Business Economics Textbook – First Chapter

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Abstract

This project aims to develop the first chapter of a textbook to be used in the Introduction to Business Economics foundation course MBAF 504 offered at the University Canada West in the Master of Business Administration program. MBAs are designed to prepare and develop leaders, so the new insights will help MBA students (future managers) study and understand economics more effectively, which in turn will assist them in succeeding in the course, program, and in their professional and personal lives. For master's degree students from UCW as well as all MBA programs and those involved in business, it will provide the necessary toolkit to be prepared for the business environment in any specialization field. Accordingly, the chapter should provide explanations of the economic contents relevant to managers and students, clarifying concepts and introducing fundamental theories, taking into account the Canadian business environment.

This research is crucial because there is a gap in the literature to be filled since Business Economics textbooks are limited, and most were written in other parts of the world rather than Canada. Hence, this new textbook aims to find the best resources to explain valuable economic content. In order to collect and provide the economic information necessary, extensive research was conducted, synthesizing and analyzing the scarce Business Economics literature published by others. Since the collection of compiled data provided insight into the terminology and concepts used in the field, the critical literature review ensured the effectiveness of the research. Through a business decision-making perspective and an explanation of relevant economic contents, this methodology ensured that the chapter developed satisfies the MBA students' needs.

Keywords: **Textbook, Business economics, MBA**

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1. Introduction

Economics is an area of study that provides us with the knowledge and tools to analyze and understand various aspects of the economy. Despite not having a formal education in economics, one is constantly exposed to economic issues and decisions that affect their daily life. These may include the determination of product prices, changes in interest rates, fluctuations in exchange rates, unemployment, economic recessions, and globalization, which are frequently featured in newspapers, news broadcasts, and conversations with acquaintances. Furthermore, the study of economics is critical in making informed choices, such as whether to save for a holiday or attend a concert. Additionally, the subject is relevant in understanding the increase in class size in Canadian institutions, the rising global consumption of fossil fuels, and how it may be effectively addressed, particularly in terms of its environmental implications. It is also pertinent in understanding the availability of summer jobs during the financial crisis and recession of 2008. A comprehensive understanding of economics is thus indispensable in offering answers to these and other related questions. Economics provides a valuable framework for addressing critical societal concerns as well as more mundane issues affecting individuals. Through the development of models and principles, economists have been able to gain insight into a wide range of situations, from the practical and immediate, such as shifts in the real estate market and rental prices, to more complex issues with far-reaching consequences. The main objective of this book is to furnish readers with economic principles and models that can be applied to a diverse array of problems. By doing so, this work aims to equip readers with the tools necessary to understand better and address a wide range of economic challenges (Frank et al., 2012).

The discipline of economics is both old and new at the same time. Even though economics has evolved as a result of changing societies, the same big questions remain, but with some new concepts as a result of the world's new concerns. Thus, economics is not a set of static facts or theories; instead, it is a set of practical principles. By studying economics, we are able to view the world differently, understand people's behaviour and decisions, understand governments' decisions - how much to tax or how to spend that tax, and understand businesses' decisions - what to produce, what prices to charge, and what wages to pay. Having studied economics, you will be able to apply this way of thinking, which will allow you to think more analytically and solve problems more effectively (Mukherjee, 2019).

In the book's introductory chapter, the authors provide an overview of economics, elucidating its core principles and emphasizing the importance of studying it. The first section outlines the defining characteristics and essential definitions of business economics. The following sections provide a comprehensive understanding of scarce resource allocation. Describes the fundamental economic quandary and its formal definitions, namely scarcities, explaining how the economic system works and the decision-making processes that determine production (In economics, there are three main questions to be answered: what needs to be produced? The answer to this question determines the type of product and how it needs to be produced. This question determines the method of product production, as well as for whom we will produce. The answer to this question also determines the distribution of goods and services within the target society.). Furthermore, the third section discusses trade-offs, opportunity costs, and business motivations. It examines the comparative advantage concept, which examines individuals' specializations, and evaluates the costs and benefits of different options. Circular flow diagrams and production possibilities curves illustrate these concepts.

The fourth section will also teach us how to use marginal reasoning (rationality) to make decisions and how managers from a wide range of business fields, including leadership, marketing, finance, human resources, entrepreneurship, etc., use economic concepts and theories to make their decisions. In the fifth section, we explore the evolution of economic thinking throughout history and the supply and demand model.

Considering that resources are scarce in relation to demand, and managers are regularly faced with trade-off situations, economics knowledge for managers is of outstanding importance. Economics theories, terminologies, and overall understanding of this subject assist decision-making processes and improve reasoning. Moreover, the market may be considered the most complex and crucial institution that affects the business environment. The economic concepts, their applications, and analysis are highly relevant for graduate students who will exert leadership positions shortly and have the need, opportunity, and power to influence business decisions (Choudhary, 2021). Business Economics is essential not only because economics affects every aspect of an individual's life but it empowers the individual with analytical and problem-solving skills.[1] By being more analytical, this "economic way of thinking" help business students be highly valued by employers and make better and more effective decisions. These leaders' decisions and skills are related to creating a competitive advantage for the company and its success and profits. Moreover, since economic choices and issues are everywhere, from small decisions to decisions made by large enterprises, this chapter is crucial

[1] Practical Example. Examples of real-life questions Business Economics aims to address include the following: Why the interest rate in Canada has increased after the COVID-19 pandemic? Why has Canada implemented a solid policy and programs to attract high-skilled labour? Why has enrollment in Canadian universities risen in the last few years? Why has Canada created good employment levels, with more than 150,000 new job positions in January 2023? (Deschamps, 2023).

to equip students with economic knowledge focused on decision-making and business choices (Sloman et al., 2018).

2. Business Economics

This section will explain the basic definitions of economics and business economics as an initial step in building the foundation for MBA students and people involved in business to understand valuable economic content. Moreover, this section will present the differentiation between macroeconomics and microeconomics and also discuss why it is essential to study the content of this new textbook.

Definition of Economics

Many believe that economics is only concerned with money. Yes, this is true to a certain point. Money plays a significant role in economics, including how much people earn and spend, how much the goods cost, how much businesses can make, and the overall amount of money in the economic system. However, money is essential only because of what it allows us to do, serving like a tool; economics is more than that; it involves production and consumption. The first is the process through which businesses convert inputs into outputs to make a profit or achieve another goal. It comprehends how much the economy and the firm produce (individually and collectively), the production methods and the number of workers employed. The second is the process of fulfilling needs and desires, using products and services, which usually entails buying the products and services. It includes how much people save and spend, how many of a given good or service they purchase, what they select to buy, and how prices, advertising, fashion, people's salaries, and other factors affect consumption (Sloman, Garratt, & Guest, 2018). Therefore, Viceconti & Neves (2013) define economics as the social science that studies the production, circulation, and consumption of goods and services used to satisfy human needs.

Furthermore, economics comprehends a wide range of topics, such as remedies for global recessions, social programs to deal with poverty and income insecurity, funding alternatives for

health, measures to combat global climate change, economic development strategies for low-income countries and regions, and many others. Although the origins of economics as a system of thought are lost in antiquity, it was first defined as "the science that studies human behaviour as a relationship between given ends and scarce means which have alternative uses" (Frank et al., 2012). Moreover, a modern definition is "the study of how people make choices under conditions of scarcity and the results of those choices for society" (Frank et al., 2012). Therefore, economics focuses on how society allocates its limited resources, given that choices among alternatives are necessary. For example, if an individual chooses to purchase a motorcycle, the same funds cannot be used to pay for a more extended holiday abroad. Alternatively, a student who enrolls for a course and wants to attend lectures cannot take a job during class times. Usually, the allocation of resources is made through millions of households' and businesses' actions combined. Thus, economists research how people choose their actions, including how much they work, what they buy, how much money they save, and how they invest. Economists also research interpersonal interactions between individuals and firms (Mankiw, Taylor, & Ashwin, 2013).

Economics as a social science often expresses its theories as abstract models based on assumptions. John Maynard Keynes defined economics as a "science of thinking in terms of models joined to the art of choosing models that are relevant." This happens because, to understand the crucial variables and the essential parts, it is necessary to disregard unnecessary abstract detail and select where to focus on. Hence, an economic model might be described as a representation of economic reality emphasizing crucial variables and their relationships. Furthermore, it is often assumed that human beings are rational in economic theories. Therefore, a rational decision-maker has clear objectives and behaves logically to achieve them, being self-

interested and acting to realize their interest. Adam Smith stated, "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest" (Frank et al., 2012).

