The comparison between World War I and World War II and Covid-19, at the time of writing (mid-August, 2020) is shown in Table 4a (on similarities) and 4.2 (on differences).

Table 4 a– World War 1, World War 2 and COVID-19 compared –similarities

	World War 1	World War 2	COVID-19
Period	1914-18	1939-45	2019-?
Duration	4 years, 3 months and 2 weeks	6 years and 1 day	8 months, on going
Conflict	Allies vs Germany	Allies vs Axe	Mankind vs Virus
Deaths	18 millions	73 millions	740.000 and counting
Economic damage	Massive stop solved by Versailles Treaty	Massive stoppage solved by Marshall Plan plus USSR actions	Great Confinement major recession since 1929 solved by massive packages for economic recovery: €750 billion from the EU (European Parliament, 2020)
Infrastructures	Destroyed	Anihilated	Paralyzed
Olympic Games	1916 not held	1940 and 1944 not held	2020 postponed for the moment

Source; Encyclopedia Britannica, 2020

Table 4b – World War 1, World War 2 and COVID-19 compared – differences

	World War 1	World War 2	COVID-19
Major Leaders	Keiser Williem and George V	Hitler and Churchill	Arden and Trump
Problem	Military	Military	Scientific
Situation regarding	Mistrust between two	Mistrust between two	Global mistrust in

	blocks	blocks	relation to a virus
Technology	Phone and radio	TV	Internet
Economic Era	Second industrial revolution first part Agriculture based, land driven	Second industrial revolution Industry second part based, human resource based	Fourth industrial revolution Service based, knowledge driven
Human Resources level	Literacy	Primary or low secondary	University
Speed of communications	Slow	Fast	Instantaneous
Weapons	Guns	Guns	Vaccine, masks, social distancing
End	Peace	Peace	Safety

Source: Encyclopedia Britannica, 2020

But it is a very specific kind of war, because of at least four topics that explain a certain optimism in relation to the recovery:

- a) First, from the demand point of view, Covid-19 did not affect consumers that much, besides those that lost their jobs, which until now have been a minority. Indeed, consumers want to go back to the old ways, and they are craving for it. This explains some protests, and the fact, that when possible, activity and tourism, have been going back to normal quite fast, particularly when trust comes back and we will discuss trust later in this paper (see 4.1.8).
- b) Secondly, and crucially, the supply side of the economy was not destroyed as in a war, and the closures that have been existing might reopen if demand restarts or might be replaced by a more agile type of business. This means that the recovery is possible.
- c) Thirdly, the Rest of the World, meaning the other countries, are urging the borders to fully reopen, not only because of exports and imports but because of tourism; this last idea is particularly important for Portugal, a country that lately had become recipient of many "Tourism Trophies" granted to Lisbon, Porto, but also to other regions (World Travel Awards, 2020). This means that not only Portugal is waiting to welcome tourists, but tourists are eager to come to Portugal. Therefore, the latest news about the reduction of cases in Portugal are seen as an omen to taking the country off the UK black list, and therefore helping decisively the economy going back on its normal track (Sousa, 2020).
- d) Thirdly and finally, the public bodies have been aware from the start. And if we may say that some of the measures were harmful for the economy (i.e., closing the borders – see 3.1,5. below) anyway they have been trying to find financial solutions to save their economies as in the EU (European Parliament, 2020) or the USA (BBC 2020a). Portugal is meant to receive almost 6 billion Euros per year from 2021 to 2030 from the European "bazooka" in order to help its recovery (Anibal, 2020) – a sum that even the more optimistic consider difficult to be spent.

All this means the social forces want the recovery to happen. Portugal is not an exception to this rule. This leads us to the next question – when will the recovery happen. Optimists say the recovery will begin in 2020, realists say it will come in 2021, pessimists point to 2022 onwards. It all depends on the vaccine, and it will also depend on the economic and social dynamic. It will depend on knowledge, information, technology, human resources and trust. We will analyse this topic in next sections. Meanwhile, people will have to adjust, and this adjustment is called the "new normal". The new normal is based on the concept of externalities and we will analyse this

question in the next sub-section. The “new normal” also is materialized in new policies and we address them in future sections.

