

Economic Power

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SYNOPSIS

Provocative, yet elegant. Imaginative, yet truthful. This is the correct exercise of economic power. And that is why it is such a challenging task.

Rather than being rich, be free. And be happy! This work differentiates among military, political, and economic power, establishes a clear sense of the relative deterministic power of history, and explains why it is not absolute. It identifies the “rules that set us free,” which empower each individual to be, instead of to have.

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MEA CULPA

The world is becoming poorer, and poorer, in Ethics. I write Ethics with a capital “E” because of its importance to safeguard overall welfare. Ethical behavior refers to establishing trust relationships grounded in the principles of respect, encompassing both respect for ourselves and respect for the environment. In every managed entity, the operational and decisional axes combine to deliver a given outcome, and the efficiency of this relationship depends on coherence and control.¹ Economics, just like Ethics, is all about balance and alignment.

The latest evolution of mankind has been trending downward because ethical guidelines have been deliberately set aside. In 1989, the United Kingdom's Prime Minister, Margaret Thatcher, removed from the law the possibility of being safe from criminal prosecution for a government official blowing the whistle on information that the official may consider crucial to safeguard the general public interest. In 2003, George W. Bush ordered the invasion of Iraq after having pushed the world to allow him to kill innocent people for obscure individual interests. In 2013, Edward Snowden leaked the existence of previously classified mass intelligence-gathering surveillance programs run by the United States National Security Agency (NSA) which threatened to invade every one's private lives around the world and, for being a guardian of the general public interest, he was charged with espionage by Barack Obama's administration and had to flee away from his home country. In 2025, Vladimir Putin, Donald Trump, and Benjamin Netanyahu stamped out Ethics by

conflating military and political power with economic power.

Herein, I am doing a *mea culpa*.

In 1993, I got my degree in Economics and started working immediately for a bank. One of my primary functions was to analyze the accounting statements of customer firms and set credit limits based on sound financial principles. My decisions had to be justified. Soon, because people felt I was enlightening in my arguments, someone suggested that I write the economics page for a weekly newspaper. I accepted the proposal. That responsibility pushed me to become a freelance researcher ever since.

I quit writing for the journal a few years later when I joined the staff of an insurance company that required exclusive dedication and expressly forbade its employees from pursuing any other economic activities. Later, I earned a Master's in International Business, founded and closed my own firms, worked as a consultant both as an employer and an employee, and continued studying whenever possible. Nevertheless, writing was always an impulse.

In 2014, I published my first book, which focused on pursuing excellence in any organization. It was mainly focused on corporate-level business. Afterwards, I expanded the scope of my writing into the economic field and published several additional books. I created the website www.matein7.com to showcase my portfolio, and I reached a point where I realized what I had done wrong. Regardless of the correctness of both, the conclusions I drew from my research and the cause-and-consequence relationships that emerge from the economic environment, I mistakenly assumed that the rules we choose to abide by would steer individual behavior onto a

harmonious path. However, the rules must be continuously monitored, questioned, and revised in a timely manner whenever necessary. That is why true economic power stems from ethical behavior and not the other way around.

This work aims to contribute to humanity's recovery, enabling organizations to fulfill their missions and individuals to find inner peace. What is a little different from my prior books is that, more than the rules requiring legitimacy, it is the reason behind any rule that is under inquiry. And that is why I believe that this book, rather than promising solutions as I did in the past, will help the reader to make a difference.

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PROLOGUE

What is economic power?

In 2024, if we google the search “first economic power in the world” we get that “the United States upholds its status as the major global economy and richest country, with a GDP of over \$28.78 trillion as of 2024, steadfastly preserving its pinnacle position from 1960 to 2024.”² According to the data available on the world’s greatest economy, in 2019, 11 percent of the country’s population lived below its national poverty line, which was approximately \$24.55 per day.

The national poverty lines serve as the benchmark for estimating the level and composition of income required to be non-poor, enabling a person to meet their basic needs for shelter and food. In 2022, the World Bank established a global absolute minimum standard of \$2.15 per day, which the United Nations currently uses to monitor extreme poverty worldwide. However, the national poverty lines provide a comparable assessment of an economy's true power to deliver welfare to its population. In Ethiopia, in 2015, 23 percent of the population lived below the country’s national poverty line of \$2.04 per day. In Vietnam, as of 2018, only 7 percent of the country’s population lived below the national poverty line of \$ 4.02.³ Does this mean that Vietnam's economy is greater than that of the United States? Is the poverty level of a society a non-priori concern regarding economic matters? What is economic power after all?

Economics concerns the systematic study of human and material interactions to ensure overall welfare improvement.⁴ In the United

States, from 1960 to 2019, considering constant prices of 2011, the income per capita improved 3.12 times, increasing from \$18,057 to \$56,469. Analogously, in Vietnam, during the same period, the improvement was from \$1,274 to \$7,266, corresponding to a 5.7-fold increase. Both Vietnam and the United States improved their populations' living conditions from 1960 to 2019; however, Vietnam's income growth was proportionally higher, while its poverty rate declined at a proportionally lower rate than in the United States.⁵ Does this mean that the global preponderance of the United States economy is at stake? Is President Trump's promise of making "America great again" precious and timely?

The analysis of economic databases enables a deeper understanding of the outcomes that have changed in an economy over time. Still, it often falls short of providing a comprehensive explanation for why such results have been produced. Power is the capacity to do something or act in a particular way. Power is also the capacity to direct the behavior of others and to influence the course of events. Understanding why a society, government, or private corporation holds economic power requires examining how its actions affect the living conditions of other individuals. The exercise of power is a tremendous responsibility.

In society, three very different powers are often confused: 1) the military power, 2) the economic power, and 3) the political power. Understanding how these powers interact and the effects they have on overall welfare is, therefore, crucial.

Lessons from History

History has provided us with a rich tapestry of diverse events, where the decisions made by the most powerful individuals have led to vastly different economic realities. Recent statistics indicate that the United States has been the wealthiest economy in the world. This fact often leads people to conclude that the country is the world's greatest economic power. The assertion is therefore based on consistently high-income per capita figures that have recently outperformed those of other countries. Indirectly, this conclusion implies that the wealthiest nations have responsibilities towards the poorest ones, as their actions shape the overall level of welfare that humanity can achieve.

However, the lessons from the past do not necessarily equate economic power with the income level. The United States has been the world's most powerful military nation since the end of World War II. It is interesting to identify how the exercise of military power is intertwined with economic power to produce a given level of welfare.

In 1162 CE, in Mongolia, the son of Kabhul Khan from the Bojigin clan was born. His name was Temudjin. At the time, Mongolia was divided into several tribes, each ruled by a master known as a “khan.” At the age of thirteen, Temudjin lost his father and immediately claimed his will to succeed him. Such aspiration was not allowed by the tribe’s older men, and he was forced to run away for his life. Escapes and persecutions were a constant throughout Temudjin’s youth. Due to this experience, he became an

expert in archery, and he was able to ride a horse all day long. Nevertheless, he never stopped fighting for his ideals of conquest and never gave up establishing contacts with anyone who could become an ally. As time went by, some of his father's trusted old men started to stand by his side, and before being twenty years old, Temudjin was nominated the tribe's leader.⁶

Temudjin was always interested in uniting all the Mongol "khan" in a single force operating under his command. As soon as he became the leader of his tribe, he began pursuing this goal. He admitted no rival and killed anyone who wanted to share power with him. Contrariwise, he was extremely generous towards the leaders serving under his command. He had a cousin, called Jamukha, with whom he lived many days of adversity during his youth. It is said that they even shared their last pieces of food provisions. Nevertheless, Temudjin followed his own path as a nomad throughout all of Mongolia, preaching the unification of the clans, setting up Mongolia's laws, and killing mercilessly everyone who refused to submit. Jamukha was never happy with his secondary condition and stepped away from Temudjin. Many clans ultimately joined Jamukha, and in the end, Mongolia was divided perfectly. The two massive armies met. And Temudjin won. Unruffled, he ordered Jamukha's death.

Temudjin was said to hold an indomitable will. He was energetic, impetuous, violent, relentless, and with an organizing genius. He made use of every available resource to ensure the success of his endeavors. He conceived the concept of "total war" and successfully organized his followers to achieve his goals. A vertical chain of

command was set up. The army was organized in contingents of ten units: ten, one hundred, one thousand, or ten thousand men. Each unit of magnitude had a commander, and, in a whole battle, he was very efficient in leading an army of two hundred thousand men just by dealing with his generals. The army was accompanied by auxiliary troops, which managed the catapults, took care of the remaining army's arsenal, and even had a section for lost items. The use of the short bow was made mandatory for use on horseback, and its use was combined with the long bow according to need. Temudjin idealized three different types of arrows, each adequate for the conditions faced in battle. The arrows for short-distance fights were heavier, had a steel tip, and were able to penetrate the enemies' protective armor. Combat tactics were methodically developed by Temudjin and intensely refined through training by his soldiers.

Strategically, Temudjin was a master in dividing the opponent's forces while concentrating his own. Nothing was left to chance. He studied every detail of the enemy. Before any conquest, he introduced people of his trust in the target territory, seeking discontented men and aiming to use this sort of animosity to his advantage. He used to advertise his past barbarities in the territories he was targeting. Whether in the case of submission or opposition, he annihilated the conquered people, killing men, women, and children. To his people, he proclaimed the soldier figure and led all of his community to maintain a soldierly presence on the battlefield.⁷

In 1206 CE, he was proclaimed "Genghis-Khan," the clan of the clans.

Temudjin created a code of laws, known as the Yassa, which was

a combination of his will and traditional tribal customs.⁸ This legal framework set up a hierarchical social structure, ruling military procedures, private, public, and economic matters, while providing total control over society to Genghis-Khan. Some of Yassa's rules are particularly revealing of the consolidated societal shape:

Rule 1- *It is ordered to believe that there is only one God, creator of heaven and earth, who alone gives life and death, riches and poverty as pleases Him, and who has over everything an absolute power.*

Rule 5- *It is forbidden to ever make peace with a monarch, a prince, or a people who have not submitted.*

Rule 8- *It is forbidden, under the death penalty, to pillage the enemy before the general commanding gives permission; but after this permission is given the soldier must have the same opportunity as the officer, and must be allowed to keep what he has carried off, provided he has paid his share to the receiver for the emperor.*

Rule 13- *Every man who does not go to war must work for the empire, without reward, for a certain time.*

Despite this legal structure being intentionally designed to create an enforcement mechanism that ensured obedience to Genghis Khan, it was a framework that united the empire's members while maintaining social order. As highlighted by Rule 17 below, the Yassa institutionalized an inheritance system that reinforced a steep hierarchical social structure, extending far beyond Genghis Khan's sphere and permeating the behaviors of the entire society across generations.

Rule 17- *The law of marriage orders that every man shall*

purchase his wife, and that marriage between the first and second degrees of kinship is forbidden. A man may marry two sisters or have several concubines. The women should attend to the care of property, buying and selling at their pleasure. Men should occupy themselves only with hunting and war. Children born of slaves are legitimate as the children of wives. The offspring of the first woman shall be honored above other children and shall inherit everything.

The Yassa enabled Temudjin to remain in power until the moment of his demise. He died in 1227.

By the time of his death, Temudjin was controlling a vast territory that encompassed China, the Middle East countries, and a portion of Ukraine and the southern regions of Russia, stretching from the Caucasus Sea to the Indus River and from the Caspian Sea to Beijing. A territory of more than 11 million contiguous square miles. An area about the size of the African continent. Despite the extension of his atrocities, it is reported that he also granted religious freedom, abolished torture, encouraged trade, and created the first long-distance postal system.⁹

Genghis Khan provides a notable example of how the misuse of executive power can shape a society. But mankind has a rich history. Perhaps the first example provided by history, when the three powers — military, economic, and political — were extremely well combined to deliver overall welfare to the community, occurred more than sixteen hundred years ago.

In 546 BCE, a tyrant arose in Athens, ancient Greece. He seized power by force and was named Pisistratus.

Two centuries before the battle that brought Pisistratus to power,

the Greek territory was divided into several regions, including cities, islands, and small chiefdoms, each with a lord who ruled as he pleased. This lord was denominated the aristocrat. *Aristos*, which means “better,” and *kratein*, which means “govern.” The term “better” was not synonymous with governance capacity or competence. Most of all, it was the wealthiest man who was the aristocrat. It was the person who could provide weapons, in case of need to defend against possible invaders, and the one who could provide entertainment, paying musicians and dancers for this purpose. The law was not written. There are reports of concrete situations in which disputes were decided in favor of whoever paid the most to the aristocrat, as he was the one who resolved issues between citizens within his territory.

Around 675 BCE, in the state of Sparta, a community socially divided into three classes emerged. Of the three, two populations were subdued. Men had the habit of eating together in shared spaces. The children’s education was assumed by the community and not just by their parents. The difficulty in keeping the subdued peoples under control triggered the need to find a solution. Spartans created a constitution through a written document that acknowledged 9,000 Spartan citizens as equals and established an administrative division based on their residential areas, rather than on kinship, as was the case in other ancient Greek territories at the time. They created the elders’ council, whose members ought to be at least sixty years old. They gathered in assembly regularly and voted by acclamation on the proposals presented by the elders’ council. For the first time in history, a community’s deliberation began to occur ordinarily, under

a legal framework, and not according to the random will of any tyrant. The written law took its first steps. With this critical behavioral change, access to power became viable for anyone who managed to garner the support of the population for themselves, just as long as it was a person coming from the dominant people in Sparta.¹⁰

In Athens, around 594 BCE, there was significant social upheaval due to two pressing problems. On one hand, the lowest classes of the population registered a large number of debts to the aristocracy. The debtor himself seized these debts; if he was unable to pay the debt, he became a slave to the creditor. On the other hand, there was discontent among farmers who had to hand over a sixth of their production to the aristocrats. The peaceful solution was found by the chief magistrate, named Solon, who decreed the abolition of taxation on farmers' output, ended the guarantee of human persons' debts, and defined an organization of society based on personal wealth, enabling access to power for anyone who became wealthy. At this time of growing political organization, people began to question the traditional social hierarchies attributed to various social groups.¹¹

Under this political scenario, Pisistratus seized power by force after defeating his enemies in battle. Despite having submitted the city of Athens through violence, he immediately started developing in the Athenians the awareness that the state was the most important. The lower classes of the population were encouraged to recognize obedience to the state, rather than to any aristocrat, regardless of their wealth or social status. He did it with subtlety. He centralized public administration and emptied of meaning the functions of

aristocracy in society, instituted a 5 percent tax on agricultural production and used that money to subsidize the poorest farmers, encouraged the participation of ordinary people in public affairs, and invigorated the ceramics industry and commercial exchanges abroad, which extended to the entire Aegean Sea. He built public infrastructure, supported private initiatives, and promoted festivals and the arts. He highlighted the importance of coordination between the public and private sectors for harmonious economic and social development.¹²

He died in 528 BCE.

Intersubjective reality

Both Temudjin and Pisistratus were tyrants who gained control over their societies by resorting to brute force. The decisions they made while ruling their communities constitute two significant examples of how the rules a society accepts to abide by condition overall welfare and produce very disparate human realities.

Reality, itself, is a notion that requires clarification. In 2024, Yuval Noah Arari, in his book “Nexus,” outlines that there are three types of reality, each being extremely powerful within a particular information network and utterly meaningless outside it. These are the following: 1) an objective reality – things that exist whether we are aware of them or not, like stones, mountains, and asteroids; 2) a subjective reality – things that exist in our awareness of them, like pain, pleasure, and love; and 3) and an intersubjective reality –

things that exist in the nexus between a large number of minds, like laws, gods, nations, corporations, and currencies.¹³ As the stories of Pisistratus and Temudjin highlight, reality is a complex thing, and power always stems from cooperation between a large number of persons.

The complexity of human intersubjective realities extends to understanding their changes. In 546 BCE, the Athenians lived well, peacefully, enjoying their productive activities, arts, entertainment, and trade abroad. However, twenty-five hundred years later, mankind is still struggling to find its own balance and inner peace. The proper exercise of economic power remains a significant challenge for the person in charge.

Temudjin, the Genghis-Khan, concentrated in himself all the powers required to control the populations he came into contact with around his ideals. These powers were the following: 1) military power – enabling effective legal enforcement of the ruler over subdued people; 2) political power – related to gathering a large number of persons around one ideal; and 3) economic power – which concerns being able to safeguard the highest possible level of overall welfare. Temudjin, under the ideal of building an empire, consecrated by force and led by an emperor alone, built an effective regulatory system to reach his individual goal. Temudjin established a totalitarian socio-economic and political regime, where he alone held all three powers, but never succeeded in providing overall welfare improvements to the entire population he managed to control.

Sixteen centuries before Temudjin, Pisistratus also established a

totalitarian regime. However, in ancient Greece, the wealthiest people in society gathered to discuss public matters. This state of affairs necessitated garnering political support from a large portion of the population to maintain public order. Furthermore, Pisistratus was able to amass the political support of poor farmers while gradually extending this influence to a large portion of Athens' citizens. Only a small fraction of the traditional aristocracy was displeased with the way Pisistratus was governing. And even so, they were not starving or doomed to despair.

These two different intersubjective realities are the outcome of the social context in which economic power is exercised. The complexity of this context encompasses several aspects, including the allocation and utilization of military power, the types of infrastructure society uses to disseminate knowledge, expertise, and helpful information, and the rules it chooses to adhere to, whether formal or informal. The economic reality depends on how power is exercised and is therefore highly contingent on human choice. However, the economic reality is a man-made intersubjective reality that extends far beyond the will of a single person.

Competition versus cooperation

Egocentric goals often characterize totalitarian regimes. Yet, they must always consider environmental intersubjective realities to ground themselves.

Temudjin engaged in a quest to conquer every soil available at

hand and beyond. His plans of conquest took into account the existence of a multiplicity of scattered tribes, each living under significant autonomy and independence from the others. By uniting these tribes under his command and leading them to conquer ownership of other territories, Temudjin engaged in a win-lose activity where the win of his people was simultaneously the loss of the subdued. Temudjin was a competitor. He was able to reach his individual goal because the dominant Mongol society's mindset was already rooted in tribal customs of obedience to authority.

Unlike what happened to Temudjin, Pisistratus took power in an overall political environment in which information flowed among the wealthiest individuals in Athenian society, and in which managing support for egocentric goals required a focus on improving the welfare of others as well. Authority was addressed to competence, and public matters were discussed openly, but decided by the elders and more experienced persons of society. At the time Pisistratus governed Athens, violence was necessary to secure executive power; however, the egocentric goal of a tyrant was insufficient to ensure the full cooperation of the entire society. History is unaware that Pisistratus ever forced a whole nation to go to war. Pisistratus developed his dominance based on a win-win mindset. He understood that it was not possible to improve his welfare by doing otherwise.

It is worth noting that History acknowledges Temudjin's efforts to foster cooperation among his people. The creation of a long-distance postal system indicates his effort to improve overall living conditions by relying on a process that requires human cooperation

and is not specifically dedicated to the war effort. Engaging in competitive endeavors is always triggered by individual motivation. Cooperative efforts, in turn, represent a collective endorsement in which a large number of individuals unite to pursue a shared goal. Humans tend to obey authority either because they want to gain the dictator's favor, are afraid of the consequences of noncompliance, or cannot control the exercise of power. Whether through the development of competitive or cooperative goals, the person who holds formal authority significantly controls what the entire society strives for.

Pisistratus and Genghis Khan have both illustrated how holding political power, by enjoying the support of a large number of society members around an ideal, is a determinant of what outcome a society's leader can foster.

Another lesson from history

The foundation of the Roman Empire constitutes another lesson from history. This example provides valuable insights into how socio-economic outcomes are derived from the institutional rules previously chosen by social leaders, and accepted by the remaining society.

In 509 BCE, Rome was a city dominated by the Etruscan king named Lucius Tarquinius Superbus. The king had a son who allegedly raped Lucretia, wife of Lucius Tarquinius Collatinus. The latter, together with Lucius Iunius Brutus and other chiefs of Rome's

most important families, fostered a revolt that led to the dismissal of the king and the establishment of the first republic.

As a consequence, this first republic organized a political government structure based on the command of the heads of the city's family clans, the “patres.” These men possessed absolute authority over their relatives and descendants. They disposed of their family members as if they were mere objects. They controlled their properties, their income, and they could sell them into slavery, or kill them if they wanted. By the time of the monarchy, these “patres” had the function of advising the king. Founded the new republic, these leaders maintained their social standing by joining the Roman Senate and advising the new governors.

In this initial state of the political definition of the republic, it was decided that the new governors, the consuls, would be two men chosen by popular election. These consuls would have the power to command the entire Roman city in administrative and military terms. They controlled the collection of taxes and the payment of public expenses. They commanded the army and were authorized to take the life of any Roman outside the city walls. These two Roman consuls were entitled to a very extended power.

Due to the understanding of the enormous power assigned to the consuls, although the consuls were two men chosen by popular vote, the popular vote also became necessary to authorize the beating or death of any Roman citizen within the city, as well as for legal and fiscal changes. Furthermore, it was immediately decided that the consuls would only serve for one year, being obliged to retire after the twelve months of their mandate had elapsed. At the foundation of

their republic, Romans feared the implications of a mistaken use of power.¹⁴

History shows that the way a society controls the exercise of power is much more important than the persons we choose to rule.