Definition of Business Economics

Mankiw, Taylor, & Ashwin (2013) report that the Greek word *oikonomos*, which means one who administers a home, is where the English word *economy* originates. This may initially seem strange, but there are many similarities between economies and businesses. A family needs to make many decisions, such as: which activity each member will perform and what their return is. Who prepares the dinner, or who goes to Costco to buy groceries? Who can repeat dessert? Each family must allocate its scarce resources to its members, considering their abilities, efforts, and needs (Mankiw, 2018). This broad field of study describes strategies for household resources to increase their welfare to business resources to increase profits. A firm must make numerous choices, such as how many employees to hire, what each person will do to contribute to the company, how much each employee will be paid, how to be more productive, how many to invest, how to manage cost, what products to produce, and many others. A business must allocate limited resources among competing uses while considering various stakeholder requirements and wishes. Many of the ideas that economists employ have immediate business applications and relevance. Economics may be referred to as the science of decision-making. Since businesses worldwide make millions of decisions daily, grasping the decision-making process and the potential outcomes is crucial.

Therefore, Choudhary (2021) defines business economics as the study of efficiently directing scarce resources to achieve an organizational goal. It analyses business situations via the lens of economic theory. Moreover, it applies economic principles and methodologies to the

firm's internal decision-making process under uncertain conditions. Mukherjee (2019) reports that this process is likely to be imperfect due to uncertainty prediction (for example, the volume of sales of a product, cost of production, profit, etc.). Therefore, business managers need to anticipate changes to mitigate the impact of unfavourable situations. Since decision-making is challenging due to the difficulty in predicting the future and the changes that are likely to occur, business economics applies economic concepts and analytical tools to a business enterprise's decision-making process. In this sense, managerial economics bridges the gap between economic theory and administrative practice. Business economics interweaves economic principles and business problems, integrating economic theory with business practices to facilitate decision-making and forward planning by management.

It uses a framework of analysis to arrive at informed decisions to maximize the firm's objectives. Decisions taken while employing a framework of study are likely to be more successful than decisions made from gut-feeling emotions. It applies economic tools to solve problems at the firm’s level, extracting techniques and concepts that allow decision-makers to allocate resources to the organization efficiently. Choudhary (2021) argues that collecting and processing key information and data is crucial to make sound, informed, and better decisions. Thus, by applying economic ideas, principles, models, and concepts to solve the problems of an enterprise, business economists attempt to tackle the problem of uncertainty. Managerial economists examine how theoretical models can be used in real-world situations, using them in practical applications (Mukherjee, 2019).

Definitions of Microeconomics and Macroeconomics

Sloman et al. (2016) state that macroeconomics and microeconomics, where *macro* stands for large and *micro* stands for little, are the two main branches of economics that have historically been studied.

- Microeconomics: studies the individual parts that compose the economy. It is interested in specific goods and services, analyzing the variables that change its supply and demand. It analyzes business competitiveness and the benefits of trade. It studies individual choices individuals made under scarcity and these choices' implications for the behaviour of prices and quantities in individual markets. The goal is to analyze the behaviour of individual economic units, such as firms, workers, consumers, and investors.
- Macroeconomics: studies the overall economy. As a result, it is interested in aggregate supply and demand. While *aggregate supply* means the overall output of goods and services of the economy, *aggregate demand* is concerned with all economic spending, including that made by consumers, foreign buyers, the government, and businesses that invest in capital or raw materials. It studies the performance of national economies and the government policies used to try to affect that performance. Macroeconomics tries to understand the determinants of the level of national output, the employment and the inflation rate, the economy's overall price level, and the balance of trade.

A century ago, there was no separation between macroeconomics and microeconomics. Alfred Marshall wrote, in the book Principles of Economics (1890), the "methodological individualism", insisting economics should explain why individuals behave as they do and

acceptance of broad generalizations about groups of people hampers the understanding of behaviour. However, when John Maynard Keynes published his book The General Theory of Employment, Interest and Money in 1936, the macroeconomics branch emerged. It provided a framework to discuss the Great Depression of the 1930s, in which the governments failed to recover from the recession and high unemployment, and the previous theories could not explain satisfactorily. Hence, macroeconomics started to develop in response to the perception that new ways of thinking about the economy were needed (Frank et al., 2012).

Since business economics focuses on the firms and is concerned with finding optimal solutions to firms' decision problems, it is mainly associated with microeconomics discussions. Business economics focuses on the firm, the environment in which it finds itself, and the business decisions that firms must make. However, it is also crucial to analyze the macroeconomic environment, given its impact on business. Therefore, efficient business managers must be aware and able to explain the external and overall environment.[2]

Importance of Economics

Since Business Economics links managerial decision-making with economic theory, it deals with the firm's problem of allocating scarce resources among competing ends. The goal is to optimize the firm's decision-making, directly impacting its success. However, the rapid technological progress, innovation and changes in production, transport, and communication, and globalization made decision-making a complex task. Therefore, business economics uses economic rational to effectively think and solve business decision problems (Mukherjee, 2019).

[2] Practical Example. The following economic problems are primarily the objective of the macroeconomics field of study: inflation, unemployment, and interest rates. On the other hand, the next problem is mainly the objective of the microeconomics field study: why the demand for toilet paper increased during the COVID-19 pandemic (Proctor, 2020).

Considering that resources, in most business cases, are limited, and managers are regularly faced with trade-off situations, economics knowledge for managers is of outstanding importance. Economics theories, terminologies, and overall understanding of this subject assist decision-making processes and improve reasoning. Moreover, the market may be considered the most complex and crucial institution operating and affecting the business environment. The economic concepts and their applications, such as price, cost, profit, demand, competition, supply, etc., and their consequent analysis are highly relevant for graduate students that will exert leadership positions shortly and will have the need, opportunity, and power of influencing business decisions (Choudhary, 2021).[3]

Pinho & Vasconcellos (2002) say that students must understand each economic concept to preserve the logical coherence of analytical reasoning. Thus, Business Economics is essential not only because economics affects every aspect of an individual's life but it empowers the individual with analytical and problem-solving skills. By being more analytical, this "economic way of thinking" help business students be highly valued by employers and make better and more effective decisions. These leaders' decisions and skills are related to creating a competitive advantage for the company and its success and profits. Moreover, since economic choices and issues are everywhere, from small decisions to decisions made by large enterprises, this research

[3] Practical Example. Why has Zellers chosen to relaunch its brand in Canada and open twelve stores there? This question is directly related to business decision-making faced by managers, in which economic knowledge is essential. Another question that might arise is why, in the first place, Zellers chose to close its stores almost ten years ago in Canada. Both these decisions involve many departments within an organization and many smaller and consequential choices, such as what will be offered to the customers, what will be the price, how the product will arrive to the customer, whether there will be enough demand for them, how many employees does the company needs to hire to have an effective presence, etc. (Evans, 2023).

is crucial to equip students with economic knowledge focused on decision-making and business choices (Sloman et al., 2018).

3. Fundamental Economic Problem

After the basic definitions are clarified, and the importance of economics and how it is interviewed in many aspects of life are exposed, this section will discuss the central economic problem. For that, the scarcity concept will be presented, a contradiction arising from unlimited wants and limited resources. Due to this problem, economic agents are faced with decisions. Therefore, this section aims to explain what is an economic system, including what are the production factors and what are the production decisions inserted in it.

Scarcity

Economics studies the relationship humans have with each other in producing goods and services necessary to satisfy the desires and aspirations of society. However, what occurs is that human needs are *infinite* or *unlimited*. This is because the human being, by their very nature, is never satisfied with what they already have; instead, they always aim for more. Conversely, the productive resources (or production factors) that the society relies on to carry out the manufacture of the goods and services (the extension of arable lands and other natural resources, the volume of labour available to work and the quantity of machines and equipment that a society owns) has a *finite* or *limited* character. Therefore, there is a contradiction. The *wants* and *needs* of society are *unlimited,* while the resources to complete the production of goods and services that should serve them are *limited*.

This leads to the following proposition: no matter how wealthy a society is (no matter how much productive resources are available), the production factors will always be *scarce* to manufacture all the goods and services that society wants. It means that society will have to choose which goods and services should be produced. In the same manner, citizens, having a determined wage or salary, cannot naturally consume all the goods and services desired but will

need to choose which ones they can acquire and which are within their range of their income. Sloman, Garratt, & Guest (2018) believe that most people would say "yes" if you asked if they would want more money. However, they do not have this desire for their own reason; instead, people desire to buy more things. The wants might change depending on one's wealth levels and preferences. For example, in a developing nation, the desire could include access to water, good education, and decent housing. Richer countries, such as Canada, may define differently their desire, such as having a second automobile, taking vacations, and having more leisure time.

Moreover, Sá (2014) brings two types of scarcity force resource allocation choices: purchasing power and time. The first happens when people want to buy more goods and enjoy more services beyond what they are used to; they would need to increase their income or sacrifice something to acquire other goods and services. The second type happens due to time limitation, which forces the individual to choose, for example, between going to work or going on vacation. Since time is limited, there is little time a day available to dedicate to satisfying our activities or recreation.