Microeconomics and the meaning of the “new normal”

In all societies, populations and powers assume certain agreements which mean they can live with some harmful situations. In the case of Covid-19, that agreement was strongly put forward because suddenly the populations faced a problem which was not seen, which was asymptomatic, and which could kill. Therefore, suddenly Covid-19 became a major issue of public health, and of national safety. Very quickly, governments had begun to react to the crisis. In the case of Portugal, the public powers began to give great signs of concern when in the beginning of March, the President of the Republic decided to self-isolate. This symbolic gesture that was meant to prepare the public for something much more drastic, was followed on March 16th by the declaration of the “emergency state”, which meant lockdown in all the country and only very sporadic trips to the open air. This situation lasted for six weeks, and the journey toward “normality” was slow: three phases of release, the last beginning on June 2nd; the first two went rather well (Lusa, 2020), but in the third, a problem emerged in 19 districts in the Lisbon Area that had to be in “crisis state” again in the second part of June and in July (Penela, 2020). At the time of writing (mid-August) all the country is in “alert state”, meaning that masks are mandatory in closed spaces and people should observe social distancing everywhere. Quite crucially, the Government and the President of the Republic have been unified regarding this topic. And, as the population closely followed and agreed with the majority of the measures put in place, the rating of approval of both these political actors soared in the process (Expresso, 2020). Therefore, there was a strong agreement in Portugal to control, at a very low level even at the risk of a very high economic cost, at least in the short run, the Covid-19 problem. The fact that the rate of unemployment did not rise, covered by lay-off measures, indicates that the society not only considered Covid-19 a big menace, but it also tried to massively mitigate the most indirect and human consequences when related to the economy and to the social structure.

Specific policies

Covid-19 put a very big question to societies, because given that the disease is often asymptomatic, it is almost impossible to contain. Therefore, fear rose to the point of folly, (Levy, 2020) and extreme measures were imposed. The hardest measures related to border control – and this leads to the perception that the country is at war. This in turn appeals to narcissistic leaders such as President Trump (Germain, 2018). In Portugal however, both the Government and the President of the Republic tried to deal with Covid-19 with a fine balance between external measures (almost closing the borders with Spain, restricting air traffic and imposing Covid-19 controls at the borders) with internal measures (lockdown and masks). Also as we will see, specific sectors were targeted, including, tourism (4.2.1), education (4.2.2), and public administration (4.2.3). All in all the Portuguese policy response to Covid-19 has been positive and sensible.

Political and economic cycles

In Portugal, the Government was formed following the elections in 2019. And speculation was rife about the possibility of succeeding until the last 4 years of the legislative cycle, particularly given that the same Government had survived between 2015 and 2019. Regarding the President, elections are scheduled for January 2021 and

the incumbent will run again, a fact that in Portugal means re-election, historically. In this context, and quite interestingly, Covid-19 became the “new playing field” of Portuguese politics, and it was not so surprising to see much solidarity between PR and PM – in a way each one was protecting the other regarding eventual opposition. In this context, both the PR and the PM prepared the country for the crisis, and for the recovery. Saving lives was the first priority.

The PESTLE model and Change

The COVID-19 began to be a health crisis. Then it became a financial crisis when the stock exchange went down. Later, it emerged as an economic crisis when the forecasts of recession and downturn were turned into reality. If this happens, a social crisis will happen, with unemployment and unrest. All this may converge on a political crisis, in which leaders will fall and power will change hands. Populism has been debated in the last weeks. Finally, this may create a cultural, philosophical, and existential crisis in which people will reassess and rethink the meaning of their lives and the way they spend their existence. For now, most of these crises are possibilities. In any event, it will be interesting to analyse if any change happens. And in this event how much and how far will change go, for whom and with what consequences. As we will see in the next section, we believe the most important facet of this change, if it comes to occur, is that it is based on Knowledge and on Trust.

Knowledge Management

Quite crucially, all this crisis has been about Knowledge Management and information. First, the crisis happened because the vaccine was missing. Second the crisis continued and was deepened because people, organizations and the society at large had no idea about the information that was needed, and how to behave best in these very upsetting circumstances. Furthermore, when the situation was seen as resilient, and unpredictable, fear was installed (Levy, 2020).

Bratianu 2015, defines three kinds of Knowledge. Cognitive Knowledge is rational in nature and based in the Cartesian method; this type of knowledge evolves around the ideas of known knowns, unknown knowns and unknown unknowns. Its importance is not in doubt, but as mainly the metaphor of the iceberg reminds us, Cognitive knowledge does not tell the full history. The other part of the history is told, by Emotional Knowledge and by Spiritual Knowledge. Emotional Knowledge deals with feelings and is rooted and commanded by emotional intelligence. Emotional intelligence was put forward by Goleman, 1995, and has been receiving much attention, crowned with the Nobel Prize of Economics in 2002, to Daniel Kahneman and Vernon Smith, for their work about rationality and emotions as two different ways Humans use to make decisions (Kahneman, 2011). Finally, Spiritual Knowledge has to do with deep social constructs such as ethics, norms, culture, religion and spirituality; it has to do with ideas that guide our actions and that are so basic that we do not dispute them; organizations use to try to determine some of the spiritual knowledge and behaviour of their members and collaborators by imposing visions, missions and codes of conduct. All in all, the three types of knowledge are absolutely complementary and important for people and organizations. We do not reason always like chess players, or like lovers / haters or like members, but every day we use, many times these three ways of thinking and acting. What happened with the Covid-19 crisis was that the Cognitive Knowledge was lacking, and so people became more emotional and more cultural than was usual; furthermore, and quite decisively and worryingly, the dominant emotion was fear, and the dominant