Economic power

To what extent is the economic problem a political one? How and why is the exercise of power related to realities of poverty, misery, productivity, and prosperity? The purpose of this book is to increase awareness in our global society of how an economy is built and what the requirements are to consistently secure large-scale cooperation among humans, aiming for the highest possible level of overall welfare.

Controlling human and material resources is mandatory to secure the goal of optimizing overall welfare. It is not possible to increase productivity, provide shelter, and deliver goods to the entire population unless some organization enables large-scale human cooperation. Pisistratus, the Roman Republic, and Temudjin all focused on achieving this.

However, controlling the resources is not enough to grant prosperity. It is necessary to know how to handle them. The empire of Genghis Khan was little more than an enormous accumulation of human and material resources that were simply unused. Moreover, Genghis-Khan dispensed with anyone who dared to disobey him, resorting to the death penalty and terror-based practices to bend

people to his will. Consequently, only his will prevailed, and human creativity was single-directed towards the act of war. This means that a large number of humans saw their living conditions deteriorate or end at Temudjin's hand, and another large number of humans were precluded from using their talents in other, more benevolent activities. Despite his efforts to set up a long-distance postal service, Genghis Khan's economic power was quite limited.

On the other hand, Pisistratus managed to develop a vast array of human activities within a harmonious and peaceful society. Human talents were reinforced and stimulated to flourish without necessarily resulting in a direct benefit to the one holding power. Conversely, the efforts of every Athenian were primarily directed to self-benefit. This social structure requires that society members be afforded the freedom to act in pursuit of their individual goals, express their talents and vocations, and do so without compromising public order. To the ruler, granting autonomy to act comes with responsibility issues.

Usually, the tyrant holding power seems to take full responsibility for what happens to every person subdued under their command. Temudjin ensured that a monitoring structure was established, where each person was held accountable for their actions as well as for ensuring that everybody else's actions were under the Yassa's principles. This social structure struggles to distinguish between factual truth and fear-based responses. For instance, if one Mongol believed in the existence of several gods, he or she would publicly extol the existence of only one god, who alone gives life and death, riches and poverty, as He pleases. Otherwise, the person would be

speaking against the law. In this sociopolitical and legal regime, rather than being responsible for their actions, people are being freed from self-responsibility. Temudjin will never ask the subdued, “Why do you think there are many gods?” Instead, the ruler tends to angrily ask, “WHO SAID THAT?” rather than quietly questioning, “Why did you say it?” Human creativity is castrated under a severe hierarchical structure, and, rather than acting responsibly, people tend to resort to fear-based responses. In this state of affairs, the possibilities for overall welfare improvement are limited to those of the person holding power, and human responses are often not based on sound common sense.

Overall welfare means that the interests of every human being are to be equally considered, and no person, family, group, corporation, or nation must be favored with a higher level of well-being at the expense of someone else. Otherwise, rather than economic power, we are in the realm of the exercise of mere military or political power.

The proper exercise of economic power requires controlling human and material resources, providing freedom, and enabling responsibility. In a thriving society, the appropriate exercise of economic power demands a specific regulatory framework that must bind society as a whole, steadily improve overall welfare, and not rely on the effort and competence of a single person. However, those who are entitled to exercise economic power must be competent in their actions.

Temudjin, with his authority and rules, created a steep hierarchical structure in society to achieve his war-centered, selfish

goal, consolidated a win-lose mindset, and gave his people a reason to die for. Pisistratus, with his authority and his rules, to reach his goal of improving overall welfare, created a horizontal structure in the society spread across an extended range of individual interests and goals, from agriculture to ceramics, from public infrastructures to arts, consolidated a win-win mindset, and gave his people, and the people they got in touch with, many reasons to live for. The correct exercise of economic power is a tremendous contributor to making life worth living.

Currently, the world is not on a path to safeguarding overall welfare. England and the United States are two of the world's most powerful economies. Nevertheless, in 2003, 7.7 percent of the United Kingdom population reported having had an episode of sleeping at least one night on the street or in a homeless shelter. This figure was 6.2 percent for the United States population. In England, from 2010 to 2017, the estimated number of unsheltered homeless people climbed by 168.7 percent, from 1,768 to 4,751 individuals.

In 2017, The Wall Street Journal reported that New York City planned to open 90 new homeless shelters. Mayor Bill de Blasio proposed a solution to address a problem that has left tens of thousands of people without a permanent home. In January 2022, 48,413 homeless people were sleeping each night in New York City's municipal shelter system, reaching the highest levels since the Great Depression in the first years of the 1930s. New York City is one of the world's wealthiest cities by GDP. However, in 2021, the United States Census Bureau reported that 12.7 percent of New York City's population was living in poverty.¹⁵

When examining data on the United States and Vietnam's evolution in poverty and per capita income, it becomes clear that Vietnam has exercised economic power more effectively over the last 60 years.

In 2024, the world is divided between two superpowers, the United States and China, which control the majority of the world's human and material resources. In a secondary role, several alliances and blocs have relatively little influence on the world's economic outcomes. However, rather than engaging in cooperative efforts to safeguard overall welfare, the two superpowers are currently following the opposite direction.

In the 2020s, China banned its population from physically accessing Facebook and YouTube, while the United States considered it unlawful for federal employees to use TikTok on their devices. Secondary countries and alliances followed similar legal procedures based on what they considered a superior economic interest.¹⁶ Rather than resorting to rules that make us free, hindering efforts regarding the safeguard of overall welfare are being raised by the political elites. The world's current foremost leaders are stubbornly engaged in creating a Genghis-Khan intersubjective reality. And there is somebody else believing that it is the best for all of us, too.

Another example that the world is not on a path to safeguard overall welfare comes from the disproportionate power large corporations have over entire countries. According to the magazine "Fortune," in 2022, the world's 500 largest corporations delivered a record-high aggregate revenue of U.S. dollars \$41 trillion —

something like \$41,000,000,000,000. In 2022, the world's GDP (Gross Domestic Product) was \$101.3 trillion, meaning that 500 firms directly control 40.47 percent of the world's income.

In 2022, Walmart was the world's largest corporation, ranking first on the Global 500 list and boasting a turnover higher than the GDP of several dozen countries. Allianz was ranked 47th on Fortune magazine's list of the world's largest companies, operates worldwide, and employs only 155,411 people. In 2022, Allianz's total revenue exceeded the GDP of more than 119 countries. The company's 2022 operating profit was €14.2 billion, equivalent to \$15.23 billion, and higher than the GDP of countries such as Madagascar, Afghanistan, or Namibia.¹⁷ It is irrefutable that these corporations hold massive economic power. Yet, pursuing individual goals.

This book explores the theory and practice of exercising economic power effectively. In the prior sentence, rather than my author's opinion, as we shall see ahead, the word "effectively" means the actions that safeguard overall welfare and must always be under social scrutiny.

The economic success of a society is mainly dependent on three fundamental pillars: employment, financial stability, and an institutional environment that ensures freedom for every person. Employment is responsible for creating the output that is distributed to the population. Money is the tool we use to facilitate the trade of the goods and services we produce among ourselves. And, the institutional environment that ensures freedom is the benevolent intersubjective reality that allows mankind to elevate overall welfare to its highest possible levels. Part 1 addresses the primary

employment components, which encompass work effort, productivity, and firm size. Part 2 addresses the monetary issues related to prices, income, credit, and exchange rates. Finally, Part 3 identifies the legal framework that conditions both employment and the use of money to maximize overall welfare. This work aims to serve as the cornerstone of a broader global understanding of the exercise of economic power.

PART 1

Employment

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CHAPTER 1

Work efforts

The development of actions to improve the individual's living conditions has always been at the heart of human activity. According to reports from Anthropological studies, a hunter-gatherer culture was the way of life of early humans, characterized by a lifestyle based on hunting animals and foraging for food. Today, in Tanzania, the Hadza people still rely on hunting wild game for meat, but they are one of the last groups of humans to live in this tradition, with only around one thousand individuals remaining. As some populations began to establish permanent, agriculture-based settlements that could support much larger communities, hunter-gatherer practices were gradually abandoned.¹⁸

Ever since the very first beginnings of mankind, society members have had to rely on mutual effort to achieve their goal of overall welfare improvement. Hunting wild game requires being skilled in multiple tasks, such as tracking, building and using weapons effectively. Moreover, due to the weight and dimensions of wild animals, it is often too demanding an activity to be successfully performed by a single person alone. Human cooperation has always

been a resource that enabled us to thrive.

Adam Smith masterfully explained the evolution of work efforts over time in his book “An Inquiry into the Nature and Causes of the Wealth of Nations.”¹⁹ The author posed that, in the early days of *homo sapiens*, humanity survived exclusively by hunting and gathering practices. At that time, communities moved from one place to another, chasing their prey. The human genius was perfected, and with that, the creation and development of tools that facilitated the achievement of the objective took place. A multitude of hunting techniques, traps, and weapons were developed. Their knowledge was shared among the group members. Simultaneously, each man was a hunter and a warrior. Each individual owned what he hunted. Additionally, each person realized that he could immediately improve his well-being by robbing others of their belongings. When making a decision, each person had to consider not only their own actions but also the potential reactions of others in society. And each man also had to maintain himself, whether he was living in his territory or when he was out fighting his enemies. Society was not conveniently organized to efficiently meet the needs of food and defense among its members.

Based on this understanding of these shortcomings, humanity began to exert control over its food supply through the creation and management of herds of animals, including sheep and goats. Pastoral communities emerged. As in the society of hunters, societies of shepherds also had to move from one place to another, in harmony with the available pastures. However, this time, when the community moved, it did so collectively, holding all its members together. The

actions of food and defense became collective tasks. Animal herds became a common resource. Then, human society began to gain efficiency in coordinating the efforts of all people. The shepherd society reached superior living conditions to the hunter society. The latter made its survival dependent on the individual's ability to find prey in the wild, while the pastoral society came to have direct control over its global diet. Consequently, pastoral societies easily conquered hunter societies.

Human ingenuity continued to persist in identifying opportunities that could lead to improvements in the population's living conditions, and agricultural techniques were developed. These techniques, in addition to controlling animal feeding, also allowed for the control of reinforcing plant feeding, both for humans themselves and to improve the quality of their herds. Then came the society of farmers. Now, the community lived in a fixed location and could no longer move outside to be at war with the enemy. Even so, between the sowing and harvesting periods, there was a period of agricultural growth that allowed them to go to other territories to plunder and steal the belongings of different communities. When at war, each farmer had to support himself. Thus, the effectiveness of their coordinated efforts was necessarily limited to the time inherent in crop growth.

The human genius continued to manifest itself, and its positive effects were reflected in the welfare of society. Metal handling techniques were developed. The most varied tools to facilitate human work were invented. Arts were developed, along with several economic activities. Professions such as blacksmith, welder,

shoemaker, carpenter, or weaver arose. At this point, it became impossible to entice these professionals to go to war, as that meant forcing them to give up their only source of livelihood, exchanging certainty for uncertainty. From then on, those who went to war had to be supported by the general public. Improvements in the war effort required increasing industrial development, and soldiers were maintained by the efforts of all non-soldiers. In this way, the percentage of the community devoted to the war effort gradually decreased.

Until this stage of humanity's progress, we identify how the allocation of community members was happening over time. The increasing use of tools that facilitate human work enabled agricultural productivity to increase, allowing the same amount of food to be obtained with fewer hours of work. Due to this fact, people were progressively relocated to where they were most needed. In other words, fewer and fewer people were assigned to agricultural activities, and in turn, more and more people were concentrated on industrial activities.

At this point in the development of human society, Adam Smith once again alerted us to the essence of human behavior. With great mastery, the economist tells us the story of a boy who worked in a factory. The boy had direct intervention in the operation of one of the first steam engines designed by man. The child's intervention was limited to alternately opening and closing the communication between the boiler and the cylinder, as the piston rose or fell. The child wanted to play with his friends instead of being tied to that factory activity. At a certain point, the child realized that he could tie

a string, joining the handle of the valve that opened the communication between the boiler and the cylinder, causing the machine to start working without his help, and leaving him free to go and play with his friends. One of the most important inventions that human genius conceived for the improvement and development of the steam engine was the result of the desire of a boy who wanted to have time to play.

The evolution of how work efforts spread across society over time provides a clear understanding that work efforts change according to circumstances. Moreover, the above exposition outlines the increasing complexity of the level of cooperation required to maintain an industrial society in an orderly manner when compared with hunter-gatherer communities. Given the existence of numerous professional activities and the identification of human heterogeneity within the workforce, allocating each employee according to their highest talents is crucial to consolidate economic power and achieve economic success.

The stimulus to work

It is therefore clear why we work. We work to at least maintain, and desirably improve, our living conditions. However, life gets better if, and only if, the satisfaction we get from enjoying the outcome of our work effort is higher than the dissatisfaction we feel from expending energy in its production. The cost-benefit relationship drives individual decision-making and explains much of

how we work.

Our global society is well aware of the effects of exhaustion from excessive work. In the United States, the National Safety Council (NSC) is an institution dedicated to helping employers foster a culture of safety. It was founded in 1913 with the mission “to eliminate preventable deaths at work, in homes and communities, and on the road through leadership, research, education, and advocacy.”²⁰ NCS’s website offers a fatigue calculator by industry to help employers measure the potential extent of this problem. In 2024, when reviewing the institution’s most recent safety report, it was concluded that the productivity costs of fatigued workers range from \$1,200 to \$3,100 per employee annually. Despite the NSC’s primary focus on human safety, it has also been helpful to outline the effects of exhaustion on work performance.

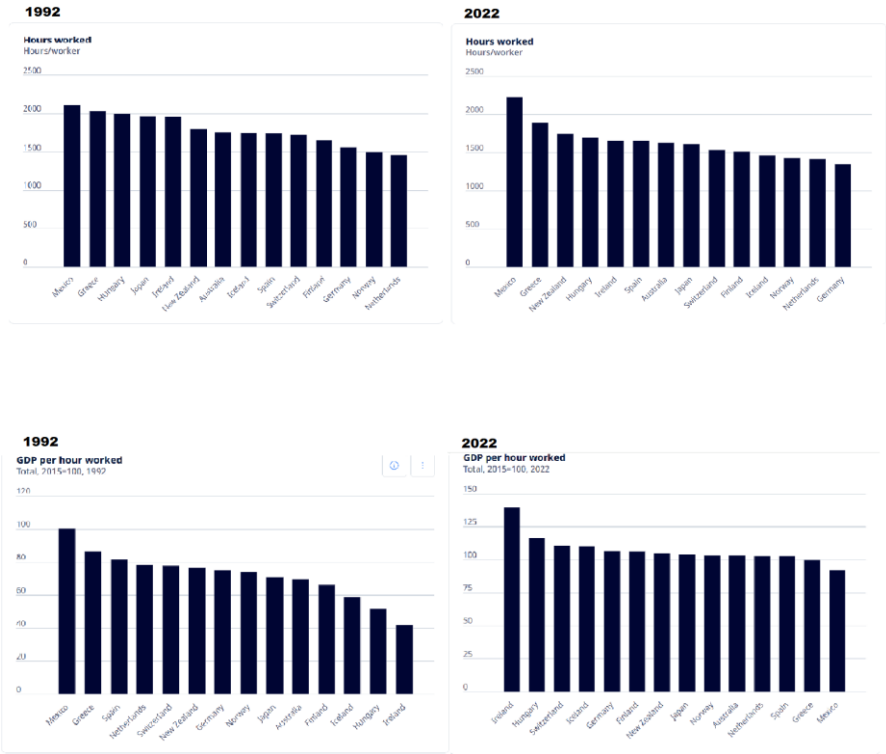
Regarding the development of economic power, addressing the unavoidable problem of workplace exhaustion becomes a determinant of how we work. It is plain that the most profitable individual activity a person can manage to reach is to be able to enjoy the goods and services produced by others without having to expend energy at all in the process. It is also clear that the highest level of overall welfare a society can achieve is conditioned by its ability to find the proper level of work effort that rests immediately before the point of exhaustion, that is, the working time that triggers fatigue problems in the workplace. To increase any society’s economic power, there is therefore an inverted U-shaped curve, departing from zero work efforts and rising until its pinnacle, after which working more jeopardizes overall welfare. The challenge is to

build a society capable of doing it.

The Organization for Economic Cooperation and Development (OECD) provides several data points that further elucidate this matter. From 1992 to 2022, the world's economies have shown disparate figures for the number of working hours and GDP (Gross Domestic Product) per hour worked. For instance, in 1992, the average number of working hours per worker in Ireland was 1,958. This number declined to 1,657 in 2022. In turn, in Mexico, the average number of working hours per worker increased from 2,104 in 1992 to 2,226 by 2022. Regarding GDP figures, during the same period, GDP per worked hour declined in Mexico (-7.8%) and rose significantly in Ireland (+233.4%). From 1992 to 2022, while Ireland managed to work less and produce more, Mexico's economy evolved in the opposite direction. Figure 1 shows some of this data regarding several countries.²¹

Mexico and Greece are two countries in the world where people work more hours but produce comparatively less valuable output per hour worked than many others. Conversely, Hungary, like Ireland, is another example of a country that managed to work fewer hours per person per year from 1992 to 2022, while increasing the value of output per hour worked. What is significant in these data is that, in OECD countries, the number of working hours has generally been trending down from 1992 to 2022, while GDP per hour worked has been gradually rising.

Figure 1. Average worked hours and GDP per worker



Source: www.oecd.org/en/data/indicators

The idea that working more is better for gaining economic power is accurate only when society starts from doing nothing up to a given level of working hours, after which the economic power of a society begins to diminish. This is an intuitive concept because, individually, we all feel the effects of fatigue on our self-productivity. Nevertheless, it is not easy to grasp the point where the benefit

acquired through the outcome of work efforts duly compensates the individual's energy expended in the process.

Since cooperative efforts are necessary to build an economy and consolidate power, the commitment of society members to the collective goal is crucial for success. However, this is often not the case when acting in a group.

In the late 1980s, several studies emerged in the academic literature highlighting the human tendency to reduce work efforts when part of a group.²² This behavior is denominated “social loafing.” The literature identifies several frameworks where different levels of social loafing are exhibited. The outcomes are explained by diverse perspectives, including cultural differences, the ability to link the output with the individual, the level of shared responsibility, and the existence or absence of group goals. Whether the decision-maker is taking on the role of an employer or an employee, in our modern society, they can all be affected by the behavior of individuals who can produce more in their work time but choose not to do so.

The existence of “social loafing” is a constraint on the exercise of economic power because it provides a widespread stimulus in society to reduce work efforts, even before an individual reaches their optimal point on the cost-benefit relationship of their work efforts, which is typically U-shaped. This behavior compromises economic development.

The practice of “social loafing” enables the person who does it to get a share of the total outcome reached by the entire society that is bigger than the proportionally fair share according to the person's contribution. If this results in a similar perception among those who

genuinely work hard, then it feels like a form of expropriation. And how much expropriation from your work efforts do you accept before reducing your commitment?

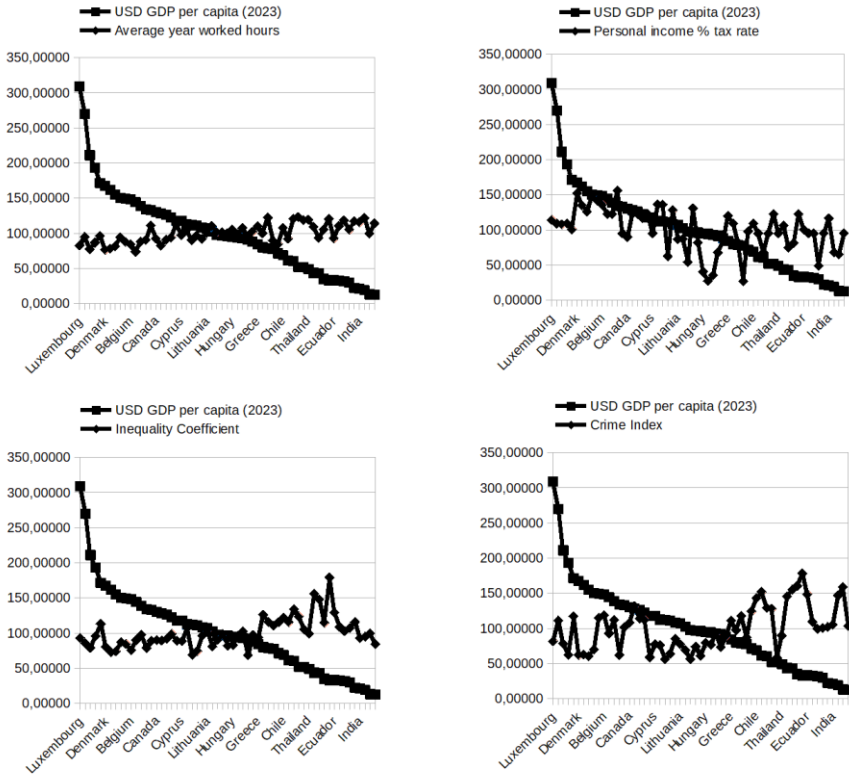
The incentive to work in a society depends on how it is organized to prevent expropriation. Inequality in the distribution of income is also a form of expropriation. Besides “social loafing,” taxation and robbery are two other forms of expropriating the outcomes of individual work efforts. All of the above directly contribute to diminishing a country’s economic power. Based on available data on average working hours per year, GDP per working hour, taxation, income inequality, and crime, it is evident that a negative relationship exists between these welfare indicators and the overall productivity of each country’s economy.