Consequently, Economics is also often defined as a science that studies scarcity or the science that studies the use of scarce resources in producing multiple goods society desires (Viceconti & Neves, 2013).[4] Vasconcellos & Garcia (2004) describe that scarcity, the fundamental economic problem, forces society to choose between production alternatives and the distribution of productive activity results to various groups in society. Sá (2014) indicates that scarcity does not mean a lack of money, food, or goods. It is a problem between human desires

[4] Practical Example. Why does University Canada West - a Canadian university, allocate forty students to the same Economics class instead of creating two classes of twenty students each? One simplistic answer might be because labour (professors) and physical assets (classrooms) are scarce compared to students' demand for that course.

and the means available to satisfy them since human needs and wants are unlimited while the resources available are insufficient to meet these needs. Hence, even if a good has a limited supply, if it is not desired and there is no demand, it will not be scarce. In summary, the excess of human desires over what can be actually produced is *scarcity*. Due to a lack of resources, it is necessary to compare and decide between options, giving up others – making trade-offs necessary.[5] This decision involves opportunity cost, a concept that will be addressed in the next section (Sá, 2014).

Production Factors

Resources are the factors or fundamental elements used in the production of goods and services (Sá, 2014). They are characterized as production factors, which are usually classified into three categories. Any good or service produced in the society results from these resources combination:

1) Natural resources: land and raw materials
2) Labour: human resources
3) Capital: manufactured resources

Viceconti & Neves (2013) discuss that natural resources are considered only the nature elements susceptible to being incorporated into economic activities. It is the physical space

[5] Practical Example. While the fundamental economic problem is scarcity, a question that arises is if all goods and services are scarce or if there is anything desired that is abundant. For something to be considered abundant, its supply must exceed demand at a zero price. For example, the Canadian government provides health care for free for its citizens, but it does not mean it is abundant. On the contrary, it is scarce because there is a cost to the government and taxpayers. Nonetheless, can water be considered abundant? The scarcity characteristic depends on the location and the purpose of its use. For example, for producing crops in a rainy place can be regarded as abundant. However, it is scarce if considering drier climates, where irrigation is costly. Moreover, drinking water is also scarce because of the cost and procedures of cleaning and filtering it (Sloman, Garratt, & Guest, 2018).

where the production is developed and natural resources contained in it, such as oil, iron, coal, and wood. The volume of these resources depends, among other factors, on technological evolution, which determines the possibility of using raw materials and energy sources, advancing territorial occupation, transport facilities, and the survey of stocks. Thus, a mineral resource in a large forest, in which exploration is unfeasible due to a lack of transportation methods to carry it into the big consumer centers, is not part of the economy's natural resources; therefore, it is not a production factor.

The Labour production factor is the time used by people to produce the goods and services. For that, it is considered the Economic Active Population of the society. A country’s population is composed of its inhabitants. By subtracting, from the population, the people that are not at working age (too young or too old), we would reach the concept of Active Population. Furthermore, if from this, it is computed that only people seeking employment in the formal labour market (excluding, for example, students and homemakers), the Economically Active Population is obtained. Therefore, the EAP is composed of employed and unemployed people. Hence, the quotient between the unemployed share of the EAP and its total is called the economy's unemployment rate.

The Capital production factor corresponds to the goods of long-term duration used in the production, including the set of buildings, machines, equipment, and facilities that the society deploys to production. This set is called the capital stock of the economy. The current state of technology restricts the productivity of this capital (Sloman, Garratt, & Guest, 2018). This means more goods and services it will be able to produce. Note that the capital concept as the production factor differs from the word capital used in everyday language, which is used to

designate a monetary amount (or other financial assets) that one owns to initiate a specific business.

The Economic Systems

An Economic System is the way society is organized to develop economic activities, which are the activities of production, circulation, distribution, and consumption of goods and services (Viceconti & Neves, 2013). Vasconcellos & Garcia (2004) complement saying that the economic system is the political, social, and economic form in which the society is organized. Moreover, this system is used by people seeking an improvement in the standard of living and well-being. The fundamental elements of an economic system are:

A) The stock of productive resources or factors of production: human resources (labour and entrepreneurial capacity), capital, land, natural reserves, and technology.

B) The complex of production units: formed by companies.

C) The set of political, legal, economic, and social institutions: which are the basis of the organization of society.

Viceconti & Neves (2013) states that, given that human needs are unlimited and productive resources are limited, any economic system would face three fundamental decisions, also called fundamental economic problems.

1) What to produce: society will have to choose, within the range of production possibilities available, which products and their respective quantities will be manufactured.
2) How to produce: society will also have to choose which productive resources will be used in producing the chosen products, given the current technological level. The competition between the different producers ends up deciding how the goods and services will be

produced. As these resources are scarce, it is always convenient for them to be used in the most efficient way so that the production cost will be as low as possible.

3) To whom to produce: society will also have to decide how their members will participate in the distribution of the production results. In other words, if everyone equally participates in these results, or if not, which of them will be more or less benefited. Income distribution will depend not only on the demand and supply in the market of productive services - that is the determination of wages, land rents, interest, and benefits of the capital but also on the initial distribution of properties and how it is transmitted by inheritance (Vasconcellos & Garcia, 2004).

How will these problems be solved in a capitalist market economy, which is the predominant form of economic system in the contemporary world, will be presented in the next section.

4. Importance of Business Economics

Mankiw (2018) argues that an economy is a group of people interacting with each other while going on with their lives. As the behaviour of an economy reflects the behaviour of the people that compose it, this section will start with studying key concepts and principles of individual decision-making. Pindyck & Rubinfeld (2013) explained that the trade-offs in modern market economies come from the flexibility and choice power to allocate scarce resources.

Trade-Offs

The first important point is that there is no free lunch. To get something we want, usually, we need to relinquish something else we also like. It is necessary to trade off one goal against another when making decisions. For example, an MBA student must decide how to allocate the most precious resource – time. The student can study accounting or marketing all day or divide the time between the two courses. For each hour the student dedicates to one subject, one hour that could have been used to study another is relinquished. Moreover, for each hour the student spends learning, she gives up one hour that could have been used to work or go skiing. Another example is a couple deciding how to spend the family income. They can buy groceries and clothes or pay for a family trip to Montreal. Each dollar spent on any of these things means they have one less to spend on other things.

When people are in society, they face different types of *tradeoffs*. A classic example is between guns and butter. The more society spends on national defence (guns) to protect the borders from external aggressors, the less can be spent on consumer goods (butter) to improve the internal standard of living. Another crucial trade-off is between the environment and high-income levels. The laws require firms to reduce pollution, which increases the production cost of goods and services. Consequently, firms would have lower profits, pay fewer salaries, charge

higher prices, or a mix of all these options. This generates a cost of reducing the incomes of the business's owners, workers, and customers (Mankiw, 2018).

Mankiw (2018) discusses that recognizing that people face trade-offs does not tell which decisions they will take or would like to. A student should not abandon accounting studies because this can increase the time available to study marketing. Society should not forget about the environment because this may impair the material standard of living. Nevertheless, recognizing the trade-offs is important because people can only make good decisions if comprehends the available options.

Pindyck & Rubinfeld (2013) states that consumers have a limited income; therefore, they need to maximize their well-being by trading off the purchase of more of some good for the purchase of less of others. Also, they can trade off current for future consumption by saving income. Workers' trade-offs can be shown in the choice of whether and when to enter the workforce. Since the payment might vary depending on the skills and educational background, one must choose between working more now or going for education, hoping to earn more in the future. They must decide how many hours they will dedicate to work per week, reducing the time available for leisure.

On the other hand, firms have limits on their production (what goods they can offer and the resources necessary for it). For example, a company does not have abilities to produce laptops; therefore, it decides to focus on car production. However, financial resources, the size of the factory, and other constraints will impact the decision on how many types of vehicles to manufacture. Also, if it wants to increase production, it would need to hire more workers, increase the factory, or both.

Prices and Market

All trade-offs previously discussed are based on the prices that consumers, workers, and firms face. Consumers chose to buy meat instead of chicken, in part, because of their preferences and, in part, because of the prices. Alike, workers choose to work more, losing leisure time due to the price they can earn for their productive effort and labour – the wage. Firms decide to hire more workers or buy more machines based partly on the wage rates in the market and machine prices. In a centrally planned economy, the government sets the prices; in a market economy, the prices are determined by the interaction between consumers, workers, and firms. These interactions occur in the markets. The market is the set of buyers and sellers that determine, together, the prices of each good and service through their real or potential interactions. For example, the cars' prices are affected by the competition between the manufacturers and the consumers' demand.

Buyers comprehend the consumers that acquire goods and services and firms that acquire labour, capital, and raw material to use in the production of goods and services. Conversely, sellers are the firms that sell goods and services, the workers that sell their labour services, and the resource owners that rent the land or commercialize mineral resources to the firms (Pindyck & Rubinfeld, 2013).