cultural and spiritual tendencies were related to nationalism, xenophobia and other cultural elements that tend to isolate us, and which in fact were rooted in that fear and tended to amplify it and also amplify Covid-19 worst possible consequences: isolation, recession and fear of our neighbour (Levy, 2020). We may had that, following (Bratianu and Rejinaru, 2019) and (Bratianu and Rejinaru, 2020), the three types of knowledge may be converted into each other; but again in what concerns Covid-19, the transformation was made in a negative way – lack or bad Cognitive Knowledge (no vaccine, no knowledge on how to behave), resulted in negative Emotional Knowledge (fear), which ignited the worst possible of Spiritual Knowledge (isolationism, nationalism, xenophobia) all this producing negative economic consequences – recession, and unemployment.

In this context, very recently (Bolisani and Bratianu, 2018) defined and described four types of major strategies, namely: Knowledge Exploitation. Knowledge Acquisition, Knowledge Sharing and Knowledge Exploration; furthermore, underlying all these strategies are the answers to three fundamental problems KM faces nowadays: perception of time, how to deal with uncertainty and how to pass from the consideration of a certain future to the hypothesis of a different probability but all possible futures. All in all, KM strategies are essential for the success of people, organizations and countries in the 21st century. And during the Covid-19 crisis, Time was very affected, because suddenly people began to live in periods of two weeks, when lockdown was implemented; in Portugal the state of emergency and further measures where renewed or revised every two weeks (EstamosOn, 2020); also uncertainty came to be the norm, or to be replaced by a “new normal” that nobody knew for sure how long would last (Lichfield, 2020) and what final configuration it will have: all this resulted in a discussion about possible futures that, to be fair, seemed to have more to do with Emotional or Spiritual Knowledge than with Cognitive Knowledge (Almeida, 2020; Duncan, 2020). All of these aspects should be introduced in the business education (Bratianu et al., 2020) and in the new relationships between universities and the business environment (Dima et al., 2017).

At the same time, and in parallel, there was talk of misleading information, but essentially, we believe that trust was lost because fear prevailed like in no other time since the World Wars mentioned in Table 4. Using Edwards, 2011 model, we may say that the world was over-whelmed by technology, which put a lot of pressure on Human Resources, who struggled a lot to find the right processes. In Portugal, technology existed and for example a Covid-19 web-platform was installed from the start (Ministério da Saúde, 2020), doctors, aid workers, logistic operators were hailed as heroes (Milheiro, 2020), and as we will see in the next section 4.2, many specific policies were put in place to find a fine balance between saving lives (which was always seen as the top priority) and not collapsing the economy causing social riots and political unrest.

Sector analysis

Tourism

The tourism sector is among the ones that is more affected by Covid-19. In April due to the confinement, the sector's activity fell by 97 percent (Neto, 2020). With the world shut down by a lockdown, nobody dared to be a tourist. Hotels and restaurants faced bankruptcy. The situation was meant to improve in the Summer and the awarding of the Champion's League final phase to the country, in June, to be played in August seemed a promising sign of that recovery (JN, 2020). However, the recovery was slowed down, when suddenly in June and July, the country continued to have an increased number of

cases, which prompted some European countries and above all the UK, to put Portugal on a “black list” for which quarantine was needed (The Portuguese News, 2020). Despite the complaints of the Portuguese authorities, echoed by the media and the social media (CNN, 2020), the situation remained unchanged at the time of writing (mid-August 2020) a fact that prompted the Association of Portuguese Restaurants to admit that half of the sector could be bankrupted within a month (Neto, 2020a). Hotels and Airbnb suffered a massive decrease in activity and were saved by a “lay-off” law that enabled businesses to temporarily pay less salary than was contracted (Expresso, 2020a). All of the touristic operators now operate under very detailed safety measures summarized in mandatory “Contingency Plans” (APOPartner, 2020).

Education

As in many other countries, lecturers were unsung heroes of the Covid-19 fight. Schools were closed on March, converting to an online delivery mode only to reopen face to face in mid-May, in time for the preparation of the National Exams needed for access to the Universities, which were postponed to late June and July. Universities are still mainly operating in online mode in mid-August, and great expectation exists in relation to the new academic year, which should begin in one months’ time. Challenges were diagnosed in lecturers (Reis, 2020) and in students (Expresso, 2020a).

Lecturers in Universities heavily carried the burden of the Covid-19 in their activity. (Tomé et al, 2020).

