

Teaching Economics at University through Film and Literature

**Miguel Ángel Echarte Fernández^a, Javier Jorge-Vázquez^a,
Sergio Luis Náñez Alonso^a & Ricardo Reier Forradellas^a**

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Abstract: This article analyses the possibility of using film and literature as educational resources in the subject "Introduction to Economics" and proposes planning for the academic year using these teaching resources and the application of active learning methodologies such as cooperative work and the inverted classroom. The proposal includes the planning of the sessions, with the objectives and resources used, and the design of activities and evaluable work. A review of the academic literature will be carried out to find out about different cases of application of these resources and an analysis of different literary and cinematographic works to show the economic contents that can be taught. It is considered that the use of these media will increase the motivation of the students.

Key-Words: literary works; films; teacher planning; motivation; teaching resources.

1. Introduction

Film and literature provide two very interesting tools for teaching economic science at the university level. Economic agents make economic decisions all the time, some of which are of great personal importance, so students need to understand these issues. Moreover, economic theory is a necessary discipline for understanding social reality at the national and international levels.

Film and literature are two media that can help in the teaching-learning process by motivating students to learn more about this discipline. Several

^a Universidad Católica de Ávila (Spain). Correspondence: Javier Jorge-Vázquez, Grupo de Investigación DEKIS, C. de los Canteros, S/N, 05005 Ávila (Spain).  ORCID 0000-0003-3654-7203. javier.jorge@ucavila.es. Coauthor: Miguel Ángel Echarte Fernández  ORCID 0000-0001-6494-6506. Coauthor: Sergio Luis Náñez Alonso  ORCID 0000-0001-5353-2017. Coauthor: Ricardo Reier Forradellas  ORCID 0000-0002-4790-0351.

works reflect the use of these media such as those by Dyl (1991), Belden (1992), Kish-Goodling (1998), and Watts (2002). In the Spanish-speaking world, different contributions are also important, as is the case of those by Gómez Galán (1999), Fernández Aguado (2001 and 2010), Mourão (2005), De Haro (2007), Pinuaga and van der Vaart (2010), Fernández *et al.* (2012), Torres-Dulce (2014), Krause (2017), and De Haro and Blanco (2017). In the field of economics teaching, the most relevant contribution is that of Becker and Watts (1998). They propose alternative methods that, although they do not replace the traditional reading method based on the explanation of graphs and tables with economic data, may be of interest to improve the motivation and quality of student learning.

The objective we are pursuing is to analyze the possibilities of using film and literature for teaching economics. An introductory subject "Introduction to Economics" will be taken as a reference. The methodology, qualitative and based on documentary and didactic analysis of practices and activities, will aim at proposing an academic course in which these didactic resources are included. Active learning methodologies will also be applied.

2. Analysis of the Economy through the Literature

The teaching of economics can be promoted using literature, as many works reflect aspects of family, business, or state economics. Literature is a very ancient art, and its genesis can be traced back to the Homeric texts of Ancient Greece. It is a human construction that requires a fictional component. Like a film, literature does not have to reflect the reality of events. History, on the other hand, does seek the truth of the facts, although as it is based on a narration of past events in which people are the protagonists, the historian's understanding is necessary and there is a margin of subjectivity in the interpretation. Since these artistic manifestations (literature and film) do not have to reflect scientific truth and economics, as a science, does have this obligation, the teacher needs to explain the contents shown in class. In other words, the use of film and literature must be accompanied by an active role of the teacher in the classroom.

Literature is an excellent didactic resource for teaching economics and other areas of knowledge. Mourão, in an article where he analyses economics in Steinbeck's book *The Grapes of Wrath*, points out that: This didactic resource is not new; it has been proposed by many academic authors, such as Kish-Goodling (1998). With this author, we can state that Literary works often reflect our economic life more accurately than today's statistical and economic techniques and mathematical models. I think the idea of using literary works to introduce humanities students to the study of economics is a good idea, and a trend that should be encouraged" (Mourão, 2005, p.68).

Indeed, Kish-Goodling (1998) proposes a methodology for teaching monetary economics through the play *The Merchant of Venice*.

In classical Greece, the word "economics" was used for the first time to reflect efficiency in the administration of finances. Xenophon in the *Economist* states that economics is a knowledge that "enables men to increase their wealth", i.e., the totality of their goods. A theory of the economic cycle can be found in the Bible, for in Genesis it is related that the Pharaoh of Egypt had a dream in which seven famished cows devoured seven plump cows. According to Joseph, son of Jacob, this meant that there would be seven years of bonanza with good harvests followed by seven years of drought. In an agrarian economy, a situation that lasted until the industrial revolution, an agricultural crisis could lead to the starvation of a large part of the population. This incipient theory of the cycle had a real basis, the rhythm of the Nile floods, but other theories of the cycle have a monetary and banking origin. Joseph offered a solution to the pharaoh, that he should save in times of economic expansion and use those resources in times of depression.

In the New Testament, some passages can be interpreted as a defense of charging interest on loans such as the parable of the talents (Matthew 25:14-30). In it, a man calls his three servants and gives five talents to one, two to another, and one to the last. The first one used it profitably and gained five more talents, the second one gained two more and the third one did not invest it but hid it in the ground. The master rewarded the first two and punished the last one by taking away his talent and giving it to the one with ten.