Figure 2 displays the relationships mentioned above.

The data was normalized by dividing each observation in the sample by the sample average. This way, each observation corresponds to its weight with the average of the 59 countries in the sample, and the disparate topics are all comparable under a notionally common scale. The 59 countries were chosen because data were available for them regarding all these indicators. In contrast, data were missing for the other countries in one or more of the statistics under analysis.

As usual, an economic statistic shows only a result related to past performance and is unable to explain how the outcome was produced.

Figure 2. GDP and other indicators of overall welfare



Source: Based on several databases available online.²³

It is worth mentioning that taxation is not always perceived as a source of expropriation and can be conceived as the price paid for buying a basket of products and services provided by the state. When this is the perception of society members, taxation does not compromise individual work efforts. Specifically, the average personal income tax rate in the Scandinavian countries — Sweden, Norway, Iceland, Denmark, and Finland — is 52 percent, while

these countries' GDP per capita averages USD 70,140. In these countries, the inequality coefficient averages 27.9 percent, and the average crime index is 31.8 percent. If we consider five countries in Latin America — Argentina, Brazil, Chile, Colombia, and Uruguay — their average personal income tax rate is 36 percent, while their average GDP per capita is USD 24,820. Their inequality coefficient averages 46.2 percent, and the five countries have an average criminal index of 60.4. Scandinavia and Latin America present two very different intersubjective realities, and only the detailed analysis of each case allows us to identify what thoroughly conditions each country's economic power. Nevertheless, these data are helpful to consolidate the perception of the negative relationship between individual work efforts and expropriation practices, and how this effect can translate into macroeconomic results.

The data table for each country is disclosed on the following pages.

Country	\$ GDP per capita (2023)	Average year worked hours	Personal income % tax rate	Inequality Coefficient	Crime Index
Luxembourg	132 400	1 519	42	32,7	34,3
Ireland	115 600	1 746	40	30,1	46,8
Norway	90 500	1 417	40	27,7	32,9
Switzerland	82 900	1 590	40	33,7	26,1
United States	73 600	1 765	37	39,8	49,2
Denmark	72 000	1 400	56	28,3	26,1
Netherlands	69 300	1 430	50	25,7	26,4

Country	\$ GDP per capita (2023)	Average year worked hours	Personal income % tax rate	Inequality Coefficient	Crime Index
Iceland	66 500	1 493	46	26,1	25,4
Austria	64 600	1 731	55	30,7	29,4
Sweden	64 200	1 609	52	29,8	48,3
Belgium	63 600	1 544	50	26,6	49,7
Germany	61 900	1 354	45	31,7	39,0
Australia	59 500	1 613	45	34,3	47,2
Finland	57 500	1 659	57	27,7	26,2
Malta	57 200	2 040	35	31,4	42,7
Canada	55 800	1 696	33	31,7	45,5
France	55 200	1 514	45	31,5	55,3
United Kingdom	54 100	1 670	45	32,4	47,8
Italy	52 700	1 723	43	34,8	47,1
South Korea	50 600	2 063	45	31,4	24,8
Cyprus	50 600	1 784	35	31,3	32,6
Israel	48 300	1 921	50	37,9	32,0
Slovenia	48 100	1 655	50	24,3	23,6
Czechia	47 700	1 776	23	26,2	26,8
Spain	46 400	1 687	47	33,9	35,8
Lithuania	46 200	1 844	32	36,7	32,5
Poland	44 100	2 029	32	28,5	29,1
Estonia	42 000	1 857	20	31,8	23,6
Portugal	41 700	1 863	48	34,6	31,2
Croatia	41 300	1 835	30	28,9	25,6
Hungary	40 600	1 937	15	29,2	33,3
Romania	40 500	1 806	10	33,9	32,3
Russia	39 800	1 974	13	36,0	38,9
Slovakia	39 300	1 745	25	24,1	30,8
Latvia	37 800	1 875	31	34,3	37,3

Country	\$ GDP per capita (2023)	Average year worked hours	Personal income % tax rate	Inequality Coefficient	Crime Index
Greece	36 300	2 017	44	32,9	46,5
Turkey	34 400	1 832	40	44,4	41,0
Malaysia	33 600	2 238	30	40,7	49,4
Bulgaria	33 300	1 644	10	39,0	36,6
Uruguay	30 700	1 552	36	40,6	52,1
Chile	29 500	1 974	40	43,0	60,1
Argentina	26 500	1 692	35	40,7	63,8
Costa Rica	25 800	2 212	25	47,2	54,2
Mexico	22 400	2 255	35	43,5	53,7
China	22 100	2 174	45	37,1	24,4
Thailand	21 100	2 185	35	34,9	37,8
Colombia	18 800	1 998	39	54,8	61,0
Brazil	18 600	1 709	28	52,0	65,1
Peru	15 100	1 932	30	40,3	67,3
South Africa	14 300	2 209	45	63,0	74,8
Ecuador	14 300	1 701	37	45,5	62,4
Indonesia	14 100	2 024	35	38,3	46,0
Vietnam	13 700	2 170	35	36,1	41,8
Sri Lanka	13 000	1 924	18	37,7	42,1
Philippines	9 700	2 149	35	40,7	43,0
India	9 200	2 117	43	32,8	44,3
Bangladesh	8 200	2 232	25	33,4	61,6
Nigeria	5 700	1 827	24	35,1	66,7
Pakistan	5 600	2 096	35	29,6	43,4

If you consider the possibility of emigrating from where you are, which countries would be potential targets for you? Answering the

question provides a clue on how the intersubjective reality presented by the economic environment conditions individual choices. However, in addition to deciding on the quantity of work effort committed, each person must also determine the direction of their work efforts. And, understanding where society's work efforts are channeled enables identifying the boosters and detractors of economic power.

The direction of work efforts

Work efforts are channeled to where they are perceived as presenting the highest cost-benefit relationship. In 2000, Professor Witold Henisz warned that people invest their resources in political activity when it is more profitable for them than economic activity. The economist has further outlined that, to society's members, the engagement in political ties is, at best, a zero-sum game.²⁴

Nevertheless, the existence of bribery and embezzlement is a worldwide reality. In our current global state of affairs, corruption activities can even be seen as the “*grease in the wheels*” that, for instance, allows those from outside Africa to invest there and contribute to economic development.²⁵ The search for a positive payoff is irrefutable, and the engagement in specific human activities is stimulated by the intersubjective reality that society manages to build and accept.

Apart from non-economic activities, Ethiopia presents a very enlightening example of how specific man-made intersubjective

realities channel efforts into a given direction.

Ethiopia is a country where typical features of communal land tenure are codified in the law. This carries specific effects on the country's ease to expropriate and/or reallocate resources to safeguard its population's overall welfare. The country has chosen to adopt a legal strategy of stating in its Constitution that "Ethiopian peasants have the right to obtain land without payment."²⁶ Moreover, the country has enacted several formal and informal regulations where the allocative control of the land is granted to either the state or the local community under a significant principle of "use it or lose it." Renting land and hiring labor occur within a legal framework, whereas land sales and mortgages are not permitted. Accordingly, this institutional environment severely hinders the transferability of land among economic agents. The Ethiopian authorities sought to secure overall welfare by minimizing the number of persons in a situation of enormous insecurity regarding their livelihood. These options were implemented within a specific socio-economic context in a country with limited public policy instruments to address population needs.

Under such a reality, it is interesting to note how the individuals' decision-making process is pushed to. The analysis examines the possibilities for working in the agricultural and non-agricultural sectors available to heterogeneous individuals, whether as employers or employees.²⁷ In 2006, Klaus Deininger and Songking Jin, in a fascinating academic paper, addressed the theme of tenure security and land-related investment in Ethiopia. The authors identified several motivational lines that channel work efforts into a given

direction.

First, combining the scarcity of labor in non-agricultural activities with a rule of law that demands the usufructuary of the land to “use it or lose it” presents a peculiar circumstance. This institutional environment leads low-skilled workers to choose the agricultural sector as their workplace. Suppose the individual risks moving to urban territories. In that case, that option severely jeopardizes their future because the uncertainty regarding what to do, how to do it, and how long they can engage in the non-agricultural activity is overwhelming. Hence, by staying in the non-urban territory, the individual knows that they are entitled to a small piece of land. The low-skilled individual is pushed to remain working in the agricultural sector, as it is the only way to ensure consistent subsistence.

Second, high-skilled land-poor farmers face difficulties in achieving higher productivity. These individuals want to expand their operations to more land, but that land is currently unavailable. On the one hand, the land is already granted to low-skilled workers. On the other hand, low-skilled farmers are hesitant to engage in rental operations due to the risk of losing their right to hold the land. Finally, the transferability of land is allowed only to immediate family members, and sharecropping is not an option. Hence, the land available for rent is scarce, and its rental cost inhibits the high-skilled worker’s best efforts.

Third, the “use it or lose it” principle stimulates investments aimed at increasing tenure security rather than higher productivity. Individuals are pushed to be farmers and to stay in agricultural

territories because, as outlined in 2003 by Klaus Deininger and Songqing Jin “*the ability to use land was contingent on proof of permanent physical residence.*”²⁸ Therefore, this stimulus acts as another barrier to increasing agricultural productivity.

Zimbabwe is another peculiar country for having adopted two different property regimes simultaneously. The dualist system of land tenure was implemented in two distinct regions of the country. The communal property regime of land tenure ruled the Southeastern Zimbabwe, in the former African Reserves, a territory now known as the Communal Area. The private property regime of land tenure, in turn, was implemented in the European-dominated “commercial” sector. The landscape was rigidly divided, and the separation between the regions provides us with an enhanced understanding of their mutual economic shortcomings. This situation is the outcome of historical events.

In the late eighteenth century, a colonialist movement emerged from South African territory and expanded north in search of fertile lands. This move settled a racial separation “*between lands held privately (by whites) and lands held under communal tenure (by Africans in the reserves)*”²⁹ and installed a dual property regime in the Zimbabwean territory. The process of expropriation led the natives of the Zimbabwe territory to lose control over their land and a significant portion of their labor. Cumulatively, this process also allocates low-skilled workers to arid lands and high-skilled workers to fertile lands, establishing a historical background whose socio-economic consequences persist to this day.

The Republic of Zimbabwe was established in 1980. Throughout

the 1980s, its annual real GDP growth averaged over 5 percent, and unlike other African countries, agricultural yields were sufficient to allow the country to export grain to other nations.³⁰ Moreover, the government also offered free education and relatively good access to medical care. This state of affairs changed by the year 2000 when the government initiated a land reform policy that involved the expropriation of white-owned commercial farms to redistribute this property to landless black natives, ostensibly.

From 2000 to 2003, the government decided to remedy the historical expropriation of fertile farmland made in the late eighteenth century by redistributing it to landless black people, thereby overruling the private property economic regime. Suddenly, the land became the government's property, and plots of fertile land could be leased to those who wished to exploit them. The measure left thousands of employed black farm workers without a job. Further negative consequences loom out: evicted farms dug up, sold or took the irrigation pipes; sophisticated farming equipment was looted, set on fire or stolen; and, as put by Craig Richardson, "*the people who replaced the commercial farmers lacked the knowledge of running a commercial farm, and many farms were simply left fallow or the wrong types of inputs were used.*"³¹ From 2000 to 2003, the Zimbabwean GDP lost 37 percent of its initial figure, and the Zimbabwean dollar lost more than 99 percent of its real exchange value. In 2003, inflation was running at a rate of 500 percent. While a period of drought occurred in the country during this time, the academic studies concluded that the rainfall shortage played a minimal role in the GDP contraction. The government

aimed to improve the living conditions of people living in the Communal Area, but failed.

As the link between the regimes of common and private property was broken, further negative economic consequences spread across the entire country. Due to the usual financial practice of lending against collateral, Zimbabwe's banks did not grant loans to the new farmers because they did not hold the required land. Meanwhile, the communal farmers' yields also fell precipitously. Hence, agricultural total output plunged. Cumulatively, the industrial production of several sectors recorded a two-digit reduction due to both the shortage of raw materials from the farming sector and the significant devaluation of the Zimbabwean dollar, which led to a substantial increase in the importing price of raw materials. The industrial sector saw seven hundred firms shut down by late 2001. Safeguarding overall welfare cannot be done by breaking the moorings between the two property regimes.

The interdependence between the two populations often escapes global heed.

By following the principle of distributing all available material resources among all members of the community, the leaders of the communal property regime perceived that each person's win is another person's loss. Ideally, the communal regime of property makes sure that everybody's wins are equivalent. However, by letting each person work independently, abandoned to their own skills and effort, the community misses the opportunity to reach higher production levels. By shielding the community from foreign knowledge, it further prevents future development. By precluding

cooperation regarding productive efforts, the community induces its members to avoid committing much of their ingenuity and talents to finding new solutions, for a portion of the outcomes of their efforts end up being expropriated. Hence, the entire community is caught in a “lose-lose” situation. In 1968, Garrett Hardin labeled the “tragedy of the commons” as the problem that emerges from the mismanagement of material resources due to the lack of individual incentives provided by this economic regime to care for the existing material resources.³²

The private property regime, in turn, is grounded on the assumption of a “win-lose” relationship. This assumption begins in the production process, where the landowner hires employees to assist with labor. The employer's mindset is that they are entitled to the entire production and will allocate a portion of it to the employees. Hence, the gain of the employee is immediately seen as the employer's loss. Additionally, the owner of the land perceives that they are engaging in a “win-lose” relationship with the other property owners, competing for the available resources, as individuals hold executive power only when they own the land. The output is sold to provide future purchasing power. Its selling price depends on the total available quantity of the produced good compared with its demand. For a given demand, the higher the productive capacity under control, the higher the unitary selling price the owner can ask. Hence, the owners are spurred to increase the extension of their properties, regardless of their intention for using those resources. By acting this way, each owner is contributing to the continuous decline in demand for their products while increasing

the number of unused resources. Again, the process leads the whole community into a “lose-lose” situation.

The “tragedy of private property” is a term used by R. Michael O’Flaherty to illustrate “*how a common resource can be squandered by the separation of a seamless ecosystem into discrete zones of management.*”³³ The way land is held is much more meaningful than the way land is owned. One of the shortcomings of the many studies on the merits of property rights enforcement in a given country is the lack of measuring the poorest person in the population. Indeed, GDP measures tell nothing about how well the poorest person lives in that country. Zimbabwe shows that, sooner rather than later, actions are taken to fulfill such needs. And yet again, they are not always designed to ensure overall welfare.

The above exposition on Zimbabwe’s recent history enables us to draw several important conclusions regarding the interaction between the communal property regime and the private property regime, and to highlight the direction of both sectors’ work efforts. The African reserves managed under the communal property regime provide the private property commercial side of the country with the labor force it needs to work the land. However, the output of the land is kept solely under the control of property owners, and its distribution disregards the needs of the people living in the African reserves. Michael O’Flaherty provides a clear and concise outline of the relationship between the two territories within Zimbabwe, focusing on the management of both human and material resources. The author’s exposition is quite eloquent.

“The ngosha (Quelea quelea) is a small but very numerous granivorous bird that sweeps over the sky in flocks like small clouds and descends on grain fields to feast. The ngosha is at the same time a very tasty bird that is an important source of protein, especially for young children who trap them in fields with deadfalls (mariya). The ngosha is viewed by the industrial irrigators to the south as a pest. By day the birds feed on the vast acreages of monocropped wheat in the irrigation estates as well as the small grains (varieties of millet and sorghum) that are still grown in economically significant volumes in drought-prone areas like Gudyanga. By night they roost along the densely wooded parts of the Save River in the Communal Areas. Given their numbers and mobility, the most effective control is to spray them at night when they are inactive and congregated in large numbers. To protect export commodities, the Save River is sprayed with a highly toxic and persistent organophosphate. The next morning a bounty of deadly birds can be gathered and, as one resident intimated to me, are even sold to unsuspecting residents of nearby urban locations. Although local residents professed knowledge of the dangers of collecting sprayed birds, it is questionable that all people, especially children, observed the warnings posted by the spraying companies.”³⁴

The correct exercise of economic power is not easy to grasp when overall welfare is the main goal to be reached. On the one hand, the supposedly modern, market-oriented economy of the fertile commercial lands, managed under a private property regime, enables the reach of higher levels of overall output. The focus on the

increased productivity of these lands persuades white farmers to act accordingly. The severe reduction of the number of available ngosha, regardless of their importance to feeding the people living in the Communal Area, constitutes evidence of the property owners' mindset. Moreover, we know that the output of this increased productivity will be distributed according to landowners' immediate interests alone. This process propels further similar actions by white farmers, as they fear being overtaken in their business by their competitors, other white farmers producing the same crops.

Ultimately, the socially healthy focus on productivity is smashed by a sick obsession with owning the entire production, while disrespecting humanity itself. On the other hand, the communal property regime condemns the whole population to live on their work efforts, according to the limited knowledge each person has to manage the available resources. Additionally, the land rights are negotiated through social identity. Either some members of the community or those who come from outside the community are excluded from local resources or, as posed by Michael O'Flaherty, are "*only able to gain secondary (nontransferable) rights to land through a full member of the resource holding-group – a husband or employer.*"³⁵ The author labels this practice as a process of "social fences," and it does not differ much from the private property regime in the sense that it relies on local leaders to decide on human and material resource allocation. However, the focus on increasing productivity based on a network of economic activity is entirely absent. Consequently, the population's living conditions under such an economic regime are dependent on their interaction with the

economies governed by the private property regime. The two realities “*worked not only within a single colonial economy but also within a unitary ecological and land-use system.*”³⁶

Context

The above exposition on the economies of Ethiopia and Zimbabwe demonstrates that a human regulatory system emerges in a given context while also contributing to the development of another context.

The communal regime of property regards some praiseworthy principles. First, everyone must be given equal opportunities. The regime attempts to achieve this goal by providing each person with a workable piece of land without requiring payment. Second, the available resources should be distributed appropriately across the entire population. In principle, no one is ever left behind. Third, there remains no piece of unmanaged land. The principle “use it or lose it” is designed to ensure that being entitled to the land is not enough. Finally, it has the merit of rewarding individuals according to their work efforts. Those who best work the land are the ones entitled to enjoy the fruits of their labor. Subsistence is achieved through work efforts. These strengths are under scrutiny when any alternative is a possibility.

In Zimbabwe, the African reserves managed under the communal property regime provide the private property commercial side of the country with the labor force it needs to work the land. The

interdependence that came from this relationship enabled the country to prosper from the foundation of the country's republic in 1980 until the beginning of the 21st century. This state of affairs was disrupted afterwards when the country resorted to governmental expropriation practices.

When humans raise a rule, they do it to fulfill a benevolent purpose, at least from the perspective of the ruler. However, the reality that is created when a given regulatory system is enacted is not straightforward, and its effects depend on the characteristics of the entire society. That is why both the context where rules are built and the context that rules create require the highest possible and continuous attention from whoever holds power.

A mundane and illuminating example comes from the trivial articulation between a military institution and a city official. This is an old story told in Portugal, particularly among the elderly. In a particular city, there was a military barracks whose entrance was permanently guarded by a soldier. Outside the barracks, the city had a public garden with a garden bench near the entrance to the military facility. One day, a city official was assigned to renew the paint on the garden benches and also painted the bench closest to the entrance to the barracks. The civil servant went to the guard on duty and asked him to call the officer on duty. When the officer on duty arrived, he was told that the bench had been freshly painted and that no one could sit there. The officer on duty told the guard that no one could sit on that bench in the garden and that he had to pass the word on to the soldier who was coming next to relieve him. From that moment on, even after the paint was dry, and for a long time, the

guard on duty prevented anyone from sitting on the garden's bench. Until someone asked why...

This example clearly outlines the ruler's benevolent intention in a given context and, regarding the goal of safeguarding overall welfare, how the rule was initially useful but later became perverse. The entire society needs to understand why a given set of rules is enacted and why it is appropriate according to the circumstances. To be both efficient and effective in its enforcement, the entire society needs to be aware of the new context that the rule is creating and be critical of the rule's contribution to society's well-being over time. We need to thoroughly understand why a given rule must be obeyed and systematically assess its adequacy.

One cannot disregard the circumstances that preside over every decision-maker. By 2001, the large majority of Ethiopia's population was characterized by facing significant labor market rationing, a high dependency on agricultural income, and a high level of illiteracy. The most educated person in a household had, on average, 5.18 years of schooling.³⁷ Accordingly, it cannot be expected that the country could quickly increase its overall productivity, for it was missing the material and human resources to do so. The deployment of a communal regime of property, as defined by the country's constitution, therefore made a great deal of sense.

However, the regime of communal property, regardless of its many forms and idiosyncrasies, always faces a tremendous difficulty in combining material and human resources to their full potential. This regulatory system is designed to evenly distribute heterogeneous material resources across heterogeneous individuals,

with little regard for both potential and skills. It focuses on dividing material resources among the population, whereas the distribution of the entire production needs to be taken care of. Moreover, it is designed to distribute material resources according to a membership principle. Access to those resources is being closed to the people who may come from outside the community. This weakness prevents community members from benefiting from the knowledge a stranger might bring. In this institutional environment, people have little incentive to devote time to educational activities. The population is induced to stay in the same territory, doing the same things, and with no meaningful prospects of future improvements. Consequently, illiteracy and unskilled workers are a burden that the country will bear for a long time. Productivity cannot be optimized under a regime of communal property.