The markets allow transactions between buyers and sellers. Therefore, the market is perfectly competitive when there are many buyers and sellers so that no single buyer or seller affects the price. For example, in agricultural products where thousands of farms produce flour, no buyer or seller can affect, individually, the price significantly. In this case, the market price will prevail. The flour price in Toronto or Vancouver is easy to measure and find. On the other hand, other markets can be considered non-competitive when a single individual unit can affect

the price. Furthermore, when the market is not perfectly competitive, different firms charge different prices for the same product. This can happen due to a firm wanting to win customers from another or a firm's consumers are loyal, allowing the firm to charge higher prices. In that scenario, the market price will be an average of the prices (Pindyck & Rubinfeld, 2013).

Furthermore, Vasconcellos & Garcia (2004) states that a market economy (capitalist system) is conducted by the market forces, prevailing free initiative and private property of the production factors. The fundamental economic problems discussed in the previous section are solved by price mechanisms through supply and demand in a market economy. In a centrally planned economy, these issues are centralized and decided by a government entity after evaluating the production resources available and the country's needs.

Opportunity Costs

Pindyck & Rubinfeld (2013) explain that since people face trade-offs (due to their scarce resources), decision-making requires comparing the costs and benefits of the possible alternatives of action. However, an activity cost is usually not as straightforward as it might appear initially. Therefore, it is essential to learn the opportunity cost to understand individual choices and behaviour. Sloman, Garratt, & Guest (2018) explain that when faced with the trade-offs discussed, there is a cost of the activity that is measured in terms of the best alternative forgone, named opportunity cost. Frank et al. (2012) define it as "the value of what must be forgone to undertake the activity" or "the value of everything that must be sacrificed to engage in it". For example, the time required for a trip to Whistler is the only time available to study for an exam. Therefore, the trip's opportunity cost, the value of what you must sacrifice to go for that activity—is high, which leads to a potential decision of not going to Whistler. Another example is if someone wants to go to the cinema, the total activity's cost should include not only the

tickets but also the babysitting job would have to give up for that period.[6] Therefore, the cost of something is what you give in turn, what one must give up to get it – the true cost (Krugman, Wells, & Graddy, 2014).

Vasconcellos & Garcia (2004) provide the following example of an economy with two options: produce 20,000 machines and 30 tonnes of food or 15,000 machines and 45 tonnes of food. Going from the first to the second option represents an opportunity cost of 5,000, which is the number of machines foregone in order to produce 15 tonnes of food.

Trade and Comparative Advantage

Frank et al. (2012) argue that when two people or countries have different opportunity costs for performing activities, it is possible to increase the total value of available goods and services through trading with one another. Therefore, there is a general benefit if everyone focuses on the activities in which their opportunity cost is the lowest. For example, if a family wants to take care of all its needs, grow its food, producing its clothes, providing its own entertainment, etc., it might be possible but will not be easy. Hence, trade allows people to divide

[6] Practical Example. Imagine someone can either go to a nearby shopping mall in North Vancouver to buy a PlayStation5 or travel to Delta and buy the same videogame for a lower price. The North Vancouver mall offers the product for $800, while the Delta store sells it for $600. The rational decision would be the one that provides the highest benefit compared to the cost. Moreover, to assist in the reasoning, it is important to consider the Uber cost for the travel alternative, which would be $50. If this was just a mathematical question, the person involved in this case would be better off buying from the Delta store since its cost would be the videogame plus the travel cost – a total of $650, which is still $150 cheaper than the first option. However, let's add one additional concept: the opportunity cost. Supposing the travel would take one hour and a half and you work in the I.T. industry, and in this time, you could work on software development and earn $250. Therefore, you are now faced with two alternatives: the first is to buy at North Vancouver at $800 or travel to Delta and buy there for $650 plus the travel cost ($50) plus the $250 you gave up since you allocated your time to travel rather than work. It is essential to notice that time is a scarce resource, and its allocation involves decision-making. In that scenario, you would be better off buying from North Vancouver since it would be $50 cheaper.

the tasks, and one provides a good or service that the other wants in return for another good or service, improving the standard of living (Krugman, Wells, & Graddy, 2014). This means that *specialization* based on comparative advantage brings gains in the market exchange. On an individual level, these comparative advantages might come from talent, education, training, or experience. On a national level, it may derive from natural resources or differences in society and culture (Frank et al., 2012).

Mankiw (2018) discusses that trade should not be seen as a sportive competition, where one side wins and the other loses; instead, it can make everyone better off. It allows people to focus and specialize in the activities that are better, and by trading, people can buy a greater variety of goods and services at a lower cost.[7] Krugman, Wells, & Graddy (2014) discuss that people can get more of what they want by trading (which is possible in market economies) rather than they could if they wanted to be self-sufficient. Varian (2010) provides the following example: Tom can produce 4,5 kilos of fish or 9 kilos of coconut per hour, while John can produce 9 kilos of fish or 4,5 kilos of coconut per hour. This means that John has a comparative advantage in fish production and Tom in coconut production. Ideally, each would specialize in what they are best at (lower cost) and trade in the market.

[7] Practical Example. Eddie Greenspan is a great criminal defence lawyer in Canada. He works to defend clients from varied types of accusations, such as drunk driving and murder. His expertise allows him to handle many kinds of legal tasks. Therefore, let's suppose he can write his own will; for that, he would need one hour. Greenspan's second option is to hire another attorney that would take two hours to do the will and charge $500. Moreover, Greenspan's opportunity cost is $1,000 per hour since he could use that one hour to work on a client's case that pays a high amount. Hence, although Greenspan would complete the will quicker than the other layer, he would be better if he chose the second option. This is true because he can make $1,000 in the hour he saves by hiring someone else ($500) to do his will. In conclusion, he would have $500 more than the first option allows (Frank et al., 2012).

Sloman, Garratt, & Guest (2018) says that when each good is produced at the minimum cost and where individual people and firms get the maximum benefit from their resources, the economy reaches *efficiency*. Consequently, since people are always looking to exploit opportunities to be better off when this is not possible anymore (individuals cannot make themselves better off by doing something different), the economy is in *equilibrium*. This situation is reached through price changes, increasing or decreasing until no better opportunities remain. Moreover, equilibrium is possible because people respond to *incentives*. For example, people living in downtown Vancouver can trust that supermarket shelves will always be full. This happens because if some merchants do not deliver, a considerable profit opportunity would have been created for another merchant to do it; there would be a rush to supply food. Therefore, the market ensures this availability. In that manner, inhabitants can focus on other tasks and jobs without worrying about growing their food and living on farms. This is the power of trade, giving gains to both parties (Krugman, Wells, & Graddy, 2014).

No institution guarantees economic efficiency. No government agents regulate if a doctor produces potatoes instead of working in a hospital or if universities waste classrooms. The efficiency happens due to an invisible hand. This means that *incentives* embedded in a market economy ensure that the resources are usually well used. If a university is known for squeezing students into a small classroom, it would see its enrollment being reduced. The market would answer in a way that would induce the university to manage its resources efficiently. In a market economy, individuals are free to choose what they consume and produce, leading to gains and opportunities that are enjoyed mutually. Moreover, if there is any possibility that someone can be better off, people will usually be able to take advantage of it. However, if there are any market failures, individual pursuit of self-interest based on the market worsens society's situation, which

means that the market result is inefficient. Therefore, government intervention might act to correct this (Krugman, Wells, & Graddy, 2014).

Krugman, Wells, & Graddy (2014) argue that the economy's resources are used efficiently when employed in a manner that fully exploits all opportunities to make everyone better. In other words, efficiency is achieved when all opportunities to make some people better does not make other worse. In the university example, it is possible to make everyone better by moving the class to a bigger room. Therefore, assigning the larger classroom would have meant an efficient use of resources, while a smaller one meant inefficient. However, when the economy is in equilibrium, the only way to make someone better is to worsen someone else. For example, if all large classrooms were occupied, transferring one course to a larger one would mean transferring another course to a smaller one (worsening its situation). Thus, when the economy is efficient, it is producing the maximum gains from trade possible given the resources available because there is no way to rearrange how resources are used in a way that can make everyone better off.