During the Middle Ages, however, the doctrine against usury, i.e., lending at interest, prevailed. This interpretation began at the Council of Nicaea in 325 A.D. and was based on a phrase from Psalm 14: "Lord, who shall tread your tabernacle? He who has not lent his money on usury". Later, another reference was used to condemn usury and appears in the Gospel of Luke: "Lend liberally, expecting nothing in return" (Luke 6:35).

Messages from the *Bible* have tried to be used to justify socialism and the critique of wealth, but also to defend private property. The former was based on the Beatitudes and some Gospel phrases such as the following one addressed by Jesus to his disciples: "I tell you the truth, I tell you, it will be hard for a rich man to enter the kingdom of heaven. Yes, I tell you again, it is easier for a camel to go through the eye of a needle than for a rich man to enter the kingdom of heaven" (Matthew 19, 23-30). The defenders of the market economy and private property often mention another phrase of the gospel: "Pay to Caesar what is Caesar's, and to God what is God's" (Matthew 22: 21).

Miguel Cervantes' *Don Quijote de la Mancha* is a key novel in world literature and is full of economic content. According to Eric Clifford: "Many think of Don Quixote de la Mancha by Miguel de Cervantes as being about a romantic hero struggling to "dream the impossible dream". However, Don

Quixote also contains lessons about freedom as political and economic science, and among them an exhaustive reflection on all kinds of politics related to money. Cervantes understood abstract concepts such as Gresham's Law, inflation, and the subjective theory of value, and he understood the folly and immorality of compulsory exchange rates, price controls, and usury laws. Not only did the Spanish author incorporate these ideas into the casuistic puzzles of Don Quixote, but I daresay he criticized the economic and monetary policy of early seventeenth-century Spain" (Clifford, 2016, p.42).

Don Quixote is a parody of idealism rather than the books of chivalry. Cervantes ridicules the ideal world where justice and human values are exalted in the face of a reality that is full of ruffians and injustice. The conclusion is that idealism leads to failure. We will now consider some of the economic concepts that appear in the novel. Right from the first page, Cervantes describes the hidalgo's eating habits (he ate more cow than mutton, as it was cheaper) and how they consumed three parts of his estate, much of which he loses because he buys a lot of books. Later, more profound theories are put forward, such as the value of goods and those related to the monetary changes of the time.

The theory of value has been the subject of much debate among economists. For the classics, the value of goods was objective, and Marx considered that it was a function of the labor embodied (labor-value theory). However, since the marginalist revolution of the late 19th century, led by Carl Menger, Stanley Jevons, and Léon Walras, value has been subjective and depends on the relative utility and scarcity of goods. The subjective demand for goods may vary from one person to another and even the same person, at different moments in time and depending on his or her life circumstances, may value the same good or service differently. Recall that in Shakespeare's play Richard III, the king was willing to give his kingdom for a horse because he was in battle and needed it to save his life.

When Cervantes describes Rocinante, it is stated that "he had more quarters than a real". The quarter was a disease that affected the hooves of horses. However, it should be borne in mind that the government frequently debased the fleece coinage by removing the silver content, and more and more cuartos had to be handed over to obtain a real. Nevertheless, there were stablecoins during the period of the Hispanic Monarchy, and some survived the independence of some South American territories. In Herman Melville's famous novel *Moby Dick* (1851), it is indicated that the eight escudos' doubloon (minted in what is now Ecuador) would be the prize that Captain Ahab would give to the sailor who discovered the white whale: "The brilliant roundel, therefore, came from a country situated in the heart of the world, under the great equator of which it bears the name. It had been minted in the very center of the Andes".

Cervantes was highly critical of economic interventionism and a great defender of freedom. He was the first to use, in a derogatory way, the concept of arbiters in one of the exemplary novels, *El coloquio de los perros* (1613). Arbiters were authors who sent a memorial to the king proposing a measure of economic intervention in 16th and 17th century Spain and are considered precursors of mercantilism. A discourse extolling the value of freedom can be found in *Don Quixote*. However, some critics have considered the Golden Age discourse to reflect a desire for a prehistoric communist utopia (Pérez de Antón, 2003; Byrne, 2012). However, it has already been pointed out that *Don Quixote* is a parody of those worlds idealized by *Don Quixote*. If we use the approach of the Spanish scholastics of the Golden Age, with authors such as Juan de Mariana who criticized monetary devaluation and defended private property, we can consider that this paragraph reflects *Don Quixote's* ignorance, not Cervantes (Clifford, 2016).

The negative effects of inflation can be analyzed in Walt Disney's cartoon about Uncle Scrooge McDuck, an old miser who is Donald Duck's uncle. Although Scrooge McDuck is a pathological case because economic agents do not have an unlimited demand for money, he is right when he warns his nephews that inflation does not generate wealth but causes a decline in the purchasing power of the currency, which makes prices tend to rise. Monetarist theorists, starting with Irving Fisher (1867-1947), used the famous quantitative equation of money according to which $MV = PT$, where M is the mass of money in circulation, V is the velocity of circulation of money (the number of times the monetary unit changes hands), P is the general price level and T is the total number of transactions. According to this equation, an increase in the quantity of money causes the price level to rise in the same proportion. The injection of money is channeled to certain sectors and prices rise, but not in the same proportion or unison. Inflation, therefore, distorts relative prices and leads to a misallocation of society's scarce resources. In the short run, it benefits debtors at the expense of creditors, but in the long run, the net effect is negative. Central banks are responsible for controlling price stability as they conduct monetary policy in their respective areas of influence.