The private property regime, in turn, allows for the allocation of human and material resources more effectively than is possible under the communal regime. Generally, while the communal property regime allocates a certain amount of material resources to each person, the private property regime allows employers and employees to use them freely. And, the productivity of a society that lets things be done is much greater than that of a society that orders people to do things. The private property regime is a regulatory system enacted to safeguard productivity. Still, it fails to establish an effective and efficient process for distributing output among all members of a society. Worldwide, where implemented, societies attempt to solve this problem by resorting to expropriation practices, such as taxation, and proceeding to an almost random distributive

effort. The private property regime induces human and material resources to be left unused, and, therefore, it is unable to be economically efficient.

Chapter summary

We work to either maintain or improve our living conditions. The human decision-making process regarding the commitment of work efforts depends on a cost-benefit evaluation that relates the amount of satisfaction gained from the work's outcome and the energy lost in its production. Hence, work efforts change according to circumstances.

It is intuitive to recognize that working less is often a good goal to pursue in cases of exhaustion, as it increases productivity. A bit less intuitive is recognizing that exposure to expropriation practices, such as robbery, taxation, or social loafing, also induces society to work less and might prevent it from reaching the optimal level of work effort. It is quite counterintuitive to realize that engaging in practices of bribery or forming political ties, rather than focusing on economic activity, actually detracts from economic development. Finally, the effects of the different regulatory systems in channeling work efforts into a given direction present a significant challenge to society because, often, the context triggered by the regulatory system, which although initially meant to be benign, ends up working perversely, for the adequacy of a rule might change according to circumstance, and no one is noting it.

Currently, worldwide, the communal property regime and the private property regime are acting simultaneously as boosters and detractors of economic development. When we analyze the welfare indicators of several countries, such as GDP per capita, annual number of working hours, personal income tax rate, inequality coefficient, and crime index, we realize that there is a multiplicity of economic outcomes regardless of the political regime that countries choose to privilege. Neither regime is sufficient to harness the economic power of a society to its full potential. It is essential to be aware of the intersubjective reality created by a regulatory system to control the situation effectively. Only then are work efforts directed to where they are most needed, and society is as productive as it can be.

CHAPTER 2

Productivity

What is productivity?

The Dictionary of the Portuguese Language defines productivity as the quality of what is productive. Therefore, productivity is a measure of an entity's ability to generate value for itself and others.

Human society has long recognized the concept of productivity. When human societies relied on hunting and gathering practices to survive, the creation of tools, such as traps and weapons, made it easy to capture prey in the wild, allowing the population to be more productive. In this circumstance, human creativity proves to be a significant determinant of economic productivity. When human societies began adopting pastoral practices, controlling society's food through the creation and management of herds of animals, such as sheep and goats, the fertility of the soil became a highly valued resource for the community. From that moment on, mankind became aware that the productivity of both material and human resources is crucial to safeguard overall welfare; therefore, productivity is a tremendously important concept for consolidating economic power.

Productivity, power, and value are distinct yet closely linked

concepts. On the one hand, as mentioned before, “power” means “to be able to”. On the other hand, the exercise of power only makes sense when it is intended to make the person feel good. Therefore, the exercise of power adds value to the decision-maker. An individual is productive when he or she can create value. If we extend these critical considerations to the whole society, it is not easy to understand what kind of value we are creating for ourselves. Which society was more productive: the society of Pisistratus or the society of Temudjin? Which society brought the most value to humanity?

Both societies engaged in large-scale cooperation to increase productivity. Pisistratus relied on trade to improve the living conditions of everyone. Besides exchanging among themselves their products and services, the outcome of the Athenians’ work efforts was exchanged for the goods produced abroad as well. Temudjin, in turn, assaulted nations to take possession of their belongings. He was an organizing genius who directed his creativity towards developing weapons, war techniques, and pushing his people to specialize in war practices. But he was unable to consolidate overall welfare. The society of Pisistratus brought more value to mankind.

Nevertheless, both societies demonstrate the contribution of human specialization to a given task, enabling them to reach higher levels of productivity. Temudjin focused on a very narrow goal: being effective in controlling every material resource available. Because the territory available was so huge, he specialized in both its conquest and maintaining its domain while sparsely devoting his attention to anything else. Regarding his goal of controlling material

resources, Temudjin's society was very productive and successful. Conversely, Pisistratus' society had to deal with a different reality, for the available resources were scarce. Increasing the productive capacity of economic activities, such as agriculture, ceramics, and the arts, to provide his people with welfare improvements required a distribution of the population across a significant number of disparate tasks. Just like in Temudjin's society, this effort at specialization also involved large-scale cooperation among Pisistratus's society members, but it further forced the ruler to focus on everybody's goals and interests, without leaving anyone behind.

Market dimension, specialization, and its limits

The contribution of large-scale cooperation to reach the highest possible level of productivity was insightfully highlighted by Adam Smith, in 1776. The author gives the example of a pin-maker that divide the whole range of tasks into several branches in which “(...) *one man draws out the wire; another straits it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head* (...)” and so on.³⁸ By specializing in a given task and coordinating the production of a pin through several men, the pin-maker increases significantly the final product quantities by the end of the day. Specialization occurs not only within a factory but also in society's realm.

The goal of specialization is to increase productivity to the highest possible level. However, to efficiently manage the available

resources, whether human or material, one must not produce more than what is required to fulfill the population's needs. In 1776, Adam Smith outlined one crucial caveat regarding the limits of the division of labor and specialization.³⁹ The author poses that the division of labor and specialization depend upon the dimension of the market. If the village is composed of a single family, a couple, and two little kids, they will have to prepare their meat, bread, sausages, and clothes, since they will not have anyone else to engage in an exchange process. Additionally, if the market is too small, being able to increase productivity significantly is not worth much to the pin-maker, as he will not be able to sell his surplus. Having a higher number of people available to engage in economic activities is advantageous for society. Hence, gathering the benefits brought by the processes of both division of labor and specialization finds boundaries in the dimension of the available market.

In 1817, David Ricardo highlighted a remarkably counterintuitive yet important notion regarding specialization. The author applies the concept of specialization to the commercial relationship between two countries. Considering that two goods are produced in two different countries, it is intuitive to understand that it is advantageous for them if each one specializes in the production that the country does best. However, it is not so intuitive to realize that specialization is also beneficial for both parties, even when one country produces the two goods more efficiently than the other.⁴⁰ The author explains that the country that best produces both products would still be better off if that country specializes in producing what it does comparatively better, leaving the other country to produce what the advanced

country does not produce comparatively so well. By specializing and engaging in international trade, both societies increase their overall production. This idea was further demonstrated by subsequent research.⁴¹ Even when testing different assumptions regarding production costs, the conclusion will always be a welfare improvement for both countries, where each country specializes in producing the good in which it has a comparative advantage.

The most important conclusion is that, through specialization, society can increase overall welfare even when assigning a productive function to someone who is not best suited for it. Hence, every human being has a valuable place where a contribution is welcome. We must coordinate ourselves in the most effective way possible.

The literature does not always clearly distinguish between the division of labor and specialization, and often treats both concepts as one. However, they are not the same thing. Productivity gains obtained through the process of division of labor are always possible wherever there are decreasing returns to scale in the production process, such as human fatigue. However, specialization has optimal limits according to the existence of complementarities between the tasks to be performed.⁴²

In 2010, Denis Görlich noted that workers often perform bundles of tasks, where bundling occurs when tasks are complements. In this specific situation, the division of labor leads to a productivity loss because complementary tasks are forced to be unbundled. The author outlines that workers increase self-productivity through inter-task learning, where, when performing a task, the individual applies

knowledge and experience acquired from performing other tasks. Consequently, there are circumstances where complementary tasks can be better performed by one worker than by multiple workers. For instance, when a worker is employed in a manual manufacturing industry, with tasks such as operating, monitoring machines, or repairing and reconstructing, he or she reaches higher productive levels by performing a bundle of tasks rather than only one. Nursing, treating, and healing others also constitute an example where the division of labor may result in a loss of productivity.

It is therefore undesirable to engage in practices of labor division and specialization when the production cost might rise as a result. Still, it is necessary to do so as long as the market dimension allows for producing a higher quantity of the good or service with minimal work effort. Otherwise, society is not being as productive as it can be, and economic power is compromised.

Opportunity cost

When the cost-benefit relationship underpins the decision-making process, it is not always easy for a society to determine the best course of action. Consequently, the correct exercise of economic power is at stake when wrong decisions give room to awful collective actions.

The absence of clairvoyance in the process can be easily illustrated by the behavior of two different groups of lions in the African savannah. In Africa, in a fertile territory, lived a pride of

twelve lions. After the rainy season, vegetation in the area became abundant, and with it came large herds of zebras that began to graze in that location. Thousands of zebras and other herbivores came to enjoy those lush green lands. Behind the herds of zebra came a pride of six lions from another part of the savannah. When this new group of six lions entered the territory, they found a local lioness who was alone and a few kilometers away from the rest of her group. The six lions from the foreign group killed the resident lioness as soon as they saw her. From then on, the two groups of lions lived in constant disarray, hunting among the immense herds of thousands of zebras that were available, but always subject to fights with lions belonging to another group than their own. The two groups together could have formed a community of eighteen lions that had thousands of zebras at their disposal, which could have lasted for eternity. Eighteen lions hunting in a group could choose the fattest, crunchiest, and most appetizing zebra they wanted. And no zebra would escape... Each hunt would be more productive and less tiring. They would feed at the desired time, had no failed hunts, and always chose the highest quality zebras. They would live in peace. The lions' inability to analyze the situation, combined with the difficulty in communicating effectively with one another, has resulted in a significant loss of opportunity regarding their overall welfare.

Being able to communicate is crucial to reaching higher levels of productivity. It is not possible to achieve large-scale cooperation unless a coordinated approach to acting is established throughout the entire society. And it requires that each society member knows exactly what to do and what outcome to expect from each of the

remaining individuals' actions, as they all depend on one another. Effective communication is at the core of a productive society.

Dependent relationships that require the highest possible level of social coordination necessitate a solid foundation of effective communication. The African continent constitutes an example of such a need. In Africa, before the colonial era, there were up to ten thousand different groups, which lived under disparate ethnic and linguistic varieties, each with its own self-government and customs.⁴³ These differences between cultures and ways of living pose an almost insurmountable barrier, seriously hindering communication between any one of those numerous groups. Accordingly, trust is hard to build among them, and increasing each tribe's welfare by assaulting others becomes an almost natural behavior. Achieving socioeconomic development in this social environment becomes a challenging endeavor, as society's potential productivity is severely compromised.

Types of productivity

When productivity is compromised, the entire society bears a cost. However, in our current global society, due to issues regarding the distribution of control over material resources across the whole population, we must consider the different notions of productivity held by various classes of individuals. Specifically, there is a remarkable separation between those who own the means of production, the employers, and those who "merely" contribute to the

production, the employees. This difference regarding the control of material resources gives rise to disparate notions of productivity.

Let us first consider the employer's case. The entrepreneur finds his or her activity productive if it allows him or her to generate a significant profit, which is the total income the person has control over. By producing something, the individual has created a use value equal to the cost of making the good, but intends to obtain an additional gain by exchanging it for a much higher value. The profit obtained from selling the product will allow him or her to purchase as many goods as possible produced by the other members of the community. To the entrepreneur, the more productive the individual, the greater the individual's capacity to be a monopolist in selling the product or service to society while paying as little as possible to the workforce that has contributed to the production of the goods or services.

Second, we have to consider the notion of productivity from the employee's perspective. The work efforts developed by the employee provide him with a salary. With this salary, the person will satisfy his or her consumption needs and, like Adam Smith's boy who tied the string between the boiler and the cylinder, this individual also aspires to have more free time for himself or herself. From the employee's perspective, his or her productivity is all the greater as the simultaneous amounts of salary and free time are at his or her disposal. It is essential to note that this feeling extends to the employer, who is always a self-employed individual.

Third, we identify the productivity of society. Society is productive when it is capable of generating the highest levels of

well-being for all, using the fewest resources possible. This means that society is productive when it produces as many goods and services as possible, at the lowest possible price, with the highest possible quality, and with people working as little time as necessary. This means that a society maximizes its productivity when it is at full employment permanently, for everybody is providing a meaningful contribution to the overall income.

The positive relationship between the level of employment and a country's productivity assumes significant importance in terms of economic power. This positive relationship presents a considerable challenge to any government, as the separation of views on productivity between employers and employees seems to escalate the exercise of economic power into a clash of social classes. And, understanding that this is not the case is often counterintuitive.

Employment and productivity

The idea that the market's dimension is crucial to achieving the highest levels of economic productivity is widely accepted. However, the dimension of the market is not only a determinant of the level of specialization that is possible to achieve in a given society, but also influences the level of new investments that those who control the material resources are likely to make. In 2008, Enrique Palazuelos and Rafael Fernández, studying labor productivity in European economies, found out that *“aggregate demand determines effective production and structurally conditions*

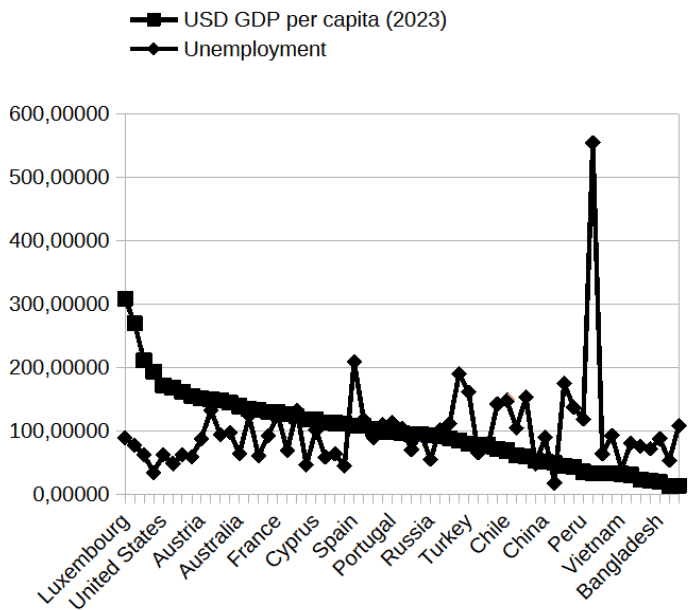
*the performance of productivity through three channels or effects: scaling, capitalization, and modernization.”*⁴⁴ This awareness poses the level of employment of a society as a determinant of both aggregate supply and aggregate demand.

Currently, and contrary to the requirements for building a robust economy, the world is not on a path to consolidate employment levels. In 2023, considering OECD countries, the average unemployment rate for people under 25 years old is 10.7 percent, or 2.6 times higher than the unemployment rate of the older active population, which is 4.1 percent. Considering the 27 countries composing the European Union, the figure of the average unemployment for under 25 years old rises to 14.9 percent, and reaches above 20 percent in countries such as Spain (28%), Italy (24.7%), Greece (23.7%), Sweden (21.7%), Portugal (20.8%), Slovakia (20.8%) and, quite near the 20 percent level, we find Luxembourg (19.3%)!

Figure 3 follows the methodology mentioned above, as shown in Figure 2, and applies to the same 59 world countries. The figure highlights the negative relationship between unemployment and GDP per capita.

Following the comparison by country regarding the unemployment rate by age groups, it is clear that humanity is being careless about the employment level in general, but particularly negligent regarding the levels of unemployment for people under 25 years old.

Figure 3. GDP per capita and unemployment



Source: Based on several databases available online.⁴⁵

Mankind’s economic power is in peril because society’s capacity to safeguard overall welfare and raise productivity to its optimal level is being disregarded. Moreover, there is no evidence that countries are engaging in conversations to mutually employ their populations, nor are there any rumors of such intentions at any of the leading global institutions, such as the United Nations, the OECD, the International Monetary Fund (IMF), or the World Bank. Governments and institutions are not working together efficiently to build stronger economies.

Country	\$ GDP per capita (2023)	Unempl. rate -25 years old (2023)	Unempl. rate +25 years old (2023)	Unempl. total (2023)
Australia	59 500	9.6	2.7	3.9
Austria	64 600	10.5	4.4	5.1
Belgium	63 600	17.5	4.3	5.6
Canada	55 800	11.6	4.8	5.8
Chile	29 500	21.6	7.8	8.8
Colombia	18 800	21.6	8.4	10.2
Costa Rica	25 800	22.4	5.6	7.7
Czechia	47 700	7.1	2.6	2.9
Denmark	72 000	14.0	3.9	5.4
Estonia	42 000	20.7	5.1	6.3
Finland	57 500	18.9	6.0	7.5
France	55 200	17.7	6.0	7.3
Germany	61 900	5.6	2.8	3.1
Greece	36 300	23.7	8.7	9.6
Hungary	40 600	13.5	3.4	4.1
Iceland	66 500	9.1	2.5	3.5
Ireland	115 600	12.5	3.6	4.8
Israel	48 300	6.5	2.9	3.1
Italy	52 700	24.7	6.7	7.8
Japan	46 300	3.8	2.4	2.5
South Korea	50 600	6.4	2.6	2.8
Latvia	37 800	13.9	5.9	6.5
Lithuania	46 200	13.3	5.9	6.5
Luxembourg	132 400	19.3	4.4	5.5
Mexico	22 400	5.4	2.1	2.7
Netherlands	69 300	8.4	2.5	3.6
Norway	90 500	11.1	2.4	3.6
Poland	44 100	10.5	2.3	2.8
Portugal	41 700	20.8	5.6	6.7

Country	\$ GDP per capita (2023)	Unempl. rate -25 years old (2023)	Unempl. rate +25 years old (2023)	Unempl. total (2023)
Slovakia	39 300	20.8	5.0	5.8
Slovenia	48 100	11.8	3.4	4.1
Spain	46 400	28.0	10.7	12.0
Sweden	64 200	21.7	6.1	7.9
Turkey	34 400	16.3	7.1	8.5
United Kingdom	54 100	12.7	3.1	4.3
United States	73 600	8.1	3.1	3.7

Chapter summary

Over the centuries, the sharing of knowledge has enabled us to evolve towards a state of increasing specialization in human activity. The simultaneity between ever-increasing levels of specialization and sharing of know-how meant that a smaller and smaller percentage of the population was able to dedicate itself to agriculture. At the same time, this was sufficient to ensure food for the entire community. First, it was possible to replace the hoe with the plow. Afterward, we managed to replace the plow with the tractor. In the same line of reasoning, to ensure that we have at our disposal the necessary material goods, it is now required to have a smaller and smaller proportion of people involved in industrial activity. In this way, the growing number of available people in the active population ends up dedicating themselves to service activities. The provision of services is the ultimate expression of the focus of economic activity on producing well-being for other members of

society, and the development of entertainment activities has become increasingly important. The construction of a prosperous society is based on the individual capacity that each human being has to put knowledge and talents at the service of the community. And that is what consolidates a society's productivity.

Market size assumes tremendous importance in consolidating overall welfare due to its contribution to increasing society's productivity. However, its ability to enable the expression of human creativity depends on the number of people engaged in the production of goods and services, as well as how each person is suited for their respective function. Regardless of the point of view used to conceptualize what is meaningful productivity, the quantity and quality of employment are intertwined to boost human welfare.

The quantity of employment that a society makes available to its members is therefore a determinant of economic power. It is impossible to secure a highly productive society if some of its members are consistently unemployed. Moreover, an individual cannot be productive when the material resources required to produce a good or service efficiently are absent. The available resources always bind firms, and different firm sizes necessarily define different societies' productivity levels. Society is often missing a solid understanding of what is within its power to control firm size.

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CHAPTER 3

Firm size

Why is firm size so important to define a society's economic power?

In 2024, the Fortune Global 500, which reports on the world's largest 500 companies for the year 2023, announced that these firms had aggregate revenues of USD 41 trillion. This figure was in line with the 2022 weight of these firms in the world's GDP. The magazine highlights that the most representative country is the United States, with 139 companies in the list, followed closely by China, with 133 companies. Nevertheless, the world's most profitable company in 2023 was Saudi Aramco with a profit of USD 121 billion.⁴⁶ In 2023, these 500 firms accounted for 41percent of the world's GDP and were employing 70,602,308 persons, a number slightly below the population of Thailand. In GDP terms, these firms control more resources than any country alone. Firm size plays a significant role in understanding a society's economic power.

One of the most prominent features of a firm is its ability to employ persons in highly productive sectors while exhibiting stability in doing so. Following, the Fortune Global 500 list is

presented, which allows us to identify the number of years each firm has been on this list. The average permanence of a firm is 18.71 years, underscoring the importance of these corporations in safeguarding overall welfare on a global scale.