Major points were the following:

From the lecturer point of view:

- a) Having to teach online with no preparation and short notice;
- b) Lack of information, lack of empathy and lack of confidence towards the students;
- c) The underlying conditions of students mattered: poor access to the internet, absence of a computer or with limited capacities, lack of privacy to attend classes, etc are frequent
- d) On evaluation: How do we know that the student is taking the test and not someone else? Who is the person with whom we communicate? How do we prevent students from plagiarizing? These questions for the most part, remain unsolved.
- e) Health problems due to an increasing number of hours sitting in front of computer;
- f) Need to deal with interruption problems.

From the student point of view:

- a) Some happiness and comfort, as they spent less time in transport, were at home “got out of bed straight to class”.
- b) Difficult to work in groups
- c) Difficulty to concentrate in class;
- d) Difficulties in understanding classes, due to communication failures.
- e) Many longed for socializing with colleagues face to face.

Overall, the feelings of distance and discomfort prevailed. Teaching in the “new normal” is simply not real teaching because of lack of social contact.

Regarding research and conferences, we know that research is based in co-opetition (Watson and Mc Gowan, 2020) and co-creation (Dollinger and al, 2019); we also know that people take part in conferences (Smiljanić, 2016) and even make conferences (Corpas and al, 2008) because face to face socialization is essential for the progress of science. The “new normal” meant that conferences were cancelled and replaced by

virtual events, and therefore that research became to be based on virtual contacts. We hope this situation ends soon, and we hope the vaccine will contribute to solving it (Tomé and al, 2020).

Public services

One of the main strategies of management in the Portuguese public services was teleworking, which was declared as the rule on March 16. In this context the data from a study - Teleworking and the Post-COVID 19 Future, on the perceptions of Ministry of Justice employees regarding telework in the context of COVID 19 and post-COVID, are quite interesting (Martins, 2020). The data were collected in the last week of April. The number of valid answers was 2373.

The basic conclusions of the study were the following:

- a) Three quarters of the employees are already teleworking:
- b) Switching to teleworking was easy for half of the employees, because of the equipment provided and also due to the personal and/or family context. Only 10% had limitations in the use of technological tools or difficulties in internet access. Also, only 10% complained about the support given by the institution (insufficient or inadequate) but for the majority it was sufficient, adequate, good or very good. The same pattern was observed about “information received from your direct management on the way of working at a distance” and “support in the implementation of this model” – two thirds said yes, one fifth neither yes nor no, and ten percent no. On the evaluation performance and decisions of the institution's top management in this period, ten percent had a bad opinion and the rest was split almost evenly between very good/ good and sufficient and adequate.
- c) About the future two third of the employees were ready to telework almost always / always if necessary, one fifth only for 1 to 3 months, and the rest more than three months. In this context, almost half of the employees imagine that they will continue teleworking, one third put it as a hypothesis and the rest are against; this happens because two thirds of the employees believe that the teleworking experience is adequate and profitable, for the worker and the organization. Finally two thirds of the employees stated they would like to continue working in Telework all the time or almost always, with the appropriate equipment and conditions available at home and one fifth said they did not want to.

Discussion

Portugal's Bubble under Covid-19

One way of analysing the Covid-19 crisis is to say that it was created by globalization, because it came from China and spread all over the world like no other disease before (Zizek, 2020). These analysts usually defend border controls and quarantine as good measures. We sincerely believe they are completely wrong and that in fact they end up “making the game” of the populist leaders they try to attack. In fact, populist leaders always find that the cause of failures is outside, and therefore they defend border controls. In the case of Covid-19 this idea had massive negative consequences because it was coupled with little incidence in the use of masks. In fact, masks are the best policy, because they protect the citizens on their own peril. Alas, they are annoying, and they may be unpopular; but as any safety net, they are a “merit good” (Musgrave, 1957) and should be implemented widely.

In the case of Portugal, this dynamic originates two important comments. First, the Portuguese authorities tried to create a balance between internal measures and international ones. In fact, beyond the six weeks of strict lockdown, the country has been aiming to open itself to the outside world. Testing has been tried on foreigners arriving at airports, strictly and successfully in Madeira Island (Oliveira, 2020) and in Lisbon (Nunes, 2002). Secondly, if there is one country in the world or at least in the Eurozone who can be badly hurt by national policies that prefer border controls to masks, it is Portugal –precisely because of the importance of Tourism as a way of recovering from the Troika years and as a way to forging a new society. Therefore, Portugal, more than other countries, should preconize and enforce masks, controls at the borders, but not closing of frontiers, and the maximization of human travelling, so that tourism would resume as soon as possible. This in turn will be decisive for the “Miracle” to continue, and to be reinforced.