Charles Dickens' novels reflect 18th and 19th century England and have been used to explain the consequences of the industrial revolution. Although many works recreate this setting, the best known is *A Christmas Carol* (1843). It tells how the protagonist, Ebenezer Scrooge, is a selfish person who is only interested in hoarding money, but who ends up changing his ways after a visit from ghosts on Christmas Eve. A similar case is the tale of *King Midas* who wished for everything to turn to gold until he discovered that gold could not be eaten and ended up repenting and living like a peasant. Although Dickens presents a very negative view of living conditions during the industrial revolution and Marxist authors argued that it was a step backward, the truth is

that compared to pre-industrial conditions, industrialization improved the quality of life of the working class (Hayek et al, 1974).

Daniel Defoe was an English novelist who is considered a pioneer of the economic press. His most important work, *Robinson Crusoe*, is full of economic concepts and for a long time, it was used by economics teachers as a reference to explain concepts such as consumption, savings, investment, direct and indirect exchange, etc. When Robinson arrives on the island, he realizes that if he wants to improve his standard of living, he must make an effort to produce capital goods that increase his productivity. Thus, he may consider making a wooden stick that will allow him to extract more berries from the trees, but to do so he must accumulate some berries and save them (save them) to be able to subsist during the time it takes to make the stick. At first, Robinson has to do all the productive tasks on his own, but when Friday later appears, the way is opened for the division of labor and social cooperation. Adam Smith already pointed out the benefits of the division of labor with the famous example of the pin factory in *The Wealth of Nations* (1776).

Robinson's example can be very useful in explaining individual human action and the advantages of social cooperation. Indeed, human beings are not isolated, but neither is it correct to think that decisions are always taken collectively. In the end, society is made up of billions of people who make individual decisions that of course affect others. The modern economy is highly developed precisely because of the high degree of the international division of labor and knowledge.

If there is an economist who has stood out for his ability to disseminate economic ideas and criticize, in the form of parody, economic sophistry, and fallacies, it is Frédéric Bastiat, a French economist and defender of economic liberalism. Bastiat considers that the difference between a bad economist and a good one is that the former only looks at the immediate consequences of economic events (he only looks at what he sees). At the same time, the latter pays attention to the short-term consequences, but also to the medium and long-term effects of economic policies (he looks at what he sees and what he does not see). In one of his works, he presents a story about the *Fallacy of the Broken Window* (1850) in which a young man breaks the window of a bakery with a brick. At first, the neighbors consider that this, although it may seem unfortunate, has a positive side because some glazier will benefit from the increased demand for windows. However, they do not consider that the baker would have spent that money on other more useful goods and now will not be able to do so.

Bastiat was also very skillful in criticizing economic protectionism in the story *Petition of the Candlemakers* (1845), which tells how candlemakers ask the government to protect them from outside competition from the sun, which naturally illuminates their houses and causes them economic losses

(unfair competition). They, therefore, propose that, for the sake of the national interest to which they contribute so much, the windows of citizens should be closed to boost the national industry.

A well-known story is *I, pencil*, an essay by Leonard Read, first published in 1958, which Milton Friedman took to television in his *Free to Choose* program. It tells the story behind the manufacture of a seemingly simple commodity such as a pencil. However, its production incorporates a great deal of knowledge that is scattered in the minds of hundreds of people. The wood from which it is produced may come from the forests of Washington, the graphite from the mine in South America, the eraser rubber may come from Malaysia, and so on. We have these goods at our disposal without any central planning behind them. This is due to the collaboration of many people who coordinate through the price mechanism and the drive for profit.

In the style of a detective novel, Marshall Jevons, a pseudonym that pays homage to two 19th-century neoclassical economists and behind which are professors William L Breit and Kenneth G. Elzinga, wrote *Murder on the Margin* (1978) in which an economics professor, Henry Spearman, discovers the murderer of a crime through the laws of supply and demand, the theory of capital and game theory. Subsequently, these authors published other books with the same protagonist such as *The Fatal Equilibrium* (1985), *A Deadly Indifference* (1995), and *The Mystery of the Invisible Hand* (2014). The concept of margin is reminiscent of the marginalist revolution of the last third of the 19th century where the value of consumer goods was explained through the concept of marginal utility, resolving the paradox of value posed by the classical economists.

A reference novel for studying economics, finance, and the role of the state in society is Russell Roberts' *The Invisible Heart: A Liberal Romance* (2002), which tells the story of two private high school teachers, Sam Gordon and Laura Silver, in Washington, D.C. He advocates the free market and opposes state intervention while Laura believes that the state should protect workers and consumers from the excesses of capitalism. Love will grow between them, but can love to grow between two people with such opposing ideas? The novel has some very well-crafted dialogues in which the most solid economic theories are shown with good examples and the economic fallacies that are so typical of our discipline are dismantled. While the romance and debates between these professors develop, a parallel plot develops in which Erica Baldwin, who heads a state institution, tries to bring the businessman Charles Krauss to justice.

The most recent novel to be analyzed is William Nicolson's *The Romantic Economist* (2013) which tells how Will, a young student with difficulty in having long-term romantic relationships, applies the economic

theory of supply and demand, types of markets, costs, game theory, and other economic concepts to succeed in love.