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Walmart	648,125.0	15,511.0	2,100,000	30
Amazon	574,785.0	30,425.0	1,525,000	16
State Grid	545,947.5	9,204.3	1,361,423	24
Saudi Aramco	494,890.1	120,699.3	73,311	6
Sinopec Group	429,699.7	9,393.4	513,434	26
China N. Petroleum	421,713.6	21,294.7	1,026,301	24
Apple	383,285.0	96,995.0	161,000	22
UnitedHealth Gr.	371,622.0	22,381.0	440,000	28
Berkshire Hathaway	364,482.0	96,223.0	396,500	28
CVS Health	357,776.0	8,344.0	259,500	29
Volkswagen	348,408.1	17,944.5	684,025	30
Exxon Mobil	344,582.0	36,010.0	61,500	30
Shell	323,183.0	19,359.0	103,000	30
China State Construction Eng.	320,430.5	4,371.5	382,894	13
Toyota Motor	312,018.2	34,214.4	380,793	30
McKesson	308,951.0	3,002.0	48,000	30
Alphabet	307,394.0	73,795.0	182,502	16
Cencora	262,173.4	1,745.3	44,000	25
Trafigura Group	244,280.2	7,393.2	12,479	10
Costco Wholesale	242,290.0	6,292.0	316,000	30
JPMorgan Chase	239,425.0	49,552.0	309,926	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Industrial & Comm. Bank of China	222,484.2	51,417.0	419,252	26
TotalEnergies	218,495.0	21,384.0	102,579	30
Glencore	217,829.0	4,280.0	83,426	14
BP	213,032.0	15,239.0	79,400	30
Microsoft	211,915.0	72,361.0	221,000	27
Cardinal Health	205,012.0	261.0	47,520	27
Stellantis	204,908.3	20,103.4	258,275	19
Chevron	200,949.0	21,369.0	45,600	30
China Constr. Bank	199,826.1	46,990.0	376,871	25
Samsung Electr.	198,256.7	11,081.7	267,860	30
Hon Hai Precision	197,876.0	4,562.9	621,393	20
Cigna	195,265.0	5,164.0	71,413	29
Agricultural Bank of China	192,398.3	38,048.7	451,003	25
China Railway E. G.	178,562.9	2,152.5	314,149	10
Ford Motor	176,191.0	4,347.0	177,000	30
Bank of China	172,327.6	32,758.3	306,931	30
Bank of America	171,912.0	26,515.0	212,985	30
General Motors	171,842.0	10,127.0	163,000	30
Elevance Health	171,340.0	5,987.0	104,900	23
BMW Group	168,102.6	12,205.2	154,950	30
Mercedes-Benz Gr.	165,637.8	15,417.0	166,056	30
China Railway Con.	160,847.4	1,701.0	336,433	13
China Baowu Steel	157,216.3	2,493.8	258,697	21
Citigroup	156,820.0	9,228.0	237,925	30
Centene	153,999.0	2,702.0	67,700	9
JD.com	153,217.4	3,413.8	517,124	9
Home Depot	152,669.0	15,143.0	463,100	30
Electricité de France	151,040.2	10,827.9	171,862	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Marathon Petrol.	150,307.0	9,681.0	18,200	13
Kroger	150,039.0	2,164.0	414,000	30
Phillips 66	149,890.0	7,015.0	14,000	12
Ping An Insurance	145,759.1	12,100.9	288,751	15
Sinochem Holdings	143,240.0	-3,666.0	203,727	3
China Mobile Com.	142,832.4	15,253.4	453,394	24
China National Offshore Oil	141,731.8	14,559.2	82,560	18
Honda Motor	141,348.5	7,660.6	194,993	30
Fannie Mae	141,240.0	17,408.0	8,100	27
China Life Insur.	139,615.9	-841.2	176,625	22
Walgreens Boots Al.	139,081.0	-3,080.0	268,500	30
Valero Energy	139,001.0	8,835.0	9,897	24
Banco Santander	137,244.8	11,973.8	207,206	30
China Comm. Construction	136,670.7	1,672.3	219,034	17
BNP Paribas	136,076.2	11,864.6	182,656	30
Mitsubishi	135,389.8	6,670.2	80,037	30
Meta Platforms	134,902.0	39,098.0	67,317	8
HSBC Holdings	134,901.0	23,533.0	220,861	30
Verizon Commun.	133,974.0	11,614.0	105,400	30
China Minmetals	132,019.7	766.0	175,524	18
Alibaba Group	131,337.9	11,165.1	204,891	8
CITIC Group	131,242.3	4,124.6	213,290	16
China Resources	126,169.5	3,797.5	394,112	15
Hyundai Motor	124,576.7	9,158.6	73,502	29
AT & T	122,428.0	14,400.0	150,470	30
Shandong Energy	122,383.2	829.6	214,409	7
Comcast	121,572.0	15,388.0	186,000	22
Deutsche Telecom	121,046.2	19,229.9	199,652	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
China Southern Power Grid	118,813.5	2,342.2	268,471	20
Uniper	116,662.5	6,819.3	6,863	6
Wells Fargo	115,340.0	19,142.0	226,000	27
Hengli Group	114,664.5	980.8	173,250	8
Allianz	113,517.7	9,233.3	157,883	30
China Post Group	112,778.5	5,884.5	728,776	14
China Energy Investment	112,048.7	6,339.1	309,037	15
Xiamen C&D	110,665.6	1,057.6	62,740	8
Reliance Industries	108,877.9	8,412.5	347,000	21
Goldman Sachs Gr.	108,418.0	8,516.0	45,300	25
Freddie Mac	108,050.0	10,538.0	8,020	28
Rosneft Oil	107,543.1	14,870.4	323,900	18
Target	107,412.0	4,138.0	415,000	30
Equinor	107,174.0	11,885.0	23,449	30
Humana	106,374.0	2,489.0	67,600	26
SAIC Motor	105,195.7	1,992.6	149,505	13
State Farm Insurance	104,198.6	-6,272.3	65,054	30
Life Insurance Corp. of India	103,547.6	4,944.0	98,463	3
Nestlé	103,505.2	12,475.4	270,000	30
Enel	103,311.4	3,716.7	61,055	30
ENI	102,501.7	5,157.7	33,142	30
Petrobras	102,409.0	24,884.0	46,730	30
SK	101,968.8	-594.8	114,950	9
E.ON	101,280.1	558.9	72,242	30
Gazprom	100,252.5	-7,383.4	492,200	28
Huawei Inv. Hold.	99,470.3	12,274.4	207,000	15
Société Générale	99,163.4	2,695.1	124,089	28
Bosch Group	99,020.7	2,271.3	419,416	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
COFCO	97,765.1	1,270.3	111,630	30
Itochu	97,074.1	5,547.5	136,334	30
PowerChina	97,034.9	775.9	184,567	13
Pemex	96,978.8	457.1	128,616	30
Tesla	96,773.0	14,997.0	140,473	4
Morgan Stanley	96,194.0	9,087.0	80,006	27
Sinopharm	96,072.2	1,149.5	202,426	12
Brookfield	95,924.0	1,130.0	240,000	8
Royal Ahold Delhaize	95,834.8	2,025.9	232,000	30
Johnson & Johnson	95,195.0	35,153.0	131,900	24
Indian Oil	94,273.0	5,042.3	31,942	30
Archer Daniels M.	93,935.0	3,483.0	41,008	30
Crédit Agricole	93,358.1	6,862.6	75,125	30
Christian Dior	93,136.5	6,815.0	197,141	24
Nippon Telegraph	92,539.7	8,853.1	338,467	30
Mitsui	92,196.4	7,359.7	53,602	30
Carrefour	91,790.6	1,793.5	305,333	30
Pepsico	91,471.0	9,074.0	318,000	30
United Parcel Serv.	90,958.0	6,708.0	382,550	30
PTT	90,418.7	3,221.1	30,772	21
AXA	90,405.8	7,771.7	94,705	30
FedEx	90,155.0	3,972.0	423,228	30
Sony	90,091.8	6,715.5	113,000	30
China FAW Group	89,485.0	2,864.2	119,658	20
Engie	89,257.7	2,387.0	97,297	29
Walt Disney	88,898.0	2,354.0	199,125	30
Orlen	88,717.6	4,921.8	66,554	16
Dell Technologies	88,425.0	3,211.0	120,000	24
DHL Group	88,385.3	3,975.1	551,233	30
China Telecomm.	87,961.5	2,150.8	391,691	25

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Nissan Motor	87,773.5	2,952.0	141,855	30
Royal Bank of Canada	87,498.7	11,019.0	91,398	30
Zhejiang Rongsheng H. G.	86,535.6	74.6	23,373	4
Lowe's	86,377.0	7,726.0	226,000	27
Tesco	86,231.3	1,486.9	225,659	30
Tencent Holdings	86,028.3	16,275.2	105,417	8
Xiamen ITH H. G.	85,818.8	178.9	34,289	8
BYD	85,082.0	4,243.5	703,504	3
Nippon Life Insur.	83,090.0	2,584.0	85,740	30
Siemens	82,931.9	8,476.7	320,000	30
Japan Post Holdings	82,905.5	1,859.1	221,387	28
Aviation Ind. Corp. of China	82,654.1	1,644.1	384,000	16
Mitsubishi UFJ F. G.	82,270.3	10,314.8	145,412	23
Procter & Gamble	82,006.0	14,653.0	107,000	30
Wuchan Zhongda G	81,952.4	510.9	26,354	14
Seven & I Holdings	80,124.6	1,568.9	117,540	19
Albertsons	79,237.7	1,296.0	196,650	20
ENEOS Holdings	79,020.5	1,993.5	50,269	30
Bank of Communic.	78,757.1	13,098.6	94,275	16
Energy Transfer	78,586.0	3,935.0	13,786	11
U.S. Postal Service	78,383.0	-6,478.0	582,781	30
Jiangxi Copper	78,243.2	371.2	32,746	12
People's Insurance Co. of China	78,181.7	3,153.2	175,881	15
Boeing	77,794.0	-2,222.0	171,000	30
China North Ind. G.	76,506.9	1,933.0	216,528	15
Pacific Construction	76,433.0	5,035.3	293,125	11
Kia	76,419.4	6,720.2	52,871	13

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Sysco	76,324.7	1,770.1	71,750	30
Dai-ichi Life Hold.	76,304.8	2,219.4	59,495	30
Pertamina	75,787.8	4,441.4	40,415	11
Vinci	75,550.9	5,083.1	279,426	24
Petronas	75,409.6	16,320.1	54,105	28
Toronto-Dominion Bank	75,063.3	7,995.6	103,257	25
Lukoil	75,012.8	13,551.9	107,596	24
Shaanxi Coal & C. I.	74,776.7	1,113.7	140,142	10
Shenghong H. G.	74,700.8	548.5	56,863	5
BASF	74,487.2	243.2	111,991	30
China Poly Group	73,998.5	988.2	102,834	10
Groupe BPCE	73,774.7	3,031.3	97,835	15
Shandong Weiqiao Pioneering Group	73,484.5	1,192.3	97,281	13
JBS	72,863.2	-212.5	272,565	15
Alimentation Couche- Tard	71,856.7	3,090.9	128,000	11
State Bank of India	71,844.0	8,106.0	232,296	19
China Merchants Bank	71,514.6	20,708.7	116,529	13
Oil & Natural Gas	71,466.1	5,947.6	36,549	18
Guangzhou Auto IG	71,386.1	345.4	110,847	12
UBS Group	71,245.0	27,849.0	112,842	30
Airbus	70,751.0	4,096.1	147,893	30
Toyota Tsusho	70,498.4	2,293.3	69,517	16
Zhejiang Geely H.G.	70,356.8	812.6	143,994	13
Taiwan Semiconductor M.	69,415.8	27,350.4	76,478	10
XMXYG	69,286.9	14.5	33,214	7
RTX	68,920.0	3,195.0	185,000	30
Itau Unibanco Hold.	68,455.0	6,630.1	95,702	11
ArcelorMittal	68,275.0	919.0	126,756	20

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
General Electric	67,954.0	9,481.0	125,000	30
Beijing Auto Group	67,852.2	328.1	90,000	12
Lockheed Martin	67,571.0	6,920.0	122,000	30
Koç Holding	67,482.7	3,037.6	119,306	23
American Express	67,364.0	8,374.0	74,600	30
Hitachi	67,313.8	4,081.5	268,655	30
Roche Group	67,269.8	12,791.1	103,605	30
Wilmar Internation.	67,155.3	1,524.8	114,123	16
Caterpillar	67,060.0	10,335.0	113,200	30
Banco Bilbao Vizcaya Argentaria	66,978.1	8,669.0	121,486	30
Korea Electric P.	66,977.2	-3,692.4	48,696	30
MetLife	66,905.0	1,578.0	45,000	30
AEON	66,727.0	312.2	381,084	30
Lloyds Banking Gr.	66,697.6	6,785.7	62,569	29
Deutsche Bank	65,978.1	6,845.3	90,130	30
China Vanke	65,789.5	1,718.1	131,097	9
HCA Healthcare	64,968.0	5,242.0	265,000	30
Sumitomo Mitsui F	64,718.3	6,662.7	120,373	30
LG Eletronics	64,490.5	545.8	74,000	24
Unilever	64,435.5	7,012.8	128,377	30
Accenture	64,111.8	6,871.6	732,819	23
Barclays	63,800.6	6,535.9	92,400	30
Jinneng Holding G.	63,639.8	993.6	439,051	12
Aluminum Corp. of China	63,595.4	876.5	124,995	17
Munich Re Group	63,353.3	4,979.4	42,812	30
Sberbank	63,329.9	17,743.5	210,753	17
Banco do Brasil	63,322.2	5,980.4	86,220	30
The Progressive Corp.	62,108.5	3,902.4	61,432	11

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
IBM	61,860.0	7,502.0	296,600	30
Nippon Steel Corp.	61,359.1	3,801.2	121,236	30
Deere	61,251.0	10,166.0	82,956	30
Nvidia	60,922.0	29,760.0	29,600	1
StoneX Group	60,856.1	238.5	4,137	14
Zurich Insurance G.	60,645.0	4,351.0	59,593	30
Bouygues	60,599.9	1,124.3	201,498	30
Mizuho Financial G.	60,503.6	4,698.0	52,307	24
Daimler Truck H.	60,420.4	4,081.0	102,946	2
ING Group	60,401.0	4,475.6	59,434	30
Merck	60,115.0	365.0	71,000	30
Bunge	59,540.0	2,243.0	23,000	22
Anheuser-Busch InBev	59,380.0	5,341.0	154,540	19
Industrial Bank	59,152.3	10,893.3	66,569	12
POSCO Holdings	58,999.2	1,300.3	44,501	30
Panasonic Holdings	58,787.4	3,072.0	228,420	30
ConocoPhillips	58,574.0	10,957.0	9,900	29
Pfizer	58,496.0	2,119.0	88,000	30
Delta Air Lines	58,048.0	4,609.0	103,000	29
China Huaneng Gr.	57,890.8	1,632.1	124,623	16
China Energy Eng.G	57,708.1	600.0	119,182	11
Dongfeng Motor	57,595.9	-391.6	122,658	15
TD Synnex	57,555.4	626.9	28,000	4
Publix Super Markets	57,534.0	4,349.0	253,000	30
Zhejiang Henjyi Gr.	57,468.0	23.5	22,417	4
Allstate	57,094.0	-188.0	53,200	29
Assicurazioni Generali	57,022.6	4,050.7	81,879	30
Cisco Systems	56,998.0	12,613.0	84,900	25
Repsol	56,980.5	3,424.8	23,943	30
Lenovo Group	56,863.8	1,010.5	69,500	15

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
HBIS Group	56,728.3	23.7	97,802	16
Contemporary Amperex Techn.	56,632.8	6,232.5	116,055	2
Renault	56,621.6	2,376.2	105,497	30
Banco Bradesco	56,490.5	2,854.2	79,583	28
China Electronics	56,083.8	2,563.0	241,097	9
Nationwide	54,609.4	-45.2	24,118	30
Charter Communic.	54,607.0	4,557.0	101,100	8
State Power Invest.	54,484.6	1,615.9	127,514	13
Edeka Zentrale	54,454.6	461.7	410,700	26
Bharat Petroleum	54,413.1	3,245.4	8,511	21
AbbVie	54,318.0	4,863.0	50,000	9
New York Life Ins.	54,317.2	804.6	15,384	30
Intel	54,228.0	1,689.0	124,800	30
TJX	54,217.0	4,474.0	349,000	23
Novartis	54,088.0	14,850.0	76,057	30
Rio Tinto Group	54,041.0	10,058.0	57,174	19
Tsingshan H. G.	53,980.0	1,554.2	107,805	6
Prudential Financial	53,979.0	2,488.0	40,366	30
COSCO Shipping	53,929.6	3,584.4	106,221	17
BHP Group	53,817.0	12,921.0	42,319	30
HP	53,718.0	3,263.0	58,000	30
United Airlines H.	53,717.0	2,618.0	103,300	27
Tata Motors	53,634.9	3,794.0	91,496	15
Performance Food	53,354.7	397.2	34,825	4
Iberdrola	53,334.1	5,192.3	41,448	20
Deutsche Bahn	53,197.9	-2,566.4	326,781	30
Idemitsu Kosan	53,042.6	1,581.1	16,571	30
Tyson Foods	52,881.0	-648.0	139,000	23
Midea Group	52,789.6	4,763.2	198,613	9

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
American Airlines	52,788.0	822.0	132,100	29
China United Network Commun.	52,632.3	1,154.5	242,891	16
Liberty Mutual Ins.	52,612.0	213.0	45,000	30
Bank of Nova Scotia	52,535.8	5,495.0	89,483	27
Volvo	52,101.5	4,696.3	97,440	30
Intesa Sanpaolo	52,004.4	8,350.1	94,368	26
Saint-Gobain	51,830.3	2,917.8	144,422	30
Shaanxi Yanchang Petroleum Group	51,525.9	997.3	130,427	12
Bayer	51,498.4	-3,179.4	99,723	30
Tokio Marine Hold.	51,371.9	4,814.4	43,870	30
Nike	51,217.0	5,070.0	83,700	18
Maersk Group	51,065.0	3,822.0	105,909	21
Phoenix Pharma	50,934.9	234.6	41,276	14
Greenland H. G.	50,897.0	-1,349.9	59,970	13
Shangai Pudong Development Bank	50,864.5	5,184.5	63,582	12
Louis Dreyfus	50,624.0	234.6	41,276	14
Bank of Montreal	50,495.0	3,237.0	55,767	14
ZF Friedrichshafen	50,406.6	-33.5	165,938	11
KB Financial Group	50,228.4	3,546.5	25,003	12
Sanofi	50,208.7	5,837.7	86,088	20
Marubeni	50,166.4	3,261.7	53,804	30
Oracle	49,954.0	8,503.0	164,000	18
Jinchuan Group	49,900.7	1,359.5	31,025	6
Swiss Re	49,800.0	3,214.0	14,719	30
Chubb	49,735.0	9,028.0	40,000	8
Enterprise Products	49,715.0	5,532.0	7,500	14
Capital One Financ.	49,484.0	4,887.0	51,987	14
Denso	49,435.0	2,164.2	162,029	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
HDFC Bank	49,299.1	7,740.8	213,527	1
China National Building Material G.	49,088.8	198.2	206,518	14
Veolia Environnem.	49,027.1	1,013.0	218,288	22
China State Shipbuilding	48,890.1	2,408.4	196,309	4
Vodafone Group	48,871.9	1,236.2	96,282	25
Plains GP Holdings	48,712.0	198.0	4,200	9
Landesbank Baden- Württemberg	48,566.6	1,080.0	10,434	17
EXOR Group	48,368.8	4,534.0	83,773	14
Jingye Group	48,120.0	248.9	33,000	4
UniCredit Group	48,044.4	10,277.6	70,752	27
Energie Baden- Württemberg	48,032.2	1,662.2	26,943	14
Tokyo Electric Power	47,868.9	1,853.3	38,183	30
Sumitomo	47,812.9	2,673.2	79,692	30
World Kinect	47,710.6	52.9	5,289	12
Orange	47,698.5	2,637.8	127,109	30
HD Hyundai	46,959.0	202.5	34,097	2
Ingka Group	46,938.0	1,596.7	165,353	4
ANZ Gr. Holdings	46,827.7	4,724.0	40,342	17
AIG	46,802.0	3,643.0	25,200	29
SoftBank Group	46,748.8	-1,575.1	65,352	17
Sinomach	46,482.2	181.6	117,357	14
Talanx	46,155.8	1,709.2	27,863	11
America Movil	46,010.9	4,291.5	176,083	18
AstraZeneca	45,811.0	5,955.0	89,900	23
Zhejiang Comm. I. G.	45,772.0	763.6	43,266	4
China Pacific Insur. G	45,759.9	3,850.3	98,732	14
Coca-Cola	45,754.0	10,714.0	79,100	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Caixa Economica Federal	45,706.8	2,349.7	86,962	4
CHS	45,590.0	1,900.4	10,609	17
China Huadian	45,534.1	1,909.5	93,459	13
Crédit Mutuel Group	45,489.9	4,261.5	77,283	1
MS&AD Insurance G	45,478.4	2,555.0	38,391	26
Hyundai Mobis	45,368.7	2,620.6	46,183	13
Susun Construction	45,265.4	1,142.0	141,256	3
SNCF Group	45,145.0	1,416.2	282,786	30
Bristol-Myers Squibb	45,006.0	8,025.0	34,100	21
China South Industr.	44,790.2	1,136.8	159,837	15
Continental	44,778.0	1,250.1	202,763	22
Raizen	44,694.1	105.6	45,417	3
Dow	44,622.0	589.0	35,900	5
George Weston	44,559.6	1,141.3	220,280	30
L'Oréal	44,520.7	6,685.3	94,605	30
Fomento Economico Mexicano	44,167.9	3,703.9	392,932	5
Telefónica	43,947.2	-964.3	104,142	30
China Minsheng Banking	43,553.6	5,060.3	63,742	12
Best Buy	43,452.0	1,241.0	85,000	26
Woolworths Group	43,256.8	1,088.6	200,364	28
Shangai Construction	43,031.1	220.1	51,272	5
LG Chem	42,921.6	1,024.3	40,000	5
Thermo Fisher Scient.	42,857.0	5,995.0	122,000	5
Magna International	42,797.0	1,213.0	166,000	24
OMV Group	42,661.8	1,677.8	20,592	16
Massachussets Life I.	42,641.4	-771.6	11,323	27
USAA	42,493.4	1,213.5	37,376	11