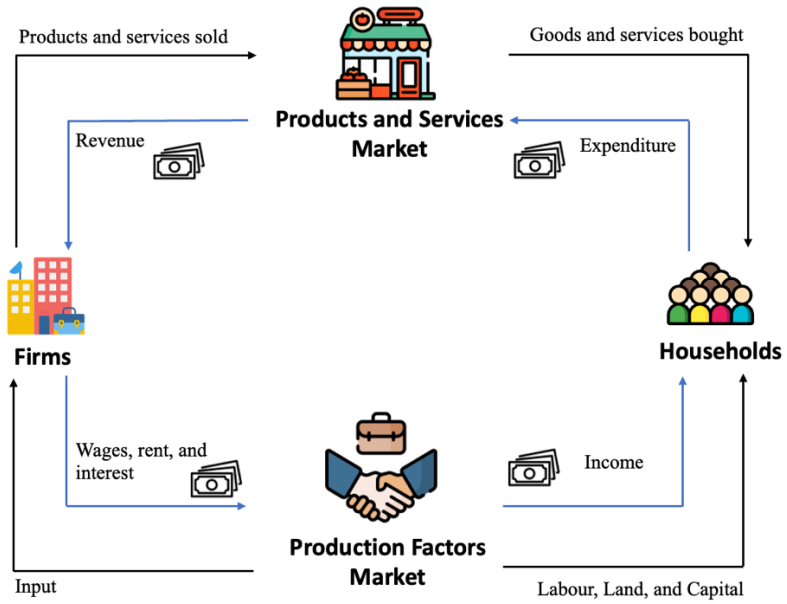
Therefore, resources must be efficiently used to achieve society's objectives. Nevertheless, there is a trade-off between efficiency and equity. For example, a government regulation that demands the allocation of parking spaces in parking lots for people with disability. Although this may cause inefficiency (potential unused resources not fully exploiting opportunities), it ensures a fairer life for those in need. Hence, policies that promote equity often come at the cost of decreased economic efficiency and vice versa. Therefore, the resources should be employed efficiently but must pursue society's goals (Krugman, Wells, & Graddy, 2014).

Circular Flow Diagram

There are two fundamental economic agents in a market economy: productive units or firms and consumer units or production factors owners. The productive units, or firms, produce the goods and services using production factors (natural resources, labour, and capital) that its owners concede in exchange for a remuneration – income. The owners of the production factors (capitalists that own the capital, workers that own the labour force, and the people who are owners of natural resources) use the income originating from the concession of their use to companies to buy the goods and services that they produce and that meet their needs. The total amount of these purchases is called expenditure. The firm is an economic agent different from the capitalist, its owner, who is part of the family. The following diagram summarizes the interactions between economic agents in an economic system (Viceconti & Neves, 2013).

Figure 1

Circular Flow Diagram



Note. Circular Flow Diagram. Adapted from "Introdução à Economia A" by L. Sá, 2014, *Universidade Federal do Amazonas*, p. 162. Copyright 2014 by Universidade Federal do Amazonas.

From the economic agents' interactions, there are two simultaneous flows: monetary, which is the result of the remuneration of the production factors (income) and real goods and services, represented by the resulting production of employing the production factors (Sá, 2014). Viceconti & Neves (2013) assert that the income, the remuneration paid by the firms to use the production factors, is classified into categories:

- Wages and salaries: remuneration of the production factor labour.
- Interests and profits: remuneration of production factor capital.
- Rent: remuneration of the owners of natural resources and capital goods lent.

The distribution of the benefits resulting from production (to whom to produce) will depend on the quantity of each production factor used and the productivity (contribution) of each. Therefore, in countries where non-qualified labour is abundant, and capital is scarce, salaries tend to be lower and interest and profits higher. Qualified labour, for being scarce and more productive, tends to receive higher remuneration. Moreover, the decision of which products should be produced by the economy is made jointly for the consumer unities (that will constitute the demand) and the productive units (that will supply the goods and services). The equilibrium between these two forces is done in the market, where the prices and quantities traded are determined. To answer the problem of how to produce will be given by the competition between the producers, that should adopt a combination of production factors to provide the lowest production cost (Viceconti & Neves, 2013).

Production Possibilities Curve

The Production Possibilities Curve (PPC) illustrates how the scarcity issue imposes a limit on the production capacity of a society that will have to decide between production alternatives. A country’s total production has a maximum limit, a potential production, or

product of full employment, where all the resources available are employed (all workers that want to work are employed, and there is no idle capacity). For example, one economy only produces machines (capital goods) and foods (consumer goods) and that they have the following options:

Table 2

Production Alternatives – Machines vs Food

Production Alternatives	Machines (thousands)	Food (tonnes)
A	25	0
B	20	30
C	15	45
D	10	60
E	0	70

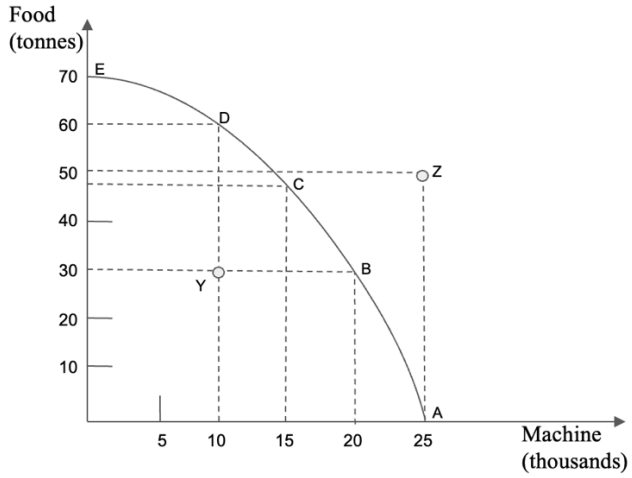
Note. Production Alternatives – Machines vs Food. Adapted from "Fundamentos da Economia", by M.A. Vasconcellos & M. E. Garcia, 2004, *Editora Saraiva*. Copyright 2004 by Editora Saraiva.

In the first alternative (A), all the production factors would be allocated to producing machines; in the last (E), they would be allocated only to produce food; and in the intermediaries alternatives (B, C, and D), the production factors would be distributed in the production of one and the other. Therefore, the curve ABCDE indicates all the production possibilities of the machines and food that this economy has. Any point in the curve means the economy operates at total capacity, using all the available production factors. In point Y or any other point inside the curve, the economy operates with idle capacity or unemployment; the production factors are underutilized. Also, point Z represents an impossible production combination (25 thousand machines and 50 tonnes of food) since the production factors and the technology this economy

has are insufficient to obtain this quantity of goods. This point exceeds this economy's potential production capacity or full employment (Vasconcellos & Garcia, 2004).

Figure 2

Production Possibilities Curve



Note. Production Possibilities Curve. Adapted from “Fundamentos da Economia”, by M.A. Vasconcellos & M. E. Garcia, 2004, *Editora Saraiva*. Copyright 2004 by Editora Saraiva.

Vasconcellos & Garcia (2004) state that shifting this PPC to the right means the country is growing. This can occur due to the increase in the physical quantity of the production factors or due to better employment of already existing resources. This might happen due to technological progress, higher productivity and organizational efficiency of the firms, and improvement in workforce qualification. Therefore, the expansion of production resources and technological advancement that characterize economic growth shift the production possibilities curve upwards and to the right, allowing the economy to obtain higher quantities of both goods.

Furthermore, the authors explain that the curve format (concave) is explained through the fact that the opportunity costs are usually ascending since when there is a production increase of a good, the production factors transferred from the other products are every time less apt to the

new objective. The opportunity cost is the lost quantity of one good that society needs to incur to increase the production of another good. This means that each transfer is becoming more complex and onerous. Equal increases in food production imply higher decreases every time in machine production (Vasconcellos & Garcia, 2004).

5. Economics and Business Decision

After comprehending all the fundamental economic terminologies and concepts and understanding that economic agents are faced with decisions, applying these ideas to the business environment is essential. Therefore, this section will discuss the rationality of the choices and how business economics can be found in managers' decision-making processes from varied specialization fields within an organization.

Rationality

Frank et al. (2012) argue that economists use the cost-benefit principle as an abstract model of how a rational person would select among competing options; therefore, this helps understand, explain, and predict human behaviour. In that sense, economists believe in the *rationality of choices*. This means that everyone considers the cost and benefits of various activities; therefore, they choose the one that allows them to maximize their goal. Hence, for consumers and employees, this implies choosing what maximizes their satisfaction. For consumers, rational decision-making concerns choosing the items that give the best benefit relative to cost, i.e., the best *value for the money*. Moreover, some of these decisions might be made unconsciously, without being aware of such a process. It might be just an intuitive rather than precise calculation (Sloman, Garratt, & Guest, 2018). Mankiw, Taylor, & Ashwin (2013) define value for money as a situation where the satisfaction gained from purchasing and consuming a product or service is greater than the amount of money one had to give up acquiring it – the price.