Having said that, Covid-19 is said to have accelerated the path towards digitalization and all the forms of activities that were described on the right columns of Tables 2 and 3. This means that after the shock passes, and the vaccine is used widely, and trust comes back, businesses will be more dynamic, cosmopolitan, skilled and open than ever before. In fact, we believe that Covid-19 was the ultimate tragedy to a single minded and closed way of seeing life, which, in the Portuguese case, was preconized by the defenders of the “Bubble”. Covid-19 showed the world, and Portugal, how interdependent we are, and how precious it is to be connected and interdependent. This connection and this interdependence are shown more than anywhere else in cities like Lisbon and Porto, which were flourishing in 2019, and recovering after a deep crisis. Therefore, we believe, the change is lasting, even if the crisis will pass and Covid-19 will be seen more as a catalyst for the “Miracle” and a last straw for the “Bubble”. Therefore, even if at first sight it seems that the touristic “Bubble” ended and everything will go back to an autarchic way of living, we believe that in one year or two the “Miracle” will restart, and will restart stronger than ever, because in the meantime, some old-fashioned ways of making business would have gone into failure. It is in this context that the Portuguese economy will have to become agile, as described in the next sub-section.

The future is agile

The covid-19 pandemic has become a huge catalyst for the digitalization of the global economy. As a result, being agile has become in great demand. Because such agile manifesto clauses (Manifesto 2020) have value: Individuals and interactions over processes and tools, working software over comprehensive documentation, Customer collaboration over contract negotiation, responding to change over following a plan has become more relevant than ever. In today's reality, an industrial enterprise faces a number of challenges. Along with those that have already become standard, which consists in achieving a high-quality indicator and minimal costs, the following are becoming topical: reduction in time to market; increase in the rate of flow of production processes; accurate customer satisfaction; wide variety of product range; use of the latest technological advances. Due to these business challenges, agile manufacturing comes to the fore. Agile manufacturing (Goldman, Nagel and Preiss, 1995; Larman, 2004. Sutherland, 2014) is a concept of production organization based on foreseeing changes in the business environment and timely responding to rapidly changing market needs through the efficient use of internal and external resources. The company's production system, which supports the agile manufacturing principles, is based on the integration of organizations, highly qualified and knowledgeable people and advanced technologies

into a coordinated system to achieve a qualitative leap forward in the competition by providing abilities that exceed those obtained from the current practice of the company. Such an enterprise is a dynamic, flexible and reliable business unit capable of rapid reconfiguration in accordance with market opportunities. So agile is very useful in the conditions of uncertainty.

The COVID-19 pandemic is highly uncertain. This is a phenomenon that has never been seen before, and its speed of propagation is extremely high. In addition, it is destructive for all spheres of the economy, as it takes away the main link of successful functioning of business processes-people. The agile mind-set has significant benefits at any time, but these are especially impactful during the covid-19 pandemic. There are a few reasons why (Brower, 2020): agile provides rhythm and cadence for work. When things are ambiguous and nothing feels certain, agile provides for regular patterns to move work forward; agile allows for quick shifts. When organizations need to make quick adjustments to priorities, approaches or the content of work, agile is especially well-suited. Completing tasks bit by bit provides the opportunity for more in-course corrections.

When situations change (that is usual for coronavirus crisis) agile allows for easy shifts because work has been planned in smaller portions and over shorter time horizons; agile is empowering.

Another hallmark of agile is teams and team members who make decisions in the moment rather than asking for permission or waiting for managers to weigh in. The Covid-19 multi-faceted crises, created pressure on many systems to react even more quickly than usual, an agile approach makes sense.

Also, agile can be relevant in today's largely work-from-home condition. Howard Sublett, Co-CEO and Chief Product Officer of the Scrum Alliance, an organization of 1.2 million members who create products using agile approaches, recommends teams keep their video and audio on as they're working together. He says everyone needs to commit to focusing on the work of the team. With intentionality and commitment, virtual connections work just fine. In addition, when all members of a team are remote, it can actually help the interactions. When all team members are calling in, it can facilitate the collaboration because it equalizes participants. Agile can help us succeed in the new normal post-COVID-19. Our current conditions require a calm response to complexity and agile empowers us to be our best in the face of uncertain times.

Conclusion

The COVID -19 pandemic is the ultimate and unexpected test to the Portuguese economy, and that it will contribute to solving the "Bubble vs. Miracle" question. Rather curiously, we believe that the COVID - 19 pandemic will accelerate the change to the "Miracle" society, because solving the crisis will require changes that will conduct the society towards the "Miracle" paradigm and not the old one. The change will be higher and more important than the crisis. The crisis will pass, the change will remain. More detailed studies must be done in the future on this topic in order to survey, monitor and facilitate the change.

References

- Almeida F. (2020). Viagem ao futuro pós-pandemia: o "novo normal" em 30 pontos
Retrieved from <https://executivedigest.sapo.pt/viagem-ao-futuro-pos-pandemia-o-novo-normal-em-30-pontos/>.