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Guangzhou Municipal Constr. G.	42,403.2	152.0	50,608	4
General Dynamics	42,272	3,315.0	111,600	24
Vale	41,784.0	7,983.0	66,807	18
Zijin Mining Group	41,445.6	2,983.3	55,239	4
Travelers	41,364.0	2,991.0	33,133	21
Warner Bros. Discovery	41,321.0	-3,126.0	35,300	2
Canadian Imperial Bank of Commerce	41,169.8	3,704.2	48,074	15
LyondellBasell Ind.	41,107.0	2,114.0	20,000	17
J. Sainsbury	41,088.4	172.1	100,000	30
Shenzhen Invest. H.	41,025.2	1,412.5	103,928	5
Ansteel Group	40,684.6	-83.1	149,765	11
Hanwha	40,683.2	291.3	69,345	19
U.S. Bancorp	40,624.0	5,429.0	75,465	17
Lufthansa Group	40,455.4	1,808.6	79,759	28
Pegatron	40,356.8	504.6	147,360	12
Abbott Laboratories	40,109.0	5,723.0	114,000	26
ThyssenKrupp	40,027.9	-2,209.6	99,981	30
New Hope H. G.	39,988.0	-93.0	79,066	4
KDDI	39,812.7	4,413.5	61,288	27
China National Nuclear	39,632.5	1,297.4	182,750	5
Taikang Insurance G	39,411.6	1,786.1	55,408	7
Northrop Grumman	39,290.0	2,056.0	101,000	25
Jiangsu Shagang G.	39,241.3	227.7	44,004	16
Meituan	39,092.5	1,957.3	114,860	2
Chery Holding Gr.	39,091.7	585.7	56,584	1
Inditex	38,903.0	5,823.5	114,510	8
Schneider Electric	38,812.2	4,327.5	168,044	23
Northwestern Mutual	38,788.1	711.4	8,239	30

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Dollar General	38,691.6	1,661.3	185,800	7
Cenovus Energy	38,689.8	3,045.3	6,925	3
ACS	38,634.6	843.4	122,979	20
Coop Group	38,582.7	640.0	82,983	15
Fairfax Financial H.	38,417.2	4,381.8	51,044	1
Guangzhou Industrial Invest. H.	38,345.2	150.7	88,440	2
PBF Energy	38,324.8	2,140.5	3,776	3
Standard Chartered	38,292.0	3,469.0	84,958	10
Xiaomi	38,276.8	2,468.5	33,627	6
Compass Group	38,004.7	1,609.5	562,460	22
Meiji Yasuda Life Insurance	37,897.4	1,062.3	47,140	30
GSK	37,691.8	6,124.5	70,212	30
Suncor Energy	37,609.3	6,147.7	14,906	14
Hangzhou Industrial Investment Group	37,398.0	364.1	4,056	1
Uber Technologies	37,281.0	1,887.0	30,400	2
DZ Bank	37,220.9	2,302.7	29,901	29
GS Caltex	37,216.9	882.6	3,268	12
Suzuki Motor	37,184.9	1,852.4	72,372	30
Haier Smart Home	36,928.8	2,344.4	112,458	7
X5 Retail Group	36,921.9	918.8	372,200	5
La Poste	36,834.9	555.7	232,726	29
Hangzhou Iron Steel	36,772.3	197.3	11,492	3
Shanghai Pharmaceuticals H.	36,768.8	532.3	48,164	5
Shandong Hi-Speed	36,743.8	491.6	56,432	3
Honeywell Internat.	36,662.0	5,658.0	95,000	30
Guangdong Guangxin Holdings	36,608.9	86.0	44,837	2

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
S. F. Holding	36,502.4	1,163.2	153,125	3
Mitsubishi Electric	36,379.9	1,971.6	149,134	30
Guangzhou Pharmaceutical Hold.	36,309.8	324.0	35,391	4
China Datang	36,266.4	332.9	87,991	15
Mapfre Group	36,097.7	732.1	30,873	15
CFE	36,077.6	5,481.6	92,054	14
Jardine Matheson	36,049.0	686.0	443,000	25
Mondelez Internat.	36,016.0	4,959.0	91,000	17
Daiwa House Indust.	35,999.4	2,067.1	48,483	20
Starbucks	35,975.6	4,124.5	381,000	4
Olam Group	35,952.8	207.6	65,980	4
Qualcomm	35,820.0	7,232.0	50,000	7
Broadcom	35,819.0	14,082.0	20,000	2
JFE Holdings	35,803.7	1,366.0	62,218	22
Hailiang Group	35,701.8	32.2	26,727	5
US Foods Holding	35,597.0	506.0	30,000	7
ELO Group	35,569.0	-409.7	145,025	28
Migros Group	35,563.1	205.9	72,523	30
Mercadona	35,525.4	1,090.7	98,700	2
D. R. Horton	35,460.4	4,745.7	13,450	4
China Electronics	35,390.9	26.8	183,469	14
Shudao Investment G	35,379.3	685.9	55,878	3
China Nation. Coal G	35,364.0	2,154.2	144,531	5
TongLing Nonferrous Metals G	35,244.5	59.7	21,443	6
CK Hutchison Hold.	35,199.8	3,001.7	300,000	9
Philip Morris Intern.	35,174.0	7,813.0	82,700	16
Paccar	35,127.4	4,600.8	32,400	4
PDD Holdings	34,981.1	8,479.2	17,403	1

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
CRH	34,949.0	3,178.0	78,500	21
Quanta Computer	34,860.2	1,274.1	56,708	19
Salesforce	34,857.0	4,136.0	72,682	2
AIA Group	34,851.0	3,764.0	27,320	9
Nucor	34,713.5	4,524.8	32,000	5
Jabil	34,702.0	818.0	236,000	4
National Australia Bank	34,549.9	4,934.3	38,516	25
SAP SE	34,542.0	6,636.6	107,602	9
CRRC Group	34,519.7	861.5	165,344	6
Shanghai Delong Steel Group	34,399.5	223.3	42,843	3
Lennar	34,233.4	3,938.5	12,284	4
Sompo Holdings	34,136.3	2,878.7	48,421	28
Eli Lilly	34,124.1	5,240.4	43,000	16
Korea Gas	34,114.8	-582.8	4,163	9
Molina Healthcare	34,072.0	1,091.0	18,000	2
Beijing Jianlong Heavy Industry Gr.	34,069.6	138.9	57,863	4
Cummins	34,065.0	735.0	75,500	1
Shaanxi Construction	34,060.9	352.7	41,390	2
Rabobank Group	34,042.6	4,634.5	49,132	26
Aisin	33,969.6	628.3	115,140	23
Rajesh Exports	33,944.1	40.5	141	9
British American Tobacco	33,907.4	-17,855.4	49,839	27
CPC	33,903.7	-656.7	17,142	23
Bank of New York Mellon	33,805.0	3,286.0	53,400	1
Tongwei Group	33,731.3	593.9	58,329	2
Netflix	33,723.3	5,408.0	13,000	4
Novo Nordisk	33,703.8	12,143.4	63,845	1

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
Shougang Group	33,621.3	343.8	83,509	13
Shanxi Coking Coal	33,533.2	1,252.5	214,937	11
Guangxi Investm. G.	33,428.1	68.1	32,241	5
VTB Bank	33,420.2	4,936.4	76,100	4
Mazda Motor	33,403.0	1,437.1	48,685	28
Hunan Iron & Steel G	33,344.8	834.0	36,114	3
Power Corp. of Canada	33,264.8	1,665.3	40,300	26
Truist Financial	33,246.0	-1,091.0	49,935	2
Siemens Energy	33,184.9	-4,832.9	94,000	4
Schlumberger	33,135.0	4,203.0	111,000	21
Ecopetrol	33,126.5	4,872.4	19,657	7
Arrow Electronics	33,107.1	903.5	22,100	11
Jerónimo Martins	33,089.1	817.3	134,379	1
China National Aviation Fuel Group	32,984.2	98.8	13,694	13
Commonwealth Bank of Australia	32,980.5	6,788.5	49,454	18
Centrica	32,882.1	4,883.0	21,014	25
Linde	32,854.0	98.8	13,694	13
Heineken	32,823.1	1,269.2	89,732	15
Luxshare Precision I.	32,758.5	1,547.2	232,585	2
3M	32,681.0	-6,995.0	85,000	30
Visa	32,653.0	17,273.0	28,800	1
Apollo Global Man.	32,644.0	5,047.0	6,855	1
Emirates Group	32,637.9	4,692.1	112,406	5
Vibra Energia	32,634.1	954.5	3,526	2
Metro	32,579.2	468.1	81,834	7
Subaru	32,540.1	2,664.4	37,693	20
Air France-KLM Gr.	32,452.3	1,009.7	76,271	25
Enbridge	32,349.5	4,588.3	12,450	11

Firm	Revenue (\$ millions)	Profit (\$ millions)	Employees	Years on Global 500 list
ABB	32,235.0	3,745.0	107,900	29
Mitsubishi Heavy I.	32,223.2	1,536.2	77,697	30
Samsung C & T	32,077.9	1,698.5	18,685	8

The Fortune Global 500, which reports on the world’s largest firms by revenue and encompasses industrial firms, financial corporations, and service providers, has had its current form since 1995.⁴⁷ The list was first published in 1955. Initially, it mainly focused on American industrial companies. Until 1989, the magazine was disclosing a list of non-United States industrial firms under the title “International 500.” Since the adoption of the current format in 1995, a total of 140 firms have been listed over the past 30 years.

The list exhibits firms from disparate economic activity sectors such as retail and grocery stores, e-commerce, electricity providers, oil and natural gas providers, textile manufacturers, telecommunications services, package delivery services, financial services, mining, heavy industries, electronics, car manufacturers, financial services, health services, pharmaceuticals, transportation services, food and beverage producers, handmade jewelry, cosmetics, entertainment, and even on-line streaming services. These firms are all multinational corporations operating on a global scale. The two largest international corporations, Walmart and Amazon, primarily serve as distributors of products produced by other companies. Even corporations such as the Royal Bank of Canada or

the National Australia Bank, which could mistakenly be thought of as having a locally restricted scope of activity, exhibit economic operations that extend far beyond their country's boundaries.⁴⁸ The Fortune 500 list reveals firms from all over the world, from big countries such as the United States, China, and India, and small countries such as Portugal, Denmark, and Taiwan. Contrary to what many media players often advocate, our global society is not heavily engaged in competing activities; instead, it is heavily involved in a large-scale cooperative mode.

These cooperative efforts are currently led by the world's largest firms, which directly employ a tiny percentage of humanity and indirectly employ a significant portion of our global workforce. Indirect employment is, in this sense, a job that is created to support the economic activity of each big firm. The proliferation of "call center" firms, which primarily provide end-customer assistance services and whose employees the contracting big firm is not directly responsible for, constitutes an example. However, similar reasoning applies to a wide variety of economic activities, such as commission agents and small outsourcing firms that provide facility maintenance and cleaning services, as well as to many other small firms whose survival is indirectly dependent on larger firms. Is this kind of cooperative effort helping to optimize the world's productivity?

Additionally, some pertinent questions are looming: 1) Do there exist differences between firms regarding the level of productivity? 2) If there are differences in the level of productivity exhibited by different firms, then what justifies continuing the employment of people in these minor productive economic activities? And, 3) What

is a big firm, a small firm, and an optimal size firm?

The following three tables detail differences in productivity. Firms are ranked by their position in the Fortune 500 list.

Some retail sector firms' productivity data

Firm	\$ Revenue per employee	\$ Profit per employee	Profit/Revenue (%)
Walmart	308,631	7,386	2.39
Tesco	382,131	6,589	1.72
Mercadona	359,933	11,050	3.07

Some e-commerce sector firms' productivity data

Firm	\$ Revenue per employee	\$ Profit per employee	Profit/Revenue (%)
Amazon	376,908	19,951	5.29
JD.com	296,288	6,601	2.23
Alibaba	641,014	54,493	8.50

Some automobile sector firms' productivity data

Firm	\$ Revenue per employee	\$ Profit per employee	Profit/Revenue (%)
Volkswagen	509,350	26,234	5.15
Toyota	819,391	89,850	10.97
Ford	995,429	24,559	2.47

According to 2023 figures, the average firm on the Fortune 500

list has a revenue of \$81,984.7 million, a profit of \$5,918.6 million, a revenue per employee of \$580,609, a profit per employee of \$41,902, and a profitability of 7.22 percent. Examining the numbers disclosed for the 500 firms, there remains no doubt about the existence of significant differences in productivity, not only between sectors, but also between the world's largest corporations. However, these statistics refer to a static moment in time and do not explain what events have contributed to those results. Moreover, the productivity data disclosed above is entirely silent on each firm's employee productivity, which is determined by each person's actual wage.⁴⁹

Above, I have just intertwined profit and productivity as if they were the same thing, but they are not. Walmart is the firm that generates the highest revenue and is the largest private employer in the world, employing over 2.1 million people. However, the federal government of the United States employs around 3 million people, providing services to the population, including defense and homeland security, the Treasury, agriculture, health and human services, the Social Security Administration, transportation, commerce, and energy. Rather than selling their services for a price, the federal government of the United States collects taxes.⁵⁰ Just like Walmart, the federal government of the United States also produces welfare, contributes to overall employment, but does not aim at profitable goals.

Moreover, Volkswagen, Toyota, and Ford are likely all expert corporations in the manufacture of automobiles. Therefore, it is highly probable that they possess similar capabilities to utilize

material and human resources efficiently in their productive processes. Conversely, it is implausible that Volkswagen is twice as productive as Ford and half as productive as Toyota, which was, by far, the most profitable company of the three in 2023. It is essential to recognize that, in society, profit and productivity are two distinct concepts.

In the Fortune 500 list above, the firm with the highest revenue per employee in 2023 is Trafigura Group, ranked 19th by revenue. The firm is a multinational French company with headquarters in Singapore and main regional centers in Geneva, Houston, Montevideo, and Mumbai. The firm's website mentions that it connects "*producers and consumers of minerals, metals and energy.*"⁵¹ The international team is based in more than 50 locations worldwide and touches more than 150 countries. Trafigura employs only 12,479 persons and generates revenue and profit per employee of \$19,575,302 and \$592,451, respectively. Despite the firm's profitability, its contribution to overall welfare is certainly comparable to that of many other private and public entities worldwide. If profit were to be a measure of human productivity, then there would be no rational explanation to justify why someone would dedicate his or her work efforts to a minor, economically rewarding activity.

Multiple-sized firms

The existence of firms of various sizes, differing in terms of annual revenue, profit, number of employees, and total asset value, is a reality. Every firm is engaged in a large-scale cooperative effort to improve overall welfare. The interdependence between a significant number of firms is unavoidable, and their mutual interactions become crucial to safeguard a society's economic power.

In 2023, the Industrial and Commercial Bank of China, ranked 22nd on the Fortune 500 list, is the world's largest corporation, holding the highest total value of assets under control, reaching an astonishing 6,297,314.5 million dollars.⁵² Moreover, worldwide, banks are the top holders of the total value of assets under control. Which is remarkable, for banks do not produce anything other than financial services. However, banks are also the top facilitators of new investment and enable global economic activity. Hence, banks are crucial in both safeguarding employment levels in a society and channeling material resources to where they are most needed.

The economic power of a society is therefore dependent on the adequate interaction between different firms to produce the highest possible level of overall welfare. The relevant size of each firm is the one that enables it to deliver the highest quantity and quality of goods and services at the lowest possible price. As mentioned in Chapter 2, specialization often induces productivity gains by allowing the production of higher quantities with lower work effort; however, its efficacy is constrained when workers perform bundles of tasks that cannot be separated without incurring a cost. Hence, the

existence of firms of multiple sizes is a reality that may be welcomed by society, just as long as the productivity of big, medium, and small firms is optimal.

Small and Medium Enterprises (SMEs)

The OECD classifies firm size by the number of people employed. Small and medium-sized enterprises (SMEs) are those that employ fewer than 250 employees. The OECD further distinguishes between micro-enterprises, which employ fewer than 10 persons, small enterprises, which employ between 10 and 49 workers, and medium-sized enterprises, which employ between 50 and 249 individuals.

In 2018, the OECD released a study based on its Structural and Demographic Business Statistics Database, which found that new firms' job creation primarily occurs in sectors with below-median productivity. The data cover the period from 2002 to 2017. Since these figures encompass the most advanced economies in the world, they are relevant for assessing the economic power our global society is achieving. The OECD researchers found that one in three people works in a micro firm and two in three in an SME, highlighting the relevance of small and medium-sized enterprises in increasing employment levels.

According to the OECD SME and Entrepreneurship Outlook 2019 document, SMEs account for 99 percent of all businesses and 60 percent of total employment, but, regardless of their crucial

contribution to overall welfare, “*even in relatively large SMEs, wage levels are typically around 20% lower than in large firms, reflecting lower productivity levels.*” Between 2010 and 2016, close to 90 percent of all new jobs in France were created in activities with below-average wages, while this figure stood at 75 percent in the United States and 66 percent in Germany and the United Kingdom.⁵³

This data strongly suggests that, currently, even in OECD countries, the creation of new jobs primarily focuses on low-productivity sectors, where it is more challenging to achieve significant economies of scale and wages are lower. The society’s incapacity to ensure employment in higher-productivity firms leads individuals to subsistence entrepreneurship, compromising society’s economic power.⁵⁴

Scale

A productive process exhibits economies of scale when it is possible to increase the quantity of output produced while lowering the average unitary cost. In this regard, human engagement in endeavors larger than one person enables scale economies, as specialization in specific labor activities leads workers to produce more output with lower work effort. Therefore, the increase in production achieved with reduced work effort significantly contributes to the overall well-being of those engaged in such a partnership. The existence of scale economies depends on cooperative efforts.

The limits of economies of scale are found when workers perform complementary tasks and when the material resources used to produce output are rare. Both set boundaries for economies of scale and can help explain productivity disparities between firms of different sizes.

The recognition of limits to firm size raises the question: Is scale fundamental to consolidating economic power?

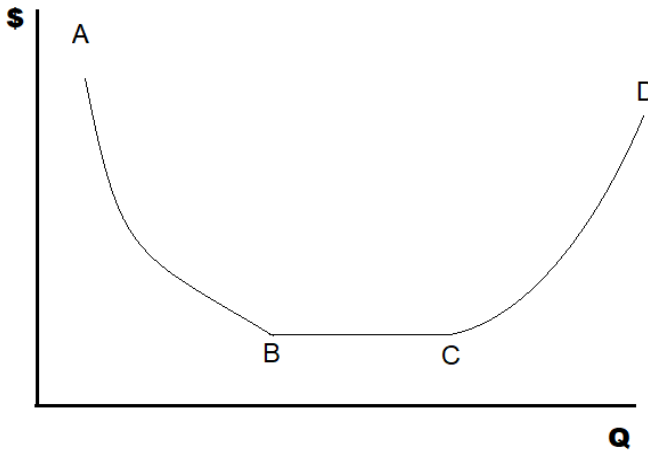
A productive process exhibits increasing returns to scale, meaning it is possible to increase the quantity of output while incurring a diminishing unit cost. This happens when we increase the amount produced by one unit, and the average unitary cost of total production decreases. This new unit produced is called a marginal unit because we are gradually increasing production.

A productive process exhibits constant returns to scale when the marginal production cost remains constant as the quantity of output increases. In this instance, the production average cost remains unchanged because each unit incurs the same per-unit cost.

Finally, a productive process exhibits diminishing returns to scale when the marginal production cost increases more than proportionally with the quantity of output, thereby increasing the average total production cost.

Given the technology available for each economic activity, these different realities set the scope for the simultaneous existence of firms of various sizes in society without compromising overall welfare. But, for a given quantity of goods, firm size must be similar in the same economic activity. Otherwise, resources are either wasted or non-productive.

Figure 4. Types of returns to scale



Source: Author's creation

Figure 4 exhibits the three types of returns to scale that can be found in a productive process. The \$-axis represents the marginal unitary cost of production of the quantity produced in the Q-axis.

From point “A” to point “B”, the productive process exhibits economies of scale, for the increment in the quantity produced leads to an increasingly lower marginal unitary cost of production. This is a typical situation where fixed head costs are required to initiate an economic activity, such as facilities or heavy machinery. Moreover, regarding the workers' productivity, it is always present whenever it is possible to resort to specialization to reach higher performance levels.