As noted, many literary materials deal with economic themes that we cannot elaborate on for reasons of space. Thus, works such as *The Arabian Nights*, Edgar Allan Poe's *The Golden Beetle* (1843), Lewis Carroll's *Alice's Adventures in Wonderland* (1865), or Robin Hood reflects economic concepts. The latter book has been made into animated films with real characters on several occasions. Some consider this outlaw of Sherwood Forest in medieval England to be a prototypical socialist hero because he "takes money from the rich and gives it to the poor", although what he was doing was taking money from the tax collectors and giving it back to the Saxon people, oppressed by the Normans, which is why some liberals have vindicated him. Political and economic references can also be found in works by George Orwell (1903-1950) such as *Animal Farm* (1945) or the dystopian *1984* (1949), which denounce the totalitarianism of 20th century Europe.

The use of this didactic resource can also contribute to improving the reading comprehension results of our students, a subject in which we have fallen back in recent years, as shown by the results of the PISA report.

3. Analyzing the Economy through Film

The first film was *La sortie des usines Lumière* (1895), and over time, cinema was consolidated as the most popular art form of the time. Some studies analyze the proposal to use film to teach economics at university and its results. One example is an article (Fernández et al, 2012) that reflects satisfactory results for the CinEmpresa project, which they developed in two editions, at the University of Santiago de Compostela.

As with literature, cinema may not reflect reality, allowing itself historical licenses. It can also be used as political propaganda or be subject to censorship. This art was used by Soviet socialism with films such as Sergei Eisenstein's *Battleship Potemkin* (1925), which tells the story of a mutiny on a battleship over rotten meat given to sailors by officers in Tsarist times and was commissioned by the regime to commemorate the anniversary of the 1905 revolution. In Nazi Germany, the same was true of documentaries such as *Triumph of the Will* (1935) and *Olympiad* (1938), both directed by filmmaker Leni Riefenstahl. For this reason, the teacher needs to explain the context of artistic productions.

Many films deal with themes related to history, law, and other social sciences. Before discussing the main economic films, it is worth mentioning some legal films such as *12 Angry Men* (1957), *Witness for the Prosecution* (1957), *Anatomy of a Murder* (1959), *To Kill a Mockingbird* (1962), *Final Verdict* (1982), *A Few Good Men* (1992), *In the Name of the Father* (1993), *Philadelphia* (1993), *The Cover-Up* (1993) and *Life Sentence* (1994). Law is

closely related to economics because all economic exchange is based on the transfer of property rights and there must be courts to resolve commercial disputes. Economics, in turn, can be integrated with history in a discipline known as Economic History. Within this genre, we can highlight several films. The slave mode of production in antiquity is reflected in films such as *Quo Vadis* (1951), *Ben-Hur* (1959), and above all *Spartacus* (1960), which tells the story of the rebellion of this slave in the last years of the Roman Republic. *Gladiator* (2000) shows the role of gladiators in the circus. When the Western Roman Empire fell in 476 AD, political power was fragmented and Europe experienced a wave of invasions by barbarian peoples (Suevi, Goths, Visigoths, Vandals, Alans, Huns, etc.). Historians consider this to be the beginning of the Middle Ages, a period that would last approximately a thousand years and end with the capture of Constantinople by the Turks in 1453, or, for others, with the discovery of America in 1492. This period is characterized by feudalism, based on the relationship of dependence between a feudal lord and a vassal or serf. These relationships can be seen in the film *The Warlord* (1965). Another interesting film about this period is *Der Name der Rose* (1986). The most important work to see the effects of the Black Death (1347-1351) in Europe is Ingmar Bergman's *The Seventh Seal* (1957). After the Middle Ages came the Modern Age from the end of the 15th century to the 18th century, when several events took place that initiated the Contemporary Age, such as the French Revolution of 1789 and the independence of the thirteen North American colonies. In economic terms, the Modern Age was characterized by great geographical discoveries, the opening of new trade routes, and mercantilist ideas that considered that wealth depended on the number of precious metals (gold and silver) that a country accumulated. Thus, the great merchants proposed limiting imports of manufactured goods to produce these products domestically and encouraging exports by granting privileges in the form of monopolies for domestic or international trade, such as the East India Companies, which were promoted in England and Holland. The films that best reflect this period are the following: *Aguirre, la cólera de Dios* (1972), *La Misión* (1986), *1492: The Conquest of Paradise* (1992), *A Man for All Seasons* (1966), about the life of Thomas More and Luther (2003).

In the Contemporary Age, in which we find ourselves, there have been many events of great economic relevance, such as the industrial revolution in Great Britain, the spread of these advances to northern Europe and the USA with the Second Industrial Revolution (1850-1914), colonialism, the economic nationalism of the inter-war period (1918-1939), the planned economy for the war effort of the Second World War, and the economic development of the United States. These include the Second Industrial Revolution (1850-1914), colonialism, the economic nationalism of the inter-war period (1918-1939), the planned economy for the war effort of the

Second World War (1939-1945), the Cold War (1945-1989), and the beginning of a new phase of economic globalization after the fall of the Berlin Wall. In between these events, there have been several economic crises such as the Great Depression of 1929, the oil crisis of the 1970s, the Southeast Asian crises of the 1990s, the Argentinean crisis of 2001, the dot.com crisis of the same year, and the Great Recession of 2008. Now the world has been shaken by another crisis of external origin generated by the COVID-19 pandemic, which will have a major economic impact. Later on, we will discuss the films that deal with these temporary crises, but first, we will mention some relevant films in the study of this period. To illustrate the effects of the First Industrial Revolution, we can see works such as *Oliver Twist* (1948), *Daens* (1992), and *Germinal* (1993). There are many versions of the former, and they are adaptations of Dickens' novels. This version is directed by David Lean and tells the story of Oliver, an orphan boy who was abandoned in an orphanage. The director of the center sells him to a businessman, and he works for him in his workshop despite the poor conditions he receives. In the end, he manages to escape and joins a group of thieves. *Daens* tells the story of the revolt of the workers in a factory in a Belgian town, and *Germinal* shows the working conditions in the mines, the strikes, and the workers' movement.