- Aníbal S. (2020). Portugal perante o desafio de executar quase 6000 milhões de fundos ao ano. Retrieved from <https://www.publico.pt/2020/07/21/economia/noticia/portugal-desafio-executar-quase-6000-milhoes-fundos-ano-1925382> As assessed on August 11th 2020.
- APOPartner (2020). Modelo de Plano de Contingência (COVID-19) para Empresas. Retrieved from <https://www.apopartner.pt/modelo-plano-de-contingencia-covid-19-para-empresas/>.
- Banco de Portugal (2020). Previsões económicas. Retrieved from <https://www.bportugal.pt/page/projecoes-economicas>.
- BBC News (2020). Trump says coronavirus worse 'attack' than Pearl Harbor. Retrieved from <https://www.bbc.com/news/world-us-canada-52568405>.
- BBC News (2020a). Coronavirus: Trump signs relief order after talks at Congress collapse. Retrieved from <https://www.bbc.com/news/world-us-canada-53712328>.
- Blomqvist, K. (1997). The many faces of trust. *Scandinavian Journal of Management*, 13(3), 271–286.
- Bolisani E. Bratianu, C. (2018). *Emergent Knowledge Strategies: Strategic Thinking in Knowledge Management*. Cham: Springer
- Bratianu, C. (2015). *Organizational Knowledge Dynamics: Managing Knowledge Creation, Acquisition, Sharing, and Transformation: Managing Knowledge Creation, Acquisition, Sharing, and Transformation*. Hershey: IGI Global.
- Bratianu, C. & Bejinaru, R. (2019). The theory of knowledge fields: a thermodynamics approach. *Systems*, 7(2), article 20, 1-12.
- Bratianu, C. & Bejinaru, R. (2020). Knowledge dynamics: a thermodynamic approach. *Kybernetes*, 49(1), 6-21.
- Bratianu, C., Hadad, S. & Bejinaru, R. (2020). Paradigm shift in business education: a competence-based approach. *Sustainability*, 12(4), 1348-1365.
- Brower T. (2020). Why Agile Is The Mindset To Get Us Through The COVID Crisis: 4 Lessons From Agile For Today And The New Normal. Retrieved from <https://www.forbes.com/sites/tracybrower/2020/04/12/why-agile-is-the-mindset-to-get-us-through-the-covid-crisis-4-lessons-from-agile-for-today-and-the-new-normal/#671a4d8531d3>.
- CIPD (2020). The PESTLE analysis. Retrieved from <https://www.cipd.co.uk/knowledge/strategy/organisational-development/pestle-analysis-factsheet>.
- CNN (2020). Portugal slams UK decision to leave it off quarantine list as 'absurd'. Retrieved from <https://edition.cnn.com/travel/article/portugal-uk-quarantine-exemption-list-scli-intl/index.html>.
- Corpas, Manuel, G.borg, Nils, J., Sarath, C.; Bourne, P.E. (2008). Ten simple rules for organizing a scientific meeting . *PLoS Computational Biology*, 4(6), 1-3.
- Dima, A.M., Hadad, S. & Luchian, I. (2017). Review on the dimensions of business-university alliances. *Proceedings of the 14th International Conference on Business Excellence*, 64-73. DOI: 10.1515/picbe-2017-0007.
- Dollinger, M., Liu, D., Arthars, N. (2019). Working Together in Learning Analytics towards the Co-Creation of Value. *Journal of Learning Analytics*, 6(2), 10-26.
- Drahokoupil J. (2020). Political Business Cycle. Retrieved from <https://www.britannica.com/topic/business-cycle>.