From point “B” to “C,” the marginal unitary cost of production of any additional unit of output is constant. This is a typical situation when the production is mainly industrial and entirely based on automated processes. Naturally, this leads to a constant average unitary cost of production.

From point “C” to “D,” the marginal unitary cost of production increases when an additional unit of output is produced. This is a situation when the production factors used exhibit signs of exhaustion. For instance, machines were used far beyond their capabilities without making required maintenance pauses, and laborers' work time is too long, leading to an increase in costly mistakes.

The optimal-size firm

It is therefore vital to identify the optimal firm size for a given economic activity, depending on the scale economies exhibited, because it is simply not rational to have the technology to achieve optimal productive processes while losing the opportunity.

When technology enables an increase in the quantity produced and a decrease in the unitary cost of production, the optimal number of firms in society is only one. This situation is located on the curve [AB] in Figure 4. In this instance, only one firm is able and required to provide the necessary quantity of goods with minimal resource waste. It is a situation in which society must strive to make the firm as large as possible until the entire market is satisfied. Regardless of

the basket of reasons that might be currently raised to oppose the last assertion, the sentence expresses the truth. And only ethics, or the lack of it, gets in the way.

When the unitary cost of production increases by 1 unit with each additional unit of the final good's production, the optimal number of firms in the economy depends on the full productive capacity per firm. In this scenario, located in line [BC] in Figure 4, the total number of firms in this economic activity must be equal to the total quantity of the good that the market absorbs divided by the productive capacity of each firm. Moreover, every firm must be of the same size.

The last situation occurs when the unitary cost of production increases with an infinitesimal increment in the quantity produced of the good or service, and is located on line [CD] in Figure 4. Now, each firm must be as small as possible, and society must do its best to ensure that every firm in this economic activity is composed of a single individual, for it is the only way to minimize production costs and prevent resource waste.

Small firms mainly produce on the curve [AB] because it is usually possible to increase the dimension of the firm to gain a reduction in the costs of production. The most frequent challenge faced by small firms is the difficulty of accessing the finance, skills, and innovation assets needed to operate as productively as possible.⁵⁵ Consequently, small firms are usually lying on the costly part of the curve [AB], producing a too low quantity of output.

Big firms, in turn, have easy access to all the strategic resources they need. These corporations enjoy easy access to finance, possess

the most skilled and trained employees, and have immediate access to innovation, whether through their own research and development activities or by acquiring innovative assets that emerge in society. Accordingly, big corporations can increase their productive capacity as long as the market is large enough to absorb the firm's output. Since big companies are engaged in business activities to generate a profit, they will always strive to increase production as long as it is possible to achieve a gain. This is the natural direction of human work efforts.

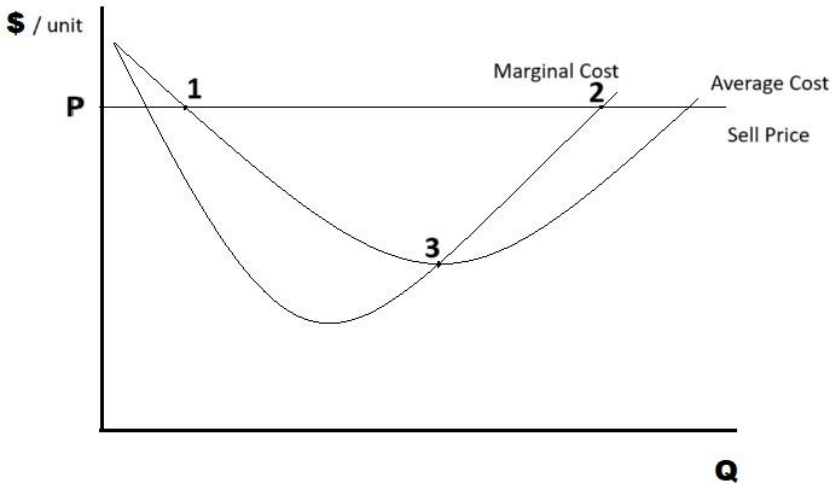
In reality, the evolution of production costs, along with the increase in production, is not steady, as shown in Figure 4.

When a start-up organizes the means of production to initiate its economic activity, it bears some head costs. These fixed costs are incurred by the firm when the investment is made and are gradually recovered as long as production is steadily sold in the market. This means that the increase in the quantity produced and sold allows for the existence of scale economies at the beginning of the firm's business.

However, if the business develops well and one input the firm uses in its productive processes is disputed in the market, then this input becomes gradually more expensive. The firm's productive costs increase accordingly. Therefore, for any economic business, a more realistic unitary production-cost curve is shaped like a parabola, with an upward U-shape.

Figure 5 illustrates this situation and explains why economies tend to exhibit firms that are too large, bearing unitary production costs that are too high for the existing technology.

Figure 5. Profit-seeking firm size



Source: Author's creation

When the quantity produced is only one, the curves of marginal and average cost exhibit the same value. When a firm enjoys scale economies at the beginning of production, the marginal cost of production decreases; therefore, the average cost of production also decreases. As long as the marginal cost of production decreases, the average cost of production also decreases. However, after reaching a minimal marginal cost of production, when the inputs become scarce in the market, their cost increases. This leads to a locus where the marginal cost of production increases, and the average cost still decreases, as long as the new marginal cost of production remains lower than the average cost. When the marginal cost of production

exceeds the average cost, the firm continues to increase its production because it remains profitable to do so. Although the firm is starting to become inefficient in its productive processes, it is still possible to sell this additional quantity at a higher price and generate a profit. So, the firm goes for it!

In Figure 5, the small U-shaped curve represents the marginal cost, the wider U-shaped curve represents the average cost, and the straight line represents the selling price. Moreover, point “1” represents the minimum quantity required to reach the financial break-even. Point “2” indicates the quantity produced by the profit-seeking firm, where marginal cost equals marginal revenue, for marginal revenue is given by the sell-price because it is the revenue brought by one additional unit sold. Point “3” represents the optimal firm size, where marginal costs equal average costs, leaving the cost of production at its minimal possible level.

It is essential to highlight three key points. First, whenever the cost of producing one additional unit of output is below its selling price, the firm always profits from it. And if it rewards bearing the cost, mankind gladly endures it. Second, if the firms were all efficient in their productive processes, they would all be producing at point “3,” but this would mean they would not be maximizing their profits. At point “3,” firms would be earning profits, but not maximizing them. And third, the consistent differences in annual profit and firm size operating in the same economic activity indicate that at least some firms are larger than they should be.

Above, it is outlined that Volkswagen and Toyota are two expert corporations in the car industry. Had these firms been efficient in

their productive processes, as I believe they held the knowledge and know-how to do so, they would all exhibit the same profit level per revenue. Despite the likelihood that they have similar capabilities to use material and human resources in their productive processes efficiently, they are bigger than optimal companies and, consequently, they are operating in the locus between points “2” and “3, leading them to consistently exhibit different profit levels per revenue, even when their cost structure is similar.

Differences in the level of profit among large companies can also be attributed to the way money is utilized in our global society. This will be detailed in Part 2. Nevertheless, the most important caveat to be aware of is that a profit-seeking society is a waste-based society. And this is not an intuitive concept to grasp.

The idea that firms can be bigger than optimal in a profit-seeking society may find some natural opposition. This idea can be refuted by claiming that in competitive open markets, big profits will attract the establishment of new firms, and the employment of people in the most profitable activity sectors will naturally follow. These new firms will drive the market’s average selling price lower, and the big corporations will be compelled to slim down.

This naive conception of economic activity overlooks the path required for an entrepreneur to transition from a small start-up to an optimally sized company. Furthermore, it completely fails to notice that entry barriers are a reality in the vast majority of available economic activities.⁵⁶ The permanence of 140 big corporations in the Fortune 500 magazine during the last 30 years utterly unveils reality. There is more than one of these large firms in the same sector of

economic activity. Free markets can only be efficient when supported by a set of rules that enable them to be so. And that, as we shall see ahead, can only be close to the truth if mankind commits to building a global society. Ultimately, this is an ethical issue.

It is therefore clear that, by allowing the existence of bigger-than-optimal firms, mankind is wasting resources. Moreover, it does not make sense to consistently have firms of different sizes in the same economic sector across time. We all live worse than what is possible because we are embracing production processes that are more costly than what technology requires. This reality is not rational. Its existence constitutes evidence that our global society is not aware of what it is doing.

Employment-related issues

The waste of resources identified above is both material and human-related. The economic power of a society is evident in its ability to distribute welfare evenly across the entire population. Since employment is required to both share work efforts among the population and to safeguard the distribution of the goods and services produced, it is also a crucial muscle of the strongest society. It is thus interesting to recognize the primary employment-related issues that compromise the economic strength of our society.

Layoff refers to the temporary or permanent discharge of a worker, which an employer arbitrarily decides. Layoff practices have economic consequences in society as they reduce firm size and

immediately exclude the dismissed employees from accessing the goods and services required to survive.

In 2024, the top ten firms resorting to layoffs have dismissed more than 135,000 workers, as follows: Citigroup, 20,000; Boeing, 17,000; Intel, 15,000; Tesla, 15,000; UPS, 14,000; Amazon, 12,000; Walmart's Sam's Club, 11,000; Thyssenkrupp, 11,000; and Nissan, 9,000.⁵⁷ In 2024, more than 5,000 companies have announced mass layoffs. In January 2025, Russia's Gazprom is prompted to slash 40 percent of its head office staff amounting 1,600 employees, the Wayfair Germany is ending operations impacting 730 employees, the Japanese Renesas Electronics is planning to lay off 5 percent of its workforce affecting around 5,000 individuals, the Swiss insurer Helvetia intends to cut 500 jobs, Airbus announces it will lay off 477 jobs in the United Kingdom, and Valeo plans to close its two plants in France while cutting 1,000 jobs in Europe. It remains clear that layoff practices occur worldwide and have a significant impact on a society's economic power.

This practice is beneficial for resource optimization if it enables large companies to approach an optimal size, and is detrimental to overall welfare if society is unable to immediately reuse the work efforts of dismissed employees and the material resources they had at their disposal. Currently, this issue is not closely followed by the entire society.

In practical terms, the current state of affairs is exact: Firms are independently deciding who are they employing and to what extension are they providing employment; governments are the ones in charge of ensuring overall welfare either by giving a healthy

economic environment where firms can strive or by safeguarding social aid to those in need; and workers, who do not control a significant amount of material resources, are just like a bottle in high sea trying to stay floating as they can while having to accept to move as the tide is dictating. The entire society's involvement in correctly solving this issue is a pressing need because, otherwise, emotionally driven reactions can lead to enormous humanitarian catastrophes, just like has happened in Zimbabwe, at the beginning of this century, at the hands of Robert Mugabe and his followers.⁵⁸

The most common reaction that workers resort to when claiming compensation for their work efforts is strikes. In 2023, the major strike activity increased by 280 percent in the United States, climbing from 120,600 workers involved in strikes in 2022 to 458,900 in 2023. Nevertheless, work stoppages due to workers' collective protests occur worldwide. A few examples that have happened since January 2023 are Tesla Sweden, Audi Mexico, the Northern Ireland public sector, the German Lufthansa, the Nigerian Association of Road Transport Owners, the South Korean medical crisis, the Safran workers in Québec, the Bangladesh quota reform movement, or the Milan Stock Exchange strike in Italy.⁵⁹

In our global society, every time a strike is implemented, the economy's strength is compromised because the entire society is prevented from producing goods and services at their best. This activity immediately jeopardizes overall welfare due to the costs incurred by employers and employees, the former by losing revenue and the latter by losing wages while bearing the costs of strike preparation and resolution. The entire society suffers from

production delays, supply chain disruptions, decreased service quality, and the development of a labor climate marked by distrust and animosity, which compromises future teamwork and collaboration.⁶⁰

Workers justify these actions due to the existence of real wage stagnancy or deterioration, poor working conditions, long work hours, erosion of health insurance, and reduced retirement benefits. But strikes can have positive impacts by serving as catalysts for organizational change and the implementation of reforms that enhance productivity and employee satisfaction in the long run.⁶¹ This form of collective bargaining power extols our human tendency to resort to large-scale cooperation to improve overall welfare. Nevertheless, it is a biased form of action primarily directed at improving the well-being of a fraction of society and mainly required due to the lack of attention from those who control the ownership of material resources.

When properly dealing with firm size while continuously developing technology that enables us to work less and produce more, our global society cannot ignore that it depends on the employment level to distribute its production. However, employees often need to be productive, which is not always the case.

The term “jobs for the boys” is related to the practice of giving paid employment to one’s friends, supporters, or relations, even when they may not be the best qualified people to do it. Albeit governmental and political activities are often the targets of such accusations, the truth is that it happens across the entire society, whether it be of public or private ownership. For instance, consider

the Ford Board of Directors across time and examine when the Ford family name was absent.⁶² Moreover, worldwide, when was the last media news disclosure relating to public and private suspicious relationships where a political tie seems to be used to provide a private benefit? Unfair compensation for less productive individuals is a practice that reduces a society's economic power while contributing to unnecessarily large firm sizes.

Finally, the most unproductive individual is the unemployed person who is capable of making a valuable contribution to society but is not providing any. In 2021, the World Economic Forum estimated that a total of 150 million people were homeless worldwide.⁶³ This means that millions of people are being precluded from contributing to overall productivity either by adding their work efforts and creativity or by reducing the working time of the employed ones. What a waste!

Summary

The quality of the employment provided by society is severely conditioned by firm size. Incorrect firm size is one of the most prominent symptoms of an economy's illness. It impacts the levels of employment, productivity, welfare, and resource wasting that a society evidences. Firm size is often mismanaged by our society, regardless of the type of ownership applied. Firms can be of either public or private ownership, but they must always be equally competent in managing the available resources. In the Fortune 500

list above, several Chinese state-owned firms are listed, including China State Construction Engineering and China Mobile Communications. The type of ownership control does not appear to compromise these firms' focus on productivity and profitability. The existence of firms of different sizes in the same economic sector constitutes evidence of resource misallocation and highlights the government's ineptitude in assisting. It is crystal clear that our global society is entirely dependent on the healthy articulation between the employment provided by productive firms and the settings of the business environment safeguarded by the governments. The required large-scale cooperation society needs to be effective in controlling firm size and safeguarding employment, yet this is utterly absent. The main reasons for this state of affairs are primarily financial and will be addressed in Part 2.

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PART 2

Money

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CHAPTER 4

Prices

Price changes are unavoidable. That is why they must be accepted, understood, and controlled. Prices are a reality that emerges from the use of money.

Money is a man-made intersubjective reality where a given amount of value is assigned to a physical symbol according to society's convention. When money was absent in society, a bartering system developed to trade valuable items, such as livestock and grain, or emotionally valued items, like cowrie shells and decorative artifacts.

The bartering system is said to have originated around 6,000 BC, when people from Mesopotamia exchanged goods such as tea, salt, weapons, and food with the Phoenicians. By 3000 BC, also in Mesopotamia, there is evidence of people drawing symbols in clay tablets to represent debts, marking what appears to be the first symbolic representation of value. The first known metal coins, which were a mere symbolic artifact used to represent human value, date back to 630 BC and originated in ancient Lydia, a region in the southwestern part of Asia, and were made of an alloy of gold and

silver.⁶⁴

Nowadays, money has no intrinsic value; it simply represents the value that other things have to a human being. The price is the amount of money that is required to acquire a good or service. But if money is used by mankind to represent the value that physical goods have, and the physical good is always the same, why does its price change?

History has presented us with a panoply of events that demonstrate mankind's struggle for price stability and aversion to price changes. Nevertheless, crucial insights gleaned from past events help clarify some price-related issues that deserve attention. These are: 1) how price changes affect the value stored in a given amount of money; 2) do prices provide a valuable contribution to guide economic activity; 3) in what way are prices established in our society; and 4) should prices be left free to change according to needs? Remarkably, these issues raise questions whose answers are underscored by many past events.

What is the relationship between prices and money?

We use money to trade goods and services among ourselves. Hence, the available amount of money will be used to acquire a given quantity of a good at the market price. For a given budget constraint, the higher the price, the lower the amount of goods we can enjoy. We can therefore write that

$$M=P.Q \tag{1}$$

where money (M) equals the price (P) times the quantity (Q) that is traded.

It is worth outlining the relationship because it is straightforward that if prices (P) increase, then the quantity (Q) that can be traded decreases accordingly. This means overall welfare persistently declines under a continuous rise in prices that supersedes the increase in the amount of money in circulation. Inflation occurs when this consistently happens across time in the economy.

Unfortunately, examples of hyperinflationary societies are common. The worst inflation period ever registered occurred in Hungary in 1946, when consumer prices doubled every 15 hours. At that time, the government attempted to address the problem by printing more money and distributing it to the general public. A measure that only made things worse.⁶⁵ Another example of hyperinflation occurs today in Venezuela, where the average inflation rate is estimated to be around 150 percent in 2025 after having reached a peak of 63,000 percent in 2018.⁶⁶

The relationship magnifies the rise of prices due to a higher quantity of money in circulation. However, the equation also highlights that prices increase when the quantity produced of a good decreases. In 2022, in the aftermath of COVID-19, a period in which the world's production of many goods and services was deliberately put on hold, inflation in the United States rose to its highest level since 1981.⁶⁷

Generally, we want to avoid price uncertainty because we store

the value produced through our work efforts by receiving money in exchange for it. And, to the large majority of the population, the quantity of money they can control is not unlimited. That is why it is crucial to understand how value is represented by money and expressed through prices.

The problem regarding the stability of the value stored in a physical support must be considered side-by-side with its ease of acting as a medium of exchange. It is known that, in ancient civilizations, the ox was used as a standard of value. This animal was a tremendously important asset for working the land. Besides its use as a productive tool, its value remained relatively stable in comparison to other basic commodities, such as grain. However, when humans had to consider its ability to function as a standard of value and a means of exchange, they found that the ox was not homogeneous, divisible, or portable. They posed many difficulties for the latter use. Nevertheless, the ox unit of value was the first symbolic attachment made by man between a metal coin and a chief unit of barter.⁶⁸

When coin metals were first used, a piece of gold equal in value to an ox was called a talent. The Lydians were the first known people who sold goods by retail using metal coins.⁶⁹ Afterward, the ancient Greek civilization had its marketplaces, and promptly adopted a process that made trade easy, and began using metal coins accordingly. This practice propelled humanity into the current market economy, where a specific form of money is used to both trade the various goods and services produced in society and to store value. But if cows are not homogeneous in value, then how much

value is stored in a talent?

The relationship between money, value, and prices always exists, but they are distinct concepts.

Money is any item that is generally accepted as a medium of exchange, is used to represent value, and assists mankind as payment for goods and services and repayment of debts. Usually, money has no intrinsic value, for it is not possible to extract any personal satisfaction from its consumption.

Value is a measure of how good, meaningful, and enjoyable something is to a person's well-being. Worth and usefulness are closely connected to the assessment of value. Accordingly, value is a personal and very subjective reality.

Price, in turn, is the amount of money required to acquire the possession of a good or service. Accordingly, when two parties consider the transaction of a physical good, regardless of the good's consistency in delivering well-being, its price will change according to the buyer's and seller's perceptions of value.

Most of all, as outlined by the equation $M=PQ$, we conclude that intrinsic value is given by the consumption of the goods and services expressed by "Q," whose relative contribution to overall welfare is weighted by the price mechanism according to the evaluation of buyer and seller.

The price mechanism exerts its influence because we use money to perform exchanges through buy-sell transactions. In 1867, Karl Marx was the first economist to conceptualize value in a way that enables us to fully understand when the processes of 'value creation' occur through the market. The author focused on how a transaction

of commodities unfolds. Specifically, the author has established a straightforward notation, “C-M-C,” to explain the process.

An individual in possession of a commodity, first C, exchanges it with another person for a different commodity, the second C. Money, the M, serves as a circulating medium. Therefore, the ‘value in exchange’ of those two commodities is even, and is given by the price. However, the exchange brings value to the community.⁷⁰ In 1934, Joseph Alois Schumpeter went further by positing that “*the world of prices does not exist and only that of value remains.*”⁷¹ Value is created because useless surpluses become useful products consumed through the exchange mechanism.

Notwithstanding the explanation provided above is correct, for value is indeed created through the exchange of surplus, it implicitly assumes that the quantity of money in circulation is standing still, and that the correct link between production and consumption is established following the market preferences through the mechanism of prices. And these assumptions require inquiry.

When does the price mechanism guide economic activity?

In 1776, Adam Smith referred to the action of price upon the general public as an automatic way of preventing famines. The economist explained that if corn is produced in smaller quantities than what the general public wants due to a bad harvest, then the producer will sell it at higher prices, which will serve the best interests of the whole society. For the producers, it enables them to

recover their production costs. At the same time, for the general public, it induces a decrease in corn consumption, allowing the entire community to survive until the next harvest.⁷² When society does not act so, then someone is going to feel the famine or, in the worst-case scenario, someone might even die.

Apart from the last case scenario, which, despite being dramatic, is still absolutely relevant, the usual role of price, by directing consumers' actions, is paramount for society's welfare. Higher-priced products will be eschewed if it is possible to replace their consumption with a similar, cheaper good, often seen as a substitute. Additionally, the consumption quantities of a higher-priced product will typically be reduced, limiting its wider distribution among society. Since, in our society, we usually benefit from the existence of several producers of a given commodity, the price information received by the general public will be the driver of their actions towards the consuming pattern that serves the community's best interests regarding overall welfare.