For firms, it implies deciding what to manufacture and how much to maximize profit. Consequently, a rational choice can be defined as a decision that involves weighing an activity's benefit and opportunity cost to maximize the decision-makers goals successfully. For example, a

firm may decide to open a new factory line in Delta. The benefits can be expressed in the revenues steaming from this new production line due to the extra quantity being sold. The costs will be the labour, material costs, etc. Thus, rational decision-making weighs up the benefits and costs, so it will be profitable to open this additional line only if the revenues are higher than the costs. Furthermore, to assist in rational decision-making, economists use the *marginal costs* and *marginal benefits* to calculate them. These are the costs and benefits of doing a little bit more or less of something. In the factory decision, the decision-maker should not consider the production's total costs and revenues but only the additional cars. Therefore, if additional cars add more to the revenue than to the costs, producing them will be profitable (Sloman, Garratt, & Guest, 2018). Frank et al. (2012) explain that the cost-benefit principle derives from the scarcity problem: to get more of something usually means getting less of another option. Thus, the individual, firm, or society should take action only if that action will bring extra benefits greater than the additional costs. This difference is called an *economic surplus*.

Managers Decision-Making

Since business economics is economics applied to firms' problems, the rational decision-making concept must be used to analyze how rational managerial decisions are formulated. According to Choudhary (2021), management is the efficient and effective directing, leading, and controlling of a group of people toward common goals. In that regard, a firm has four main types of decision-making. The first is how to allocate resources. The scarce resources must be allocated efficiently to their respective uses to get maximized results and achieve the firm’s goals. The second concerns inventory decisions about what levels of stocks of raw materials and finished goods to hold over a period. This should consider demand and supply and is also related to queuing problems about installing additional machines or hiring extra labour – consider

possible loss if does not undertake these activities. The third is pricing: which method to adopt to calculate and fix the prices for the goods or services. This is especially important given that the firm's revenue comes from that decision, directly impacting its success. The fourth is the investment decision: planning forward involves allocating scarce resources over time, such as investing in new developments, how much to invest, sources of funds, etc. Mukherjee (2019) adds that managerial decision-making involves product decisions since the company must decide which product to produce and in what quantities. For that, it must estimate the demand for its product.

Choudhary (2021) emphasizes that since business economics involves analyzing demand, cost, pricing decisions, profit management, and capital management, it is linked with many management fields.[8] Because its goal is to solve the firm's problems, it is interwoven with other areas (Mukherjee, 2019). Mankiw, Taylor, & Ashwin (2013) provide examples of a firm's decisions in its different departments that utilize economic concepts.

Leadership: leaders must be aware of how to make decisions to maximize efficiency and the firm's benefits to achieve its goals. Therefore, economic concepts are crucial to guide

[8] Practical Example. Let's imagine a flower shop business. The owner, seeing that some tulips would not resist the night and if he does not sell them in a couple of hours, the value of these tulips would be zero. Therefore, the owner needs to go through a decision-making process and choose whether to sell these tulips on the sidewalk near his small store or go to a restaurant in downtown Vancouver to try to influence people on dates to buy the flowers. However, the restaurant charges a fee of $25 to give the sales permission. Moreover, going downtown means giving up time (valued at $10) plus the bus ticket to commute ($5). Hence, the total cost to sell the flowers in the restaurant is $40. Since the owner has experience selling flowers downtown, he forecasted the sales to be $50. Therefore, his estimated net profit is $10. Hence, to be better off selling the flowers on the sidewalk, he would need to make more than $10 in revenue (Frank et al., 2012). This simplified example shows how sales, marketing, and financial decisions are interviewed with economic concepts and ideas.

managers in their tasks. Moreover, leaders must be prepared to make decisions under uncertainty and risky conditions.

Marketing: market segmentation comes from the “for whom to produce” decision. It involves acquiring and keeping customers and assigning marketing characteristics, such as domestic buyers, foreign markets, low or high-income, etc. Also, it studies consumer behaviour, including estimation, analysis, and forecasting of demand. Business economics assists in answering questions, such as whether to conduct an advertising campaign and, if so, how much to spend on it and when.

Finance: economics concepts, models, and theories assist in the cost, revenue, and pricing analysis under different market conditions. Maximization of profits is usually the first goal of a private company. Therefore, financial analysis is crucial. Moreover, it assists with capital budgeting, rate of return of investments of a firm, and planning and control of capital expenditure - what to invest in, what not to invest in, how much to invest, growth and expansion analysis, etc. Since business economics is metrical in character, it helps estimate relationships, predict quantities, and use them in decision-making and forward planning. Moreover, accounting data and financial statements constitute the language of business; therefore, they are so close to each other that "managerial accounting" has developed as a separate and specialized field.

Human resource: business economics assist in the scarce resources allocation decisions concerning labour and employees – whom and when to hire or fire. Businesses are also interested in how stakeholders choose, such as why some employees are not committed to their work or the business's values.

Entrepreneurship: theories of market structure, consumer behaviour, economic agents, and impacts of government decisions on the business are linked with this management field.

Business Analytics: Statistics and its methods help empirically test economic theory. With its help, better decisions relating to demand and cost functions, production, sales, or distribution are made.

Operations management: business economics assist in finding out the best of all possibilities. Linear programming is an excellent aid in decision-making in business and industry as it can help solve problems, such as determining facilities, machine and labour scheduling, distribution of commodities and optimum product mix, production analysis, economies of scale, etc.

Project management: business economics help in the evaluation of investment projects of a company, allocation of resources, opportunity cost analysis, and cost control. Business economics concepts are also found in deciding whether to pursue a project or not and calculating its potential benefits.

6. Supply and Demand

Mankiw (2018) discusses that since economics is concerned with consumption and production, it is also concerned with demand, supply, and the relationship between them. Demand is linked to the “wants” of the scarcity problem. If everything were free, everyone would demand anything they wanted. On the other hand, the supply is limited since it is linked to resources. The total amount a firm can supply depends on the available resources and technology. Therefore, as previously discussed, people's “wants” are greater than what can be offered. Thus, potential demand exceeds the potential supply. Society must, then, find solutions for dealing with this imbalance. This can be seen at individual levels (for example, cars or the oil market) but can also be extrapolated to the overall economy - the aggregate (total) demand needs to be balanced to aggregate (total) supply. This means that the overall expenditures in society need to match the total production. Economics, therefore, studies how this match and balance happens or not and how demand adjusts to supply and vice-versa.

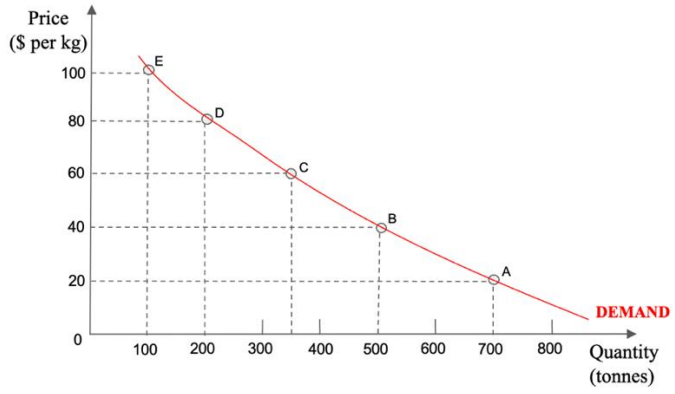
To assist in these studies, economists use *economic models*. These models explain and predict, in a simplified manner, the relationships that happen in the economy. Although abstraction is not ideal, this is crucial to be able to focus on the variables relevant to the causes and effects. The discussion about demand, supply, and price is one example of an economic model. For that, general statements from observations can be made – called induction. Moreover, models help to explain causes, predict, forecast, and draw conclusions. However, given the complexity of reality, economists use the *ceteris paribus* assumption. This means that the deductions can be assumed given that nothing else that could affect the conclusion has changed. For example, given that the demand for cars has increased, cars’ prices will rise with the assumption that the manufacturing cost did not change (Mankiw, 2018).

Demand

Consumer demand for a good or service increases when its price decreases and decreases when prices increase. Hence, this relationship is expressed by a descending demand curve: the smaller the price, the greater the quantity demanded. There are two reasons for this *law of demand*. First, as prices, relative to other goods, rise, the demand for that product will drop given that the consumers can buy other options and switch to substitute items - *substitution effect*. Secondly, given that consumers' purchasing power is limited, when prices rise, consumers will feel poorer since they cannot buy the exact quantities as before with the same amount of money. On the contrary, when prices decrease, the quantity demanded increases because people can buy more (income effect), and they will switch away from substitute items (substitution effect). Consequently, the *demand curve* defines the number of goods or services consumers will purchase within a price range they intend to pay. In the potatoes example, point E shows that at $100 per kg, 100 tonnes will be demanded. If this price decreases to $80 per kg, the quantity demanded increases to 200 tonnes - point D (Sloman et al., 2016).