- Duncan R. (2020). What Will The Post-COVID 'New Normal' Look Like?. Retrieved from <https://www.forbes.com/sites/rodgerdeanduncan/2020/05/02/what-will-the-post-covid-new-normal-look-like/#318de3e374e8>.
- Edwards, J.S.. (2011). A process view of knowledge management : it ain't want you do, it's the way that you do it. *Electronic journal of knowledge management*, 9 (4), 297-306.
- Encyclopedia Britannica (2020). Retrieved from <https://www.britannica.com/>.
- EstamosOn (2020). O que é? Foi declarado o estado de emergência. Retrieved from <https://covid19estamoson.gov.pt/estado-de-emergencia-nacional/o-que-e/>.
- European Commission (2020). Economic Forecast for Portugal. Retrieved from https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-performance-country/portugal/economic-forecast-portugal_en.
- European Commission (2020a). Summer Economic Forecast. Retrieved from https://ec.europa.eu/info/sites/info/files/economy-finance/ip132_en.pdf.
- European Parliament (2020). Covid-19: the EU plan for the economic recovery. Retrieved from <https://www.europarl.europa.eu/news/en/headlines/economy/20200513ST079012/covid-19-the-eu-plan-for-the-economic-recovery>.
- Expresso (2020). Popularidade de Costa ultrapassa Marcelo por pouco, mas perde na confiança. Retrieved from <https://expresso.pt/politica/2020-07-19-Popularidade-de-Costa-ultrapassa-Marcelo-por-pouco-mas-perde-na-confianca>.
- Expresso (2020a). Hotéis avisam que haverá despedimentos e falências se o 'lay off' não for prolongado até setembro. Retrieved from <https://expresso.pt/economia/2020-07-15-Hoteis-avisam-que-havera-despedimentos-e-falencias-se-o-lay-off-nao-for-prolongado-ate-setembro>.
- Expresso (2020a). Quase 80% dos estudantes universitários do Porto sentiram aumento de ansiedade ou depressão. Retrieved from <https://expresso.pt/coronavirus/2020-06-26-Covid-19.-Quase-80-dos-estudantes-universitarios-do-Porto-sentiram-aumento-de-ansiedade-ou-depressao>.
- Galha L. (2020). Histórias de quem não consegue sair com medo da Covid-19. Retrieved from <https://www.sabado.pt/vida/detalhe/historias-de-quem-nao-consegue-sair-com-medo-da-covid-19>.
- Germain, M.L. (2018). *Narcissism at Work: Personality Disorders of Corporate Leaders*. Cham: Palgrave Macmillan. DOI 10.1007/978-3-319-60330-8
- Goldman, S., Nagel, R. N. and Preiss, K. (1995). *Agile competitors and virtual Organizations: strategies for enriching the customer*. New York: Van Nostrand Reinhold.
- Goleman D. (1995). *Emotional Intelligence: Why It Can Matter More Than IQ*. New York: Bantam Books.
- Idealista (2018). There is no "housing bubble" but rather a "paradigm shift" in the real estate market. Retrieved from <https://www.idealista.pt/en/news/property-sale-portugal/2018/06/14/107-there-no-housing-bubble-rather-paradigm-shift-real>.
- IMF (2020). Portugal. Retrieved from <https://www.imf.org/en/Countries/PRT>.
- Portuguese Republic (2020). The State Budget for 2020. In Portuguese. Retrieved from <https://www.oe2020.gov.pt/orcamento-estado-2020/>.

- JN (2020). António Costa: "A grande mensagem que a escolha da UEFA dá a todo o mundo: é que Portugal é um destino seguro". Retrieved from <https://www.jn.pt/desporto/antonio-costa-a-grande-mensagem-que-a-escolha-da-uefa-da-a-todo-o-mundo-e-que-portugal-e-um-destino-seguro-12323869.html>.
- Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.
- Larman, C. (2004). *Agile and iterative development: A manager's guide*. Cornwall: Addison-Wesley.
- Le Monde (2020). Nous sommes en guerre » : le verbatim du discours d'Emmanuel Macron. Retrieved from https://www.lemonde.fr/politique/article/2020/03/16/nous-sommes-en-guerre-retrouvez-le-discours-de-macron-pour-lutter-contre-le-coronavirus_6033314_823448.html.
- Levy, B.H (2020). Ce virus qui rend fou. Grasset.
- Liechfield G. (2020). We're not going back to normal. Retrieved from <https://www.technologyreview.com/2020/03/17/905264/coronavirus-pandemic-social-distancing-18-months/>.
- Lusa (2020). As duas fases de desconfinamento "parece que correram bem". Retrieved from <https://www.dn.pt/pais/as-duas-fases-de-desconfinamento-parece-que-correram-bem-NG6338719>.
- Manifesto (2020). Manifesto for Agile Software Development. Retrieved from <https://agilemanifesto.org/>.
- Martins, C. (2020). THE IMPACT OF COVID-19 ON PORTUGUESE PUBLIC SERVICES: MINISTRY OF JUSTICE – Jus e civitas. *A Journal of Social and Legal Studies*, VII (LXXI).
- Milheiro, J. (2020). Lisboa vai ter monumento aos heróis do combate à Covid-19 em calçada portuguesa. Retrieved from <https://www.tsf.pt/portugal/cultura/lisboa-vai-ter-monumento-aos-herois-covid-19-em-calcada-portuguesa-12341709.html>.
- Ministério da Saúde (2020). Covid-19 As assessed on August 12th 2020. Retrieved from covid19.min-saude.pt/.
- Musgrave R. (1957). A Multiple Theory of Budget Determination. *FinanzArchiv*, New Series, 25(1), 33–43.
- National Institute of Statistics (2020). Estatísticas do Comércio Internacional. Retrieved from https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUE_Sdest_boui=415205569&DESTAQUESmodo=2.
- Neto R. (2020). Portugal perdeu 97% dos turistas em abril devido à pandemia. Receitas afundaram para 5,7 milhões. Retrieved from <https://eco.sapo.pt/2020/06/17/portugal-perdeu-97-dos-turistas-em-abril-devido-a-pandemia/>.
- Neto R. (2020a). Quase 4 em cada 10 restaurantes admite pedir insolvência . Retrieved from <https://eco.sapo.pt/2020/07/02/quase-4-em-cada-10-restaurantes-admite-pedir-insolvencia/>.
- Nunes R. (2020). Aeroporto de Lisboa já recebeu quase uma centena de passageiros infetados. Retrieved from https://www.dn.pt/edicao-do-dia/18-jul-2020/aeroporto-de-lisboa-ja-recebeu-quase-uma-centena-de-passageiros-infetados-12434924.html?utm_source=push&utm_medium=mas&utm_term=12434924.