Concerning producers, the role of price information takes an entirely different character. Usually, for firms, the higher the selling price of a product, the more profitable the business is. Accordingly, firms will be prone to increase production since, at that price, there is significant unsatisfied demand. By increasing the quantity of this desired product, firms will act in the best interest of consumers. While higher product prices induce firms to produce more, they also induce consumers to consume less, fostering a natural adjustment in the quantities produced and consumed that suits overall interest.

When, by laboring, society can satisfy all its members regarding a

given need, say, feeding, then producing food beyond the threshold of satisfaction is unproductive. In this case, not only is society wasting resources producing something useless, but it is also losing the opportunity of engaging in an alternative production of something appreciated by the community. Adam Smith posed that *“it is the interest of all those who employ their land, labour, or stock, in bringing any commodity to market, that the quantity never should exceed the effectual demand; and it is the interest of all other people that it never should be fall short of that demand.”*⁷³ Therefore, producing beyond the threshold of satisfaction is a process of value destruction, and the correct settlement of prices is crucial to society’s success in avoiding such mistakes. In society, the central role of prices is to direct production efforts to where they are most needed.

Thus, the price mechanism correctly guides economic activity when the quantity of money in circulation remains constant, and both producers and consumers are free to engage in trade. This guidance serves the overall welfare if, and only if, society is aware of its assumptions.

The way prices are established in our global society

But, worldwide, the quantity of money in circulation is not kept steady; there is massive artificial interference in the formation of prices, of either political or financial nature; and there are income asymmetries among society members that push production and consumption into mistaken paths. Sometimes, these events

intertwine in such a stupefying way!

An example of such economic mistakes, often caused by the lack of ethics that humanity has inadvertently adopted everywhere, is exemplified by the medicine called “Ozempic,” which was traded in Portugal in 2025. The way the medicine is brought to market is shocking, as the end consumer is offered the option to purchase the product at €10.00 or at ten times that price.

Specifically, “Ozempic” is a medicine for helping patients suffering from type 2 diabetes mellitus, which is the most common type of diabetes, accounting for about 90 percent of all cases. In Portugal, the law stipulates that this medicine can only be purchased with a medical prescription, while the government bears approximately 90 percent of the cost. This means that, lawfully, the patient acquires “Ozempic” at a pharmacy for € 10.00 just as long as he or she is holding a medical prescription.⁷⁴

In Portugal, the government entity responsible for regulating and supervising medical products is Infarmed. By law, the prescription of “Ozempic” can be authorized only if the patient has a body mass index of 35 kg per square meter. Moreover, the government negotiates with the pharmaceutical laboratory for the annual quantity of “Ozempic” sold in the country at a specified maximum price. If the pharmaceutical company sells more product than the agreed-upon quantity, it will have to reimburse the government.

These rules are so far from market needs that they put the architects of this legal scheme to shame in the prices they charge. The reality goes as follows.

First, there are more than 1,300,000 people in Portugal suffering

from diabetes, and each pack of “Ozempic” lasts for one month only. Despite this, the government agreed with the pharmaceutical company that only 30,000 boxes would be sold monthly in Portugal under the government's participation, which, as one Portuguese doctor told SIC, the Portuguese TV channel that produced the documentary, “*it is nearly zero.*”⁷⁵ Otherwise, the pharmaceutical would have to compensate the country for selling any additional quantity of the product!

Second, the medicine is often illegally prescribed by doctors to obese patients who do not have diabetes. In Portugal, there are more than 2,000,000 obese persons. These numbers are enough to establish a demand that far exceeds supply. Still, “Ozempic” is known to be used by Hollywood celebrities to lose weight and maintain a good body shape, contributing to a mood that further stimulates its use. Finally, in Portugal, regular obesity medications cost more than € 300.00 per package, and the state covers none.⁷⁶ Under such huge demand for a tiny supply, both obese and diabetic patients ordered “Ozempic” in as many pharmacies as they could to buy it at € 10.00 and looked to purchase the product outside the health legal system at the asking price.

As it stands, the government-pharmaceutical agreement encourages the producer to sell the product unlawfully in the country, and the emergence of a substantial black market for “Ozempic” is unavoidable. The legal mess has induced a dual price formation. The government arbitrarily set a price of €10.00 without regard for the population's needs. Once the government's participation reaches 90 percent, we conclude that the state pays

approximately €100.00 to the pharmaceutical company for a pack of “Ozempic.” Therefore, we cannot be surprised that “Ozempic” is being sold through social media and mouth-to-mouth at prices starting at € 120.00 and below the € 300,00 level set by the free market price for obese medication.⁷⁷

The SIC’s documentary even confronted an Infarmed government official about the “Ozempic” situation, who reported that the shortage of this medicine was an international problem. Officially, “Ozempic” is the fifth best-selling drug in the country. Although Portuguese pharmacies do not stock “Ozempic” on their shelves, there appears to be a substantial amount of the medication available on the black market. And this poses ethical peril.

It is worth mentioning that the current state of affairs regarding “Ozempic” also presents a safety problem. One doctor alerted that the medicine requires a cold chain to be kept at a controlled temperature at all times. However, in the black market, the drug is sold out of its original package and passed from hand to hand on the street. This behavior seriously jeopardizes the patient’s health, who not only does not know precisely what he or she is buying, but cannot be sure that the drug is in good condition as well. And, just like “Ozempic,” there are other medicines marketed in Portugal that follow the same pattern.⁷⁸

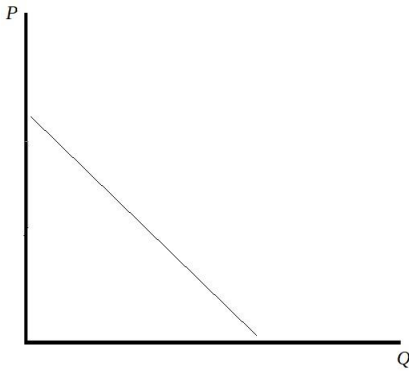
The way prices are established when buyers and sellers act freely usually extols the best of mankind towards each other. The change of pricing according to the heterogeneity of buyers and sellers is interesting to illustrate with a practical example. Today, in Morocco, there are vibrant retail markets called souks, where a wide variety of

goods are traded without any previously marked price. In this instance, the sellers deliberately set relatively high initial prices, expecting customers to enter into bargaining. Engaging in the negotiation to secure a lower price is essential to ensuring the best deal, making it a game that fosters a connection between the parties. While this practice establishes a cultural standard that citizens learn to cope with, it also means that for someone with a fixed budget to spend, the uncertainty of the cost of necessary goods carries significant risk. However, even in Morocco, the daily practice of negotiating the price of a good or service provides citizens with a clear perception of its fair price. For those deeply engaged in the practices of a given market, despite some price fluctuation between a minimum and a maximum value, people hold a perception of the average value towards which the majority of business deals converge.

This benevolent use of free markets, in which people connect and enjoy life, is conditioned by income disparities among consumers. In 1933, Joan Robinson argued that the aggregate demand curve cannot be represented by a straight line when there are income disparities among consumers.

Figure 6 represents the effects of the budget constraint on the price formation. That is, facing a given income available to spend, the consumer cannot pay more than the price “P” to acquire a given quantity “Q” of the good. The straight line exhibits the maximum price-quantity pair. An aggregate demand curve for people with the same income would also be represented by a straight line when considering only the budget constraint.

Figure 6. Price formation under a budget constraint

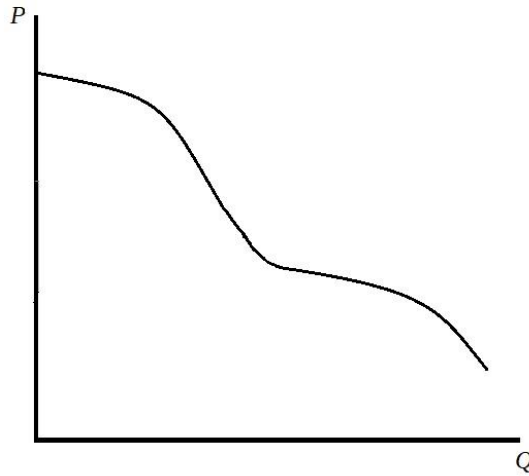


Source. Author's creation.

However, when income inequalities among consumers are severe, a straight line cannot represent aggregate demand, and price formation adapts to the circumstances. Figure 7 evidences this effect of income heterogeneity among consumers.

Currently, in our global society, the establishment of prices is often dependent on both private and public interactions. Suppose we combine the example of Portugal's "Ozempic" problem with severe income disparities in the population. In that case, we understand why the Portuguese government has produced such economic nonsense. The government's 90 percent share of the cost of a necessary drug is allegedly justified by the principle of safeguarding healthcare services for all, regardless of income. But what can we conclude about the effectiveness of this purpose? And, ethically, what does it mean to perpetuate this balderdash?

Figure 7. Demand under consumers' income heterogeneity



Source. Based on Joan Robinson (1933), “The Economics of Imperfect Competition.”

Another example of how income disparities and legal frameworks intertwine to influence price formation is provided by the current state of the real estate market in Lisbon. In September 2024, the leading international news channel, Euronews, reported that the city was facing a shortage of affordable and social housing, which was exacerbated by wealthy foreigners relocating to Portugal in pursuit of a tax haven. This state of affairs led thousands of people to protest in the streets of Lisbon, screaming, “I have to choose between paying for a house and eating.”⁷⁹ Real estate prices have skyrocketed because of a vast disparity between the purchasing power of foreigners and home inhabitants.

Governmental interference in a product’s market price does not

restrict itself to the legal framework, but is often done by resorting to fiscal policies. Politicians resort to indirect taxes, such as the value-added tax (VAT) in Europe, which applies a fixed percentage to the producer's selling price of a good or service and is an *ad valorem* tax. This consumption tax is added to the final selling price borne by consumers in nearly all products sold in the European Union. Once again, governments interfere with the consumer's ability to acquire a given quantity of goods and services. Since the consumer has a fixed budget, they are forced to reduce their consumption because a portion of the available budget is allocated to the government, which does not use that money to acquire the same products.

Another way enabling governments to manipulate market prices is by applying tariffs on international trade. Tariffs are a specific type of tax or duty imposed on the import or export of a product. In 1776, Adam Smith alerted for the persistent existence of “*contrivances*” for building monopolies, stating that firms were acting with a “*view (...) to raise the rate of their own profit as high as they can; to keep the market, both for the goods which they export, and for those which they import, as much understocked as they can.*”⁸⁰ Political ties between public and private entities to extract benefits for some individuals at the expense of the remaining society are not new to mankind. As posed by Witold Henisz, and it is worth remembering, “*institutional environments in which economic returns can easily be secured through political channels lead individuals to reallocate resources from economic to political activity.*”⁸¹ And that explains a lot of our current society's lack of ethics.

Unless for recreational purposes, there is no sense in trying to produce at home what can be bought cheaper abroad. When a tariff is imposed on the importation of a good produced abroad, that is equivalent to increasing its price. Since consumers have a fixed budget to spend, they will be forced to consume less of that good while paying more for the national product. It is equivalent to an immediate reduction in the available income of every citizen. Furthermore, producers currently selling in the country are not compelled to lower their prices, as they are prevented from facing additional competition. By resorting to tariffs, governments engage in price manipulation that cannot be intended to safeguard overall welfare.

In February 2025, Donald Trump's administration imposed tariffs on Canada, Mexico, and China as follows: 1) 10 percent *ad valorem* tariffs on Chinese products and Canadian energy; 2) 25 percent *ad valorem* tariffs on Mexican and Canadian products, other than mentioned in point 1; and 3) the mandated tariffs apply in addition to any preexisting tariffs.⁸² If the import of goods from Canada is shaking the interests of some fellow Americans, would it not be easier to enact a law that those goods can no longer enter the United States? What is the rationale for avoiding such a measure while justifying increasing tariffs?

Tariffs apply everywhere. However, unilateral agreements between countries are often designed to mitigate the adverse effects of tariffs.⁸³ Mankind has even institutionalized the concept of the Most Favoured Nation (MFN). MFN treatment requires Members to accord the most favorable tariff and regulatory treatment given to the

product of any one Member at the time of import or export of “like products” to all other Members, where “like products” refers to two goods that are produced by two different trading nations. Indeed, the debate over whether this practice is beneficial or detrimental to human society sometimes arises. Still, it must be acknowledged that it can be reduced to analyzing how the governmental manipulation of price can be beneficial.

Should prices be left to be determined according to need?

We know that when prices are left free to be agreed between buyer and seller, as it happens in the flourishing marketplaces of Morocco, a single seller of a given product can enjoy too much market power that might jeopardize overall welfare if the producer decides to bring to market lower quantities of his or her product while asking for a higher selling price. For instance, when a monopolist farmer arbitrarily increases the price of corn simply because he or she is the only seller in the market, the magnitude of his or her huge profit signals to society that a critical need must be fulfilled. Hence, profit is a measure of society’s potential need and can only be con-substantiated through the price formation.

Nevertheless, the arbitrary increase in prices is often accused of causing inflation. However, this cannot be true if the amount of money in circulation is kept steady. Under a given budget constraint faced by the consumer, an arbitrary increase in the price of one product will lead to the rearrangement of the price-quantity pairs of

the remaining products; however, the rise in prices cannot persist over time. Society must not worry about inflation caused by an arbitrary price increase decided by the producer. Conversely, society must welcome the beneficial effects of above-normal profits, as they signal an economic activity that calls for new entrepreneurship to emerge, and the price mechanism provides correct guidance to economic agents.

Indeed, the intuitive idea that monopolies always represent a peril to society is something deserving of close inquiry. The word “monopoly” is a Greek compound of “mono,” meaning “one,” and “*polein*,” meaning “to sell.”⁸⁴ A monopoly is perceived as the legal right of being the sole seller of a given product in the market, whose exclusivity is usually granted by a governmental authority. A monopoly is a man-made intersubjective reality.

The idea of creating a reality where one person is the sole seller of a product to everybody else dates back to the beginning of the 15th century. In 1421, in Florence, Italy, an individual invented a device to transport marble and realized that he could only guarantee a high profit from the exploitation of that idea if the remaining society were prevented from building similar devices. So, he convinced the local government to recognize his copyright and ensure the exclusive exploitation of his invention for a given period. Later, in 1474, the first exploration license was issued in Venice, Italy. However, it was not until 1790, in the United States, that a country passed a patent law guaranteeing its inventor the right to exploit their invention under a monopoly regime.⁸⁵

This was the first move on the part of the inventor: getting society

to grant market protection, which would provide him or her with an incentive to continue innovating. Cumulatively, society realized that, by doing so, the patent falls into public knowledge. This situation allows for its improvement and awakens society to other related inventive possibilities. Despite awareness that the inventor may exploit the rest of society with their invention, the rule of exclusivity is created to reap social benefits that may exceed the cost.

Another common justification for the existence of some legal monopolies in modern economies is the massive fixed costs required to build infrastructure that serves the entire population. For instance, it does not make sense to have more than one railway company providing rail transportation for people and commodities in a given territory, as building two rail lines, almost side by side, to provide the same service would be an absurd waste of resources. This concept encompasses scale economies, in which the unitary average production cost decreases as productive capacity increases.

In 1977, following this token, but considering the possibility of a given number of firms competing to become a monopolist in specific market niches, Avinash Dixit and Joseph Stiglitz inquired about how scale economies evolve as consumers reward producers' efforts. The economists' study followed prior literature by examining how firms participate in the economic activities that society most needs. Aiming to explore consumers' heterogeneity, firms seek to find a market niche that provides monopolistic profits. This behavior might benefit society as a whole because heterogeneous consumers value product diversity.⁸⁶

Despite the awareness that the existence of scale economies

justifies monopolies, and acknowledging it is irrefutable that the optimal number of firms is only one when technology enables to continuously decrease the unitary average cost with an increase in the quantity produced, society fears monopolies due to their power to identify the maximum sell-price they can ask to provide a given quantity of their product or service. And, albeit counter-intuitively, this is the most outstanding merit of a monopoly!

Society is well aware that a monopolist can practice price discrimination in pursuit of profit maximization. By increasing the product's selling price and observing consumers' reactions, the monopolist can accurately identify the price-quantity pair that maximizes profit. Due to the existence of heterogeneous consumers in regards of budget dimension, where, historically, society is composed of a large number of poor people and a reduced number of rich people, there may be the case that the monopolist optimal sell-price that maximizes profit is set too high for the poor person's budget, while the monopolist is supplying a minimal quantity of the product, making it available to a small fraction of society only. Resources tend to be misused when this happens, but the laser precision in setting the selling price that the monopolist can achieve is only possible.

It is not the existence of a monopoly that we must fear, but rather the incapacity of a society to eradicate the harm of its existence. If the monopoly subsists under a condition of scale economies, it is welcome. Suppose the monopoly persists over time and the monopolist is too large to endure an average production cost above the minimum of the known technological average cost. In that case,

it represents permanent damage to overall welfare. However, it is not the price mechanism that is failing. The malfunction comes from an incoherent business environment that feeds market power imbalances. And that is often an ethical issue as well.

Typically, consumers number in the thousands, while producers are a small number. This reality enables producers and governments to define the price while consumers are forced to accept it. Aggregate demand in an economy is composed of many buyers competing to acquire the product. In contrast, aggregate supply comprises a small number of owners who control material resources and often collude among themselves to gain even greater control over the product's market price. In society, consumers are typically price takers.

However, there is a special situation where the entity buying in the market is the only one. This happens when a producer is a monopolist.

The monopolist is the sole seller of a given product or service, while relying on the suppliers of raw materials and labor skills that also sell to several other industries. Suppose the producer is the only seller in a given free market. In that case, it requires specialized knowledge and expertise specific to the monopolist's productive technology. In this situation, the producer can be the sole buyer of the fringe resources specific to their way of production. At least to some extent, the monopolist is also a monopsonist in the factors market.

In situations like this, aggregate demand is composed of a bare minimum of individuals, who sometimes even resort to contrivances

to set the product's market price, while multiple producers compete to sell in the market; aggregate supply, however, submits to the buyer's greater negotiating power.

The monopsonist sets the product's market price because it is a profit-maximizing entity. When the monopsonist is bargaining with a large number of sellers to settle a purchase, being the product homogeneous, he or she will make the deal at the lowest possible price.

In situations of severe market imbalances on the demand side of the economy, producers unite their efforts to act as a cartel and become, as much as possible, a monopolistic price setter. Producers engage in cooperative efforts when they understand the imbalance in negotiating power between them and the market's sole buyer and quantify the opportunity cost inherent in the situation. Often, for sellers, uniting efforts pays off more than continuing to compete among themselves. For instance, as outlined by Henry Hansmann, in the United States, "*cooperatives dominate important industries, such as basic agricultural and supplies, and have a large market share in others, such as wholesaling and production of business supplies and services, electricity generation and distribution, housing, banking, and insurance*". In contrast "*the overall share of economic activity accounted for by cooperatives is larger in advanced market economies than it is in less-developed economies.*"⁸⁷ The author identifies simple market power imbalances, or market failure situations, as one of the causes that explain cooperative efforts among economic agents. Imbalances in market power are one structural factor that helps explain some strategic market behavior by

firms. The effects of the group of producers' retaliation against the monopsonist will be complete if they successfully manage to act as a perfect cartel.

The struggle to gain market power always finds its limits in the conditions of the business environment. Apart from the government's clumsy interference, there are two other consistent primary sources of market power imbalances. First, there is a limit set by the consumer's purchasing power. Second, imbalances in market power reach an extreme when we consider the price of money. Both impact the price formation mechanism in a relevant way.

The effects of consumer purchasing power on price formation occur when a firm must adopt a policy for setting the selling price across different markets. Often, a firm can be a monopolist in both its home country and abroad, while producing entirely domestically. In this case, the monopolist engages in price discrimination, and its decisions condition human well-being everywhere.

When a firm can discriminate on price across different markets, the producer will set its price according to the quantities demanded by consumers in each location. However, the monopolist determines the quantity offered in each market to maximize its profit. The monopolist produces a given quantity of the final product and determines the quantities distributed to the different markets based on the local demand for the product. The selling price that is possible to ask in each market simultaneously defines the quantities the monopolist decides to supply. If it is possible to ask for a higher price in a given place while selling the entire production there, then the product will not be provided elsewhere. However, if it is possible

to increase production and sell it abroad at a lower price while still making a profit, then the monopolist will likely pursue this option. By the same token, if economic activity is prevented in a market abroad, as often happens during war, production at home can be compromised, and the welfare of society in the home country is also affected.

Across Europe in 2022, the price of a bottle of Heineken beer ranged from €3.80 in Iceland to €0.57 in Ukraine. Despite the currency being the same, the firm adjusts the product's selling price according to its interests and the target market's purchasing power. In 2024, Heineken beer prices around the world ranged from \$3.33 in Norway to \$ 0.30 in Nigeria.⁸⁸ Naturally, the higher prices are for the countries with the highest GDP per capita.

Currently, mankind is not facing boundaries regarding the simultaneous production and distribution of goods and services. Generally speaking, and despite Donald Trump's efforts to plunge the world into darkness, there is no confinement, yet that forces us to produce and consume in a specific location. This presents crucial opportunities to leverage economies