For an analysis of the second Industrial Revolution with the development of the oil industry and the concentration of capital, see Orson Welles' *Citizen Kane* (1941), *Giant* (1956), and *There Will Be Blood* (2007). The First World War (1914-1918) put an end to the process of peace and economic integration, and the consequences were far-reaching: the end of the empires of Central Europe, the Ottoman Empire, and the fall of the Tsars in Russia. With the rise of communism came the nationalist reaction of European fascism. The 1919 Treaty of Versailles imposed very harsh conditions on Germany, which led to hyperinflation in that country and the rise of nationalism. John M. Keynes warned of disaster in his *The Economic Consequences of Peace* (1919). The best films about this war are *Paths of Glory* (1957) and *Gallipoli* (1981). Although it was a turning point in the history of the continent and the world, there are few films about this war, although Sam Mendes' *1917* (2019) is a recent release of great quality. To understand the context of the Bolshevik revolution, see David Lean's *Doctor Zhivago* (1965), based on the novel by Boris Pasternak, who won the Nobel Prize for literature in 1958.

Nazism and World War II have produced many more films than other events of the 20th century. A list of the best must include Cabaret, Visconti's *La Caduta Degli Dei* (1969), *Tora, Tora, Tora* (1970), *Patton* (1970), Steven Spielberg's *Schindler's List* (1993), Roberto Benigni's *La Vita è Bella* (1997), Spielberg's *Saving Private Ryan* (1998), *The Sinking* (2004) and *The Counterfeiters* (2007). After the Second World War, the world was divided

into two large blocs: on the one hand, the US allies, with free-market economies, albeit intervened, and on the other, the countries that were under the orbit of the Soviet Union (USSR) and communism. These two great powers were the protagonists of the Cold War, an indirect conflict through the support of governments or guerrilla groups in other countries and the struggle for hegemony in fields such as the space race, chess, economic growth, etc. The best film to compare these systems, although it caricatures prototypical characters, is Billy Wilder's *One, Two, Three* (1961).

In general, and even though the film industry has been dominated from the beginning by Hollywood and the big American studios, few films have been produced that openly defend the capitalist economic system. A notable exception is a film *The Fountainhead* (1949). It is an adaptation of the novel by Ayn Rand (1905-1982), a Russian philosopher who emigrated to the US and was an advocate of Objectivism, in which an architect, Howard Roark, tries to impose his ideas of construction against other approaches. Some films praise the individualistic entrepreneur who stands up to politicians and big corporations. This is the case of *Tucker, a Man and his Dream* (1988), and *The Aviator* (2004). An example of the possibility of achieving goals through effort is found in *The Pursuit of Happyness* (2006) where the protagonist, who must take care of his son, manages to escape unemployment and poverty.

The following is an analysis of the most important crises and how cinema has dealt with them. *The Grapes of Wrath* (1940) tells the story of a family who loses their land after an eviction in the middle of the Great Depression in the United States and set out on a journey, along with the famous Route 66, to get from Oklahoma to California, where they hope to find a better future that they will not find. Other films recreate the atmosphere of the Great Depression, among which we can highlight: *Sullivan's Travels* (1941), *Bonnie & Clyde* (1967), *They Shoot Horses, Don't They?* (1969), *The Sting* (1973), *The Purple Rose of Cairo* (1985), *O Brother!* (2000), *Road to Perdition* (2002), and *Cinderella Man* (2005). The most iconic are *Bonnie & Clyde* and *The Sting*.

Another film with a strong economic message is *Modern Times* (1936) in which an assembly line worker loses his mind due to the strenuous pace of work. It is a critique of Taylorism and industrial capitalism. It reflects the social discontent of the depression, the influence of mechanization on human activities, poverty, hunger, and the problem of evictions. The practice of fractional reserve banking can be seen in several films. The best known is *It is a Wonderful Life* (1946) where the owner of a small family bank plans to commit suicide when his bank goes bankrupt. In a scene where customers demand their deposits in a bank panic, Bailey explains to them that these resources are invested in different projects: mortgage loans, businesses, etc. In *Mary Poppins* (1964) there is also a scene where the loss of confidence leads to a banking panic. *La Odisea de los Giles* (2019) is an Argentinian comedy

that shows the consequences of the 2001 bank run on a group of people who have lost everything.

The 2008 crisis, known as the Great Recession, has also been made into a film and several documentaries have been produced. The best known is undoubtedly *Inside Job* (2010), which won the Oscar for best documentary of the year and highlights the financial deregulation and immoral behavior of bankers, rating agencies, and politicians who designed or promoted highly complex financial instruments. The best film about the Great Recession is *The Big Short* (2015). It tells the story of young people who bet against the real estate sector by investing short, i.e. speculating that stock prices would fall in the future, something that was not expected in the years leading up to the collapse of Lehman Brothers. The film is based on a book by Michael Lewis. Another interesting film about this crisis is *Margin Call* (2011), which tells the story of the lives of the workers of an investment bank within hours of the outbreak of the crisis in the financial markets. In *Too Big to Fail* (2011), the 2008 crisis is explained by adapting the book by Andrew Ross Sorkin. A film that looks at the crisis from the perspective of a European country is *Adults in the Room* (2019), based on a book by former Greek finance minister Yanis Varoufakis. The most recent work on this episode is *Nomadland* (2020) where a woman who has lost everything in the crisis starts living as a nomad in a caravan and embarks on a journey west.