Figure 3

Demand Curve



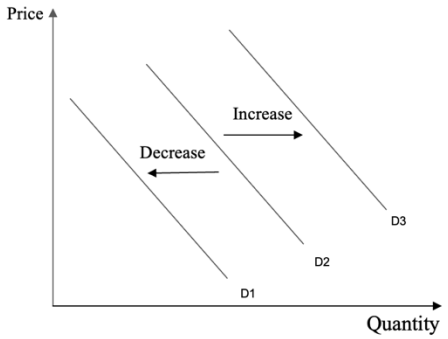
	Price ($ per kg)	Total market demand
A	20	700
B	40	500
C	60	350
D	80	200
E	100	100

Note. Demand Curve. Adapted from “Economics for Business”, by J. Sloman, D. Garratt, J. Guest, & E. Jones, 2016, *Pearson Education Limited*, p. 54.

Other determining factors besides price affect the demand. First, the income: when income increases, people tend to buy more goods and services, increasing the demand. Economics defines normal goods as those that, when there is an increase in income, their demand also increases. However, goods whose demand decreases with increasing income are called *inferior goods* (for example, when people become wealthier, they decrease their demand for low-quality products). Secondly, tastes and preferences: consumer tastes and preferences change over time, and what was once popular becomes outdated. Alternatively, when consumers start to believe that they must have a good, demand can quickly increase. This might be affected by advertising, fashion, health, etc. Therefore, the more desirable the goods, the higher their demand. Third, the price and number of substitute goods: the lower the price of a substitute good, the demand will shift towards it, decreasing the demand for the good people switched from. Alternatively, when the price of one alternative product goes up, it increases the demand for the other. For example, if the tea price drops, coffee demand might drop. Forth, the price and number of complementary goods (consumed together): the higher the price of complementary goods, the fewer will be bought, decreasing the demand. For example, if the PlayStation 5 increases its price, the demand for PS5 games will decrease. Fifth, future expectations: when consumers expect a good or service's price to rise, they tend to buy more now, increasing demand. Sixth, income distribution affects demand: transferring income from the poor to the rich might increase the demand for luxury goods (Sloman et al., 2016).

Figure 4

Demand Curve - Shifts



Note. Demand Curve. Adapted from "Economics for Business", by J. Sloman, D. Garratt, J. Guest, & E. Jones, 2016, *Pearson Education Limited*, p. 55. Copyright 2016 by Pearson Education Limited.

Choudhary (2021) argues that demand analysis, estimation and forecasting are crucial for a business firm selling goods and services in the market. Many managerial decisions depend on accurate estimates of demand to forecast future sales to prepare production and allocate resources efficiently. Moreover, this directly impacts the organization's success since it affects the market position and profitability.

Supply

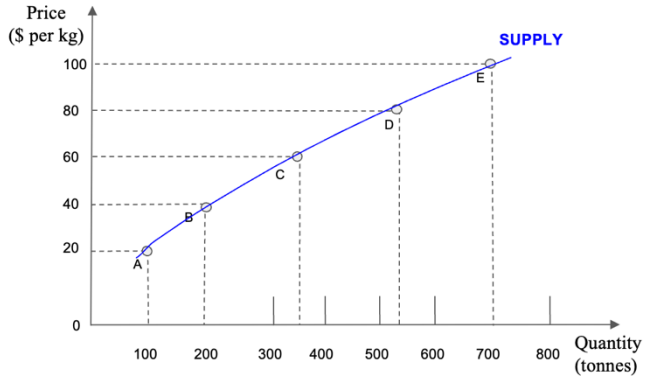
Sloman et al. (2016) explain the supply definitions, which is the quantity of a good or service a producer or seller is willing to offer at each price in a certain period. The decision to produce is guided by the principle of profit maximization, translated into the *law of supply,* which states that when prices increase, the quantity supplied of goods and services will also increase. Therefore, the supply curve is ascending because producers will be willing to offer smaller quantities of goods or services, the lower their prices. This happens because, beyond a given level of output, firms' costs increase more quickly as they increase supply (for example, employees must be paid overtime, and machines might be almost at full capacity); therefore, it

will only be worthwhile to produce more and bear these increased expenses if prices rise. Another reason is that, with a price increase, the good becomes more profitable; hence, businesses will be motivated to manufacture more of it by switching from less profitable goods' production. Moreover, new producers will be motivated to enter the market, increasing the market supply. When summing all individual offers of each producer, it represents the market supply.

The amount of product that producers would like to offer at different pricing can be shown in the supply curve. An increase in price from $60 to $80 per kg will increase the market supply from 350 to 530 tonnes (Sloman et al., 2016).

Figure 5

Supply Curve



	Price ($ per kg)	Total market supply
a	20	100
b	40	200
c	60	350
d	80	530
e	100	700

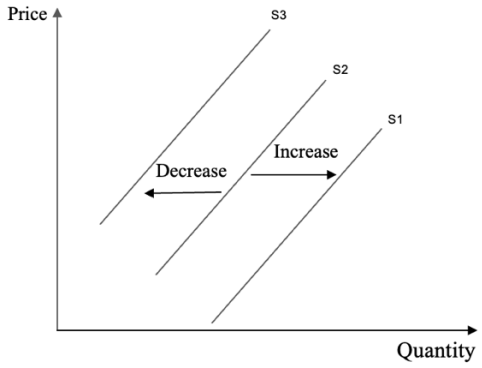
Note. Demand Curve. Adapted from "Economics for Business", by J. Sloman, D. Garratt, J. Guest, & E. Jones, 2016, *Pearson Education Limited*, p. 56. Copyright 2016 by Pearson Education Limited.

Other factors beyond price also influence supply. First, the higher the cost of production, the lower the firm's profitability. The variable costs, such as wages and the price of materials, and the costs of fixed assets, such as equipment and machinery, can increase the cost of production. Thus firms would reduce output and switch to other products with lower costs. Secondly, the technology advances allow cost reduction. For example, companies manipulate inventory more

efficiently, giving them the ability to handle larger inventories and reduce the cost. Third, the profitability of alternative products: if the resources can be allocated to more profitable goods, firms will switch their production, decreasing the supply of the less profitable item. For example, potato supply might decrease if carrots provide higher profits (price rise but costs fall). Fourth, future expectations: if there is an expectation that prices will rise, suppliers might temporarily reduce their quantities sold to built stocks and sell with higher prices in the future. Fifth, the number of sellers: supply might increase with more competitors in the market. Sixth, climatic conditions: when the agricultural production of beans suffers from the weather, supply drops, and prices rise. When a determinant of the supply changes, its curve shifts (Sloman et al., 2016).

Figure 6

Supply Curve – Shifts



Note. Demand Curve. Adapted from "Economics for Business", by J. Sloman, D. Garratt, J. Guest, & E. Jones, 2016, *Pearson Education Limited*, p. 58. Copyright 2016 by Pearson Education Limited.

Equilibrium

Combining the demand and supply analysis, it is possible to reach the actual price, and the actual quantity bought and sold is determined in a free and competitive market. Sloman et al. (2016) explain that the quantity produced and the market price are determined by the intersection of supply and demand curves. Still, other factors besides price affect supply and demand;

whenever one of these factors changes, market equilibrium is affected. Market equilibrium is when the price of a good or service reaches a value that equals the quantity demanded with the quantity supplied in the market.[9] At the intersection of these two curves, the equilibrium point in the market is given.[10]

In the potatoes example, if the price was $ 20 per kilogram, demand exceeds supply by 600 tonnes (A − a). Consumers would be unable to obtain all they wanted; thus, they would be willing to pay a higher price. Producers, unable or unwilling to supply enough to meet the demand, would only accept a higher price. There is a shortage, and its effect will drive up the price. There would still be a shortage at $40, which would force the price to increase. Nevertheless, with that increase, the quantity demanded decreases and the quantity supplied increases, progressively eliminating the shortage. On the other hand, if the price were $ 100, supply would exceed demand by 600 tonnes (e − E). There would be a surplus, forcing the price

[9] Practical Example. During the COVID-19 pandemic, with governments asking the population to stay home, people changed its expectation towards the future. And, with changes in expectations, the demand for some products changed drastically. This was the case with toilet paper, which increased 250% in its purchases in Ottawa. The population's panic led to a shortage of these products, and supermarket shelves were quickly emptied. The panic of a virus added to rumours of a tissue shortage in Asia, and work-from-home policies changed people's behaviour, leading to increased demand. However, there was no supply problem; on the contrary, production increased to meet the demand (Proctor, 2020).