- Oliveira R. M. (2020). Quem viaja para a Madeira está obrigado a cumprir regras. Retrieved from <https://www.dnoticias.pt/2020/7/1/56074-quem-viaja-para-a-madeira-esta-obrigado-a-cumprir-regras>.
- Penela R. (2020). Estado de calamidade nas 19 freguesias de Lisboa prolongado por mais 15 dias. Retrieved from <https://observador.pt/2020/07/13/estado-de-calamidade-nas-19-freguesias-de-lisboa-prolongado-por-mais-15-dias/>.
- Rencher, A.C., Christensen, W.F. (2012). Chapter 10, Multivariate regression – Section 10.1, Introduction. *Methods of Multivariate Analysis*. Wiley Series in Probability and Statistics, 709 (3rd ed.), John Wiley & Sons.
- Reis, C. (2020). Exaustão de professores "a níveis mais elevados" do que nunca. Retrieved from <https://www.dn.pt/edicao-do-dia/08-mai-2020/exaustao-de-professores-a-niveis-mais-elevados-do-que-nunca-12155998.html>.
- Samuelson P. and Nordhaus D (2013). *Economics*. New York: Mc Graw Hill.
- Smiljanić, J., Chatterjee, A., Kauppinen, T., Mitrović, D. (2016). A Theoretical Model for the Associative Nature of Conference Participation. *PLoS ONE*, 2/9/2016, 11(2), 1-12.
- Smith S. Le Grand J, Propper C (2008). *The Economics of Social Problems*. 4Th edition Red Globe Press.
- Sousa J. (2020). Portugal and Sweden among the five European countries with the greatest reduction in new cases of Covid-19. Retrieved from <https://jornaleconomico.sapo.pt/en/news/Portugal-and-Sweden-among-the-five-European-countries-with-the-greatest-reduction-in-new-cases-of-covid-19-624323>.
- Sutherland, J. (2014). *SCRUM. The art of doing twice the work in half the time*, Crown Business.
- The Portugal News (2018). IMF warns of risk of real estate ‘bubbles’ in Portugal. Retrieved from <https://www.theportugalnews.com/news/imf-warns-of-risk-of-real-estate-bubbles-in-portugal/46330>.
- The Portugal News (2020). Portugal excluded from the UK “air bridge” list. Retrieved from <https://www.theportugalnews.com/news/portugal-excluded-from-the-uk-air-bridge-list/54725>.
- Tomé E, (2005). Evaluation Methods in Social Policy” Boletín Informativo de Trabajo Social (Bits), Revista Digital – Escola Universitaria de Trabajo Social de Cuenca – Universidade de Castilla la Mancha - numero 8, Setembro 2005.
- Tomé E. (2012). Knowledge Management” in International Human Resource Development: Learning, Education and Training for Individuals and Organizations 3rd Edition. Edited by JP Wilson. Kogan Page Editors. Cap V, pp 93-112,
- Tome, E. (2018). Tourism in Portugal - Between the Bubble and the Miracle, Proceedings of the International Conference on Tourism Research, ICTR 2018 - Edited by Dr Minna Tunkkari-Eskelinen and Dr Anne Törn-Laapio - ISBN: 978-1-911218-76-0
- Tomé E., Gromova E., Mello P., Hatch A., Mauricio F. (2020). KM and the Post COVID-19 new normal - Theoretical analysis with application to Universities. The Future of Universities after Covid-19 Edited by Dan Remenyi. *Reading* : ACPI Editors.
- Trading Economics (2020). Portugal - Economic Forecasts - 2020-2022 Outlook. Retrieved from <https://tradingeconomics.com/portugal/forecast>.
- Trading Economics (2020a). European Union Indicators. Retrieved from <https://tradingeconomics.com/european-union/indicators>.

- Trading Economics (2020a). United States - Economic Indicators. Retrieved from <https://tradingeconomics.com/united-states/indicators>.
- Watson, K., McGowan, P. (2020). Rethinking competition-based entrepreneurship education in higher education institutions: Towards an effectuation-informed coopetition model. *Education + Training*, 2020, 62(1), 31-46.
- World Travel Awards (2020). Turismo de Portugal. Retrieved from <https://www.worldtravelawards.com/profile-28112-turismo-de-portugal>.
- Zizek S. (2020) Pandemic ! - Covid-19 shakes the world. Polity.