If we leave the field of economic crises and enter the labor market and the problems of unemployment, we can look at some Spanish films. *Los lunes al sol* (2002) shows the effects of industrial reconversion and the drama of unemployment. *El Método* (2005) shows the competitive climate among the aspirants to an executive position and the lack of scruples of the participants. *Glengarry Glen Ross* (1992) tells the story of real estate agents operating in a highly competitive sector in crisis. In *Full Monty* (1997), a group of steelworkers in Sheffield become unemployed and become strippers, and *The Company Men* (2010) reflects the problem of collective unemployment due to downsizing and the need to readjust to the new situation. Unionism appears in several films such as John Ford's *How Green Was My Valley!* (1941) by John Ford, *On the Waterfront* (1954) by Elia Kazan, and *Novecento* (1976).

The importance of ethics in business and the lack of moral values of many managers or businessmen are also well reflected in films such as *Network* (1976), *Wall Street* (1987), *Pretty Woman* (1990), *The Insider* (1999), *Erin Brockovich* (2000), *Up in the Air* (2009), *Limitless* (2011), *Le Capital* (2012), *The Fraud* (2012) and *The Wolf of Wall Street* (2013) and in documentaries such as *Enron, the Smartest Guys in the Room* (2005).

The sub-genre of heist and con films is well developed, and some have already been mentioned. Notable are *Goodfellas* (1990), *Reservoir Dogs* (1992), *Snatch* (2000), *Nueve Reinas* (2000), *Catch Me If You Can* (2002), and *Public Enemies* (2009).

To analyze the changes that have taken place in the business world with the emergence of the internet and information technologies, see *The Social Network* (2010), which tells the story of the creation of Facebook by Mark Zuckerberg. Another highly relevant topic is business leadership and human capital management, which appears in several films closely linked to sports, such as *Invictus* (2009) and *Moneyball* (2011).

Business negotiation, conflict resolution, and decision-making can be seen in many films, but we can highlight its great quality and importance in the history of cinema *The Godfather* (1972). Several films reflect a future where resources have become very scarce, and humanity is on the brink of the abyss. In *Mad Max* (1979), humans struggle for petrol in an anarchic world, and in *When Fate Catches Up with Us* (1973), the inhabitants of New York suffer from hunger and face Malthusian overpopulation. In conclusion, it may be noted that there are very few films that focus on the lives of great economists. One can mention *A Beautiful Mind* (2001), based on the life of John Nash, and *Le Jeune Karl Marx* (2017).

4. Teaching Proposal for the Subject "Introduction to Economics"

The subject is taught in the first year of the Degree in Business Administration and Management. It will follow the units of the syllabus included in the teaching guide of the subject. There will be units where more literary or audio-visual resources will be used and others where, due to their subject matter, they will not be used or will be used to a lesser extent. The application of this method requires a great deal of involvement on the part of the teacher, as he/she must have an in-depth knowledge of the materials and make an appropriate selection of them according to the subject and the time available. Appendix A shows an example which proposes a lesson plan detailing the objectives of each session, the activities carried out in class and the literary or audio-visual resources used.

In the first class, the evaluation criteria will be explained. We are going to propose that the final exam will account for 50% of the mark and that the remaining 50% will be divided into three parts, 10% of the mark based on the activities carried out in class (Appendix B), another 10% of the mark on a reading control (Appendix C) and 30% based on the compulsory individual work. The activities will be carried out in class after the teacher's explanation and the use of literary material or the viewing of a fragment of the films mentioned. The teaching methodology to be used is cooperative learning, as the activities will be carried out in pairs. It is an active method in which the students take the leading role in the teaching-learning process. For the last two parts, the Flipped Classroom methodology will be used. According to Jorge-Vázquez, et al. (2018), the Flipped Learning model involves a transfer outside the classroom of certain learning processes that require lower-order cognitive

levels and that, therefore, enable more autonomous and independent work by the student. This frees up time in the classroom for the development of other more complex activities of application and consolidation of content that require greater teaching guidance, enabling an interactive and personalized learning experience. In this way, according to the classroom intervention proposal, students do the work at home (in this case, the proposed readings and the viewing of the films) and use part of the class time to progress with the final work and raise any doubts they may have. This is another active learning methodology that is usually associated with the creation of audio-visual content by the teacher (Tourón & Santiago, 2014; Jorge-Vázquez et al, 2020). In this sense, the teacher will create and send videos analyzing these materials to facilitate the students' tasks. On the other hand, as several authors (Martín et al, 2017; Sengel; 2016; Basso-Aránguiz et al, 2018; Jorge-Vázquez, et al, 2020; among others) argue, this pedagogical approach contributes effectively to the students' competence development.