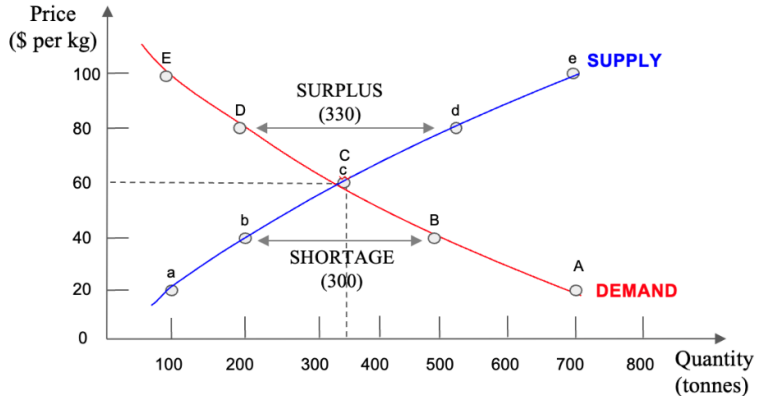
[10] Practical Example. House prices in Calgary rise when oil prices rise due to a change in demand. Since oil production is critical to Calgary's economy, when these corporations increase their activities and operations, it attracts people to work there, to provide goods and services to the oil industry, and to provide goods and services to meet the city's demographics expansion. For example, the city would need more teachers to accommodate the children of these new adults living in Calgary. Therefore, it has a high chance of offering higher salaries to attract the necessary personnel, which means people will earn more money. Hence, the housing demand will increase, changing the demand curve to the right due to a higher population and higher salaries. Further, the house market equilibrium price and quantity will be higher than previously (Frank et al., 2012).

down as competition would take place to sell the excess supplies. Even at $ 80, more were supplied than consumers were willing and able to purchase, failing to clear the market.

Therefore, only one price is sustainable and would prevail where demand equals supply. At an equilibrium price of $ 60 per kg, demand and supply are 350 tonnes (equilibrium quantity). Thus, in point Cc, there is no shortage and no surplus in the market. If the price starts at any level other than $ 60, it will tend to move towards it. If it is above $60, the surplus would drive the price down (demand curve: from point D to C and supply curve: from point d to c). Hence, the equilibrium price is the only price at which producers' plans to supply exactly match the consumers' plans to buy (Sloman et al., 2016). Varian (2010) explains that the prices adjust until the total demanded equals the total supplied.

Figure 7

Market Equilibrium



Price ($ per kg)	Total market demand (tonnes)	Total market supply (tonnes)
20	700 (A)	100 (a)
40	500 (B)	200 (b)
60	350 (C)	350 (c)
80	200 (D)	530 (d)
100	100 (E)	700 (e)

Note. Demand Curve. Adapted from "Economics for Business", by J. Sloman, D. Garratt, J. Guest, & E. Jones, 2016, *Pearson Education Limited*, p. 59.

7. Evolution of Economic Thinking

Economic ideas are developed according to the social, age, and place conditions from where they emerge. Therefore, they are strictly related to their context. For educational purposes, below is a concise explanation of the evolution of economic thinking and its main characters (Sá, 2014).

Pre-scientific phase

This phase was composed of three periods: Greek Antiquity, Middle Ages, and Mercantilism.

In Greek Antiquity, the term economics was utilized for the first time by Xenofontes and was related to private goods management. In Greek, economics is translated to *oikonomia*, with *oikos* meaning home and *nomo* meaning law. The Greek and roman authors did not create a proper economic theory. Instead, they were concerned with practical aspects of the house administration or factors related to the money from economic transactions. Therefore, they developed some economic ideas related to taxes, tariffs, and transportation networks.

In Middle Ages, between the 5th and 15th centuries, economic thinking was oriented and guided by Christian morality. The church recognized the manual and intellectual work dignity. Moreover, they advocated the *fair price* - a price charged based on the actual cost, which is the sum of materials and labour, without any increase. Additionally, the church condemned the interest charges, called usury.

Mercantilism's period was from 1450 to 1750. They were the first to study economics from a structured perspective, even with some divergent thinking. Some of their leading thinkers, William Petty and Cantillon, discussed that the wealth of a country was measured by their precious metal inventory. Therefore, they sought to establish the principles on how stimulating

and fostering foreign trade would ensure the savings and stocks of these metals. They defended the idea that the country and government should intervene in the economy. William Petty anticipated many classic economic concepts and emphasized the importance of labour division importance. Richard Cantillon developed crucial theories regarding foreign trade, and some consider him the modern economy founder.

Scientific phase

Physiocracy was a school from the end of the 18th century and taught that agriculture was the main wealth source and that economic activities were exclusively dependent on the laws that govern nature. Another lesson from the Physiocrats was that the excess of agricultural production was what allowed trade development and growth. Those who produced just for survival purposes were considered poor. Furthermore, they argued that the government should not intervene in the trade. Their main thinker was François Quesnay, a physician responsible for the notions of organs, flows, and circulation, medicine and biology concepts that are used in economics.

The Classic School (late 18th - early 19th century) consolidated Economics as its own scientific area of study. The classics laid the foundation of economic liberalism, a current of thought who defended total economic freedom to the private initiative develop without the government influence. Their goal was to explain the reasons for the countries wealth. The *economic liberalism* argued that the free competition between companies would regulate the market transactions, which would trigger a decrease in the prices and would benefit the technological innovations that improve the quality of the product and increase the production rhythm. The main thinkers were Adam Smith, David Ricard, John Stuart Mill, and Jean-Baptiste Say. Adam Smith, the author of Wealth of Nations, was a philosopher and economist that had

great influence on the European bourgeoisie since he attacked the mercantilist economic policy. His ideas were crucial for the development of capitalism in the 19th and 20th centuries.

The Marxism School (1818-1883) was based on Karl Marx's fundamentals, a critic of the capitalist system. This school described capitalism of the big cartels (commercial agreements) e the rising conflict between capital and labour. For Marx, capitalism does not possess the correction mechanisms for its own failures; therefore, the system would generate economic crises that would frequently happen, generating concentration or centralization of capital. Small and fragile organizations would be eliminated in every crisis. Karl Marx presented the foundation ideas for the Socialist Revolution, which impacted world history. The socialist government system was adopted by Russia, China, and Cuba.

The Neoclassic School (1870-1929) worked on Economics analysis using intensive mathematics and allocation and distribution to diverse places. Its members, who followed these ideas, asserted that the foundation of the economic conduct of the human being was the scarcity of resources in the face of unlimited needs and urges. The main thinkers were Marshall, Walrs, Schumpeter, Pareto, Pigou, and Edgeworth.

Keynesian School, as an example of the most recent phase of the economic thinking evolution, it has as its main author John Maynard Keynes (1883-1946). In his book, The General Theory of Employment, Interest and Money, published in 1936, he criticized Say's Law, which argues that the supply creates its own demand; therefore, an increase in production would turn into income additions for workers and entrepreneurs, who, lately, spend money when buying goods and services. The Effective Demand Principle developed by Keynes denies Say's Law, showing that not all income turns into additional consumption. Keynes's principle refers to a situation in which the demand creates its own supply. In other words, if there is demand, the

firms want to produce, and it is necessary the government intervention through a public spending policy. For Keynes, the classics (liberals) believed in the self-correcting principles of the market. However, they did not know and present solutions for the crises. Keynes demonstrated that the markets do not have natural self-correcting forces. Furthermore, he advocated the notion that changes in the income (wealth) depend on private expenditure decisions (effective demand), especially investment decisions (Sá, 2014).

Conclusion

This chapter gave a taste of what business economics is and explained how crucial this knowledge is for business managers, providing examples of varied situations where these economics concepts can be used and applied. Therefore, economics can be considered a decision-making science. Given that the wants and needs are unlimited and the resources are scarce, everyone needs to decide on how to allocate the limited resources. Hence, economists make assumptions about behaviour to understand how individuals and businesses make decisions and analyze how economies work. With economic models, theories can be formulated to assist in predictions. In this context, each consumer decision communicates to a company how the consumer views their products: a purchase decision is favourable, while a purchase of a rival product sends a message that consumers value the other product more. Collectively, these individual decision-making influences if the business is thriving. On the other hand, businesses must understand these messages' reasons to improve and respond to changes. Therefore, businesses also make decisions - ranging from simple ones, such as whether to order from one supplier or another, to complex decisions on how to meet consumer needs more effectively. For that, businesses will weigh up the costs and benefits of each decision. Businesses' decisions can be categorized into three types: investment in productive capacity, growth and expansion, and acquiring and keeping customers. These decisions will trigger the need for other consequential decisions (Mankiw, Taylor, & Ashwin, 2013).

In summary, the fundamental lessons were discussed, primarily how the decision-making process occurs and how people, businesses, and governments behave to increase their utility through rationality, comparing marginal benefits and costs. In that discussion, key concepts and terminologies were presented, such as the fundamental economic problem of scarcity, trade-offs

among alternatives, and the opportunity cost - the cost of any action measured in terms of foregone opportunities. Furthermore, the fundamental interactions in the economy were discussed, permeating topics such as the mutual benefit of exchange and trade, the definition of the market, the comparative advantage concept, the connections between economic agents through the circular flow diagram, and how the quantity demanded and supplied in a market economy trend towards equilibrium. In the following chapters, the discussion will be more in-depth, developing other relevant topics to provide the students with insights about business, markets, and economies.

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