The aim of the final project is for the students to interrelate the contents seen in class with a selection of books and films that they will have to read and watch outside school hours. The selection is as follows: Book (*The Invisible Heart*), Films (*Wall Street*, *Pretty Woman*, *Up in the Air*, *Inside Job*, *The Social Network*, *The Big Bet*, and *Margin Call*). This assignment will consist of a written document of between 15 and 20 pages incorporating the following points: (a) Introduction; (b) Development; (c) Conclusions, and (d) Bibliography

Although during the course students have been taught the importance of classic works of cinema and literature, we think that, for the final assignment, where the student has to write an extensive essay, it is better to focus on light novels or recent films. In the film block, we have chosen modern films with a variety of themes (unemployment, business negotiations, finance, economic crises, etc.). In the case of books, we have chosen *The Invisible Heart* because it shows many economic concepts in a romantic novel in which the main characters are also two teachers at Edward School, Sam, an economics teacher, and Laura, an English literature teacher. Sam is in favor of the free market and Laura thinks that the state should intervene and regulate economic activities.

The assessment of the compulsory work will be based on an analytical rubric which will be given to the students so that they know the most relevant aspects to focus on. It is also considered appropriate for students to read the novels *Murder in the Margin* and *The Romantic Economist* because of the appeal of mystery and love adventure books. The back cover of both books summarises the content very well. Let's look at the back cover of the first book: "Thus, between coral reefs and Caribbean percussion bands, Professor Henry Spearman leads the reader to the murderer by applying the law of supply and demand, opportunity costs, monopoly, capital theory, and even the

famous prisoner's dilemma of game theory. Behind the name Marshall Jevons-comprised of the surnames of two famous 19th-century English economists-are two American economics professors who, with Henry Spearman, create a distinctive and original figure in the tradition of the British mystery novel and, not least, manage to familiarise even the most economically adverse reader with economic principles".

As for the second, he tells us that: "Will, tired of his difficulties and missteps in his relationships with girls, the young student Will decide one day to change his approach and apply the fundamental notions of economic theory to his love life, thus becoming The Romantic Economist. Through this amusing approach, William Nicolson brings together and explains the main concepts and mechanisms that govern the economy in this tale of his protagonist's adventures and misadventures in love. Thus, supply and demand, the efficient market hypothesis, game theory, investments, costs, strategies, etc. Will Will, succeed with his new approach? Probably not as much as anyone who looks to this entertaining book as an opportunity to easily understand the elementary springs of how economics Works".

To check that the student has read these two novels, a reading control is proposed. It is important to know at the end of the course the degree of satisfaction of our students with the method we are developing. To this end, a survey is proposed (Appendix D).

5. Conclusions

We have reviewed the academic literature and found that these media have been used successfully in different contexts. Film and literature could motivate students to understand issues that, although they pertain to people's daily lives, may seem very abstract if explained using only complex mathematical models or graphs and statistics. These literary or audio-visual media do not have to replace traditional teaching methods but can rather act as an educational supplement to motivate our students. Moreover, it will provide them with a good cultural background because we can draw on the classics of literature and cinema. The first part of the paper has shown the theoretical framework necessary for the teacher who wants to follow this course program to understand the capacity that these tools have for the study of economics and other social sciences. Afterward, a proposal for teaching intervention has been put forward, consisting of a class program with the planned objectives, the planning of the sessions, the activities to be carried out and the resources to be used. Ten activities to be carried out in class, a reading control and a compulsory final project have been proposed. Active learning methodologies such as cooperative work and the Flipped Classroom will be used. We cannot yet know the success of this proposal as we have not yet implemented it in the classroom, but we believe that it will be supported by the students and the

teaching staff. To know the degree of satisfaction of our students with this method, we have designed a model survey that can be given to the students at the end of the academic year.

The main advantage of this method is its ability to improve student attention and its adaptability to a virtual teaching environment. A possible drawback of the proposal is that an important part of the assessment consists of autonomous work on the part of the student, especially reading control and individual work so the importance of teamwork in this part is not valued. However, they will be able to do the work in the classroom and raise their doubts. In addition, it has been established that the activities carried out in class are done in pairs so that students learn to cooperate.

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Appendix A: Course planning

Example of a didactic unit (out of the total of 15 that make up the course. All of them can be requested to the corresponding author of this article).

Unit 1: Economic Science

Contents	Objectives	Class planning	Class-room work	Literary and film re-sources
1. Economic science. Human needs.	To know the characteristics of economic science	1. Presentation of the course 2. Explaining the concepts		
2. Goods that satisfy human needs.	To know the difference between consumer goods and capital goods.	1. Explain the concepts 2. Read several excerpts from Robinson Crusoe		Robinson Crusoe
3. Economic activity. (The method of economic science)	To know the main economic activities	3. Explain the concepts	Activity 1	
4. (The insertion of economists in the labor market). Case study: Are needs created or discovered?	Analyze the role of the economist in society and possible career opportunities	1. Reading of cases proposed in the book 2. Activity 3. Time for Flipped Class-room activity		

Appendix B: Proposed course activities

General considerations. The activities can be done in pairs and will be carried out in class after the teacher's explanation and the reading of a text or the viewing of scenes from films commented on by the teacher. All the activities are worth the same for the final grade.

Activity 1. Robinson Crusoe and the foundations of economics

1. Who is the author of the novel?
2. Who is Robinson Crusoe and how did he get to the island?

3. What economic problems does he encounter living alone on the island?
4. What are the advantages and risks of another person appearing as Friday?

Activity 2: Economic history through film

Link the following columns:

Spartacus	Feudalism
William of Baskerville	Slave revolt in Rome
Ben-Hur	The Name of the Rose
Economic system during the Middle Ages	Slavery in galleys
The Warlord	Medieval film.
Quo Vadis?	Nero

Activity 3: Film about economic systems: One, Two, Three by Billy Wilder

1. Where is the film set?
2. What is the historical context of the film?
3. What are the main strengths and weaknesses of the character who represents the capitalist economic system?
4. What are the main strengths and weaknesses of the character representing communism?

Activity 4: Reading the story by Tom Smith

Answer the following questions:

1. Summarise the plot of Tom Smith's story: What causes the rise in the price of bread? How does society react to the rise in the price of bread? How does the government react?
2. Define the concept of monopoly and oligopoly. There are different concepts of monopoly. Describe briefly each of them.
3. What is a cartel? Give some examples

Activity 5: Business cycles.

Answer the following questions:

1. What does the parable of the talents in the Bible teach us?
2. What was the canonical prohibition of usury?
3. Summarise the theory of the Joseph cycle in Genesis.
4. Why did the Great Depression occur and what were its consequences?
5. Why did the Great Recession occur and what were its consequences?

Activity 6: Business cycles. Unemployment and inflation

Answer the following quiz:

Which of the following cycle theories is the oldest?

- a) Mises and Hayek's theory of the monetary cycle.
- b) Joseph's theory of Egypt's Pharaoh shows years of good harvests followed by years of drought.
- c) Kydland and Prescott's theory of real cycles
- d) The Uncle Scrooge McDuck theory

Which film reflects the effects of the 2001 Argentinean bank corralito?

- a) The Grapes of Wrath
- b) Inside Job
- c) The Big Bet
- d) The Odyssey of the Giles

The film *The Grapes of Wrath*?

- a) is based on a novel by Steinbeck
- b) Is set in the American Great Depression
- c) It narrates the journey of a group of farmers on their way to California.
- d) All options are correct.

According to Scrooge McDuck:

- a) Inflation generates very positive effects on economic activity.
- b) Inflation reduces the purchasing power of money and has negative effects.
- c) Inflation does not affect real economic activity.
- d) Government spending stimulates aggregate demand.

In which film is the drama of unemployment depicted?

- a) *The Big Gamble*
- b) *Mondays in the Sun*
- c) *Margin Call*
- d) *Nine Queens*

Which film tells the story of how the Great Recession of 2008 unfolded in the USA?

- a) *Margin Call*
- b) *The Big Bet*
- c) *The Grapes of Wrath*
- d) Both a and b are correct.

What is the most important documentary about the Great Recession?

- a) *Inside Job*
- b) *How to Improve the Standard of Living*
- c) *Bankruptcy*
- d) *In Defence of the Euro*

Which film shows how to better oneself through hard work and refers to a phrase from the US Declaration of Independence?

- a) *Mondays in the Sun*
- b) *In Pursuit of Happiness*
- c) *The Method*
- d) *Up in the air*

In which film is an eviction process depicted?

- a) *Mondays in the Sun*
- b) *The Grapes of Wrath*
- c) *The Merchant of Venice*
- d) *Wall Street*

Activity 7: Money and the financial system

1. Summarise the plot of Shakespeare's *The Merchant of Venice*. What credit operation is depicted in the novel?
2. How did currency devaluation take place in Spain during the Golden Age and what effects did it have? Point out any fragment of *Don Quixote* where this phenomenon is analyzed.
3. What view of financial markets does Gordon Gekko, the main character in the film *Wall Street*, have?
4. What are the differences between stocks and corporate bonds?

Activity 8: The fractional reserve

1. What is the fractional reserve?
2. Why can't George Bailey return all the customer deposits in the film *It's a Wonderful Life*?
3. Why is there a bank panic in the film *Mary Poppins*? What is fiat money?
4. In the film *Contestant* it is stated that money is based on debt. What does this mean?

Activity 9: The Euro and the monetary policy of the European Central Bank (ECB)

After the screening of the documentary *In Defence of the Euro*, fill in the table below:

Positive aspects of the common European currency	Negative aspects of the common European currency

Activity 10: Underdevelopment

After the screening of the video: How to improve living standards, answer the following questions:

1. Identify five developed and five developing countries.
2. What are GDP per capita and the Human Development Index (HDI)?
3. Why are there such differences in levels of wealth?
4. What can a developing country do to get out of this situation?

Appendix C: Reading control

General To be held on the last day of class. Duration: 40 minutes

*Reading test on the book *Murder in the Margin*:*

1. Who is Henry Spearman?
2. Where does the story take place?
3. How many crimes take place?
4. What economic theories appear in the novel?
5. Who is the murderer(s)?
6. How does the economist discover the criminal?

*Reading quiz on the book *The Romantic Economist*:*

1. what economic theory is behind the idea of "begging to be begged"?
2. Why did Will's strategy with Rebecca fail at the beginning of the novel?
3. What is the efficient market hypothesis and when does it appear in the novel?
4. What is signaling and how does the protagonist apply it?
5. How does the protagonist apply financial theory to romantic relationships?
6. How does the protagonist apply game theory to romantic relationships?
7. What does the author mean by Keynesian love?

Appendix D: Satisfaction survey

Please mark the rating that corresponds to the following questions (in order from the lowest to the highest rating)

	1	2	3	4	5
Assessment of classroom activities					
Degree of difficulty of the compulsory work					
A general assessment of the selected films					
Overall assessment of the selected books					
Teacher's performance with resources used					
Final evaluation of the course					

1. What did you like most about this methodology?
2. What aspects of this methodology can be improved for the next course?
3. Which films and books did you like the most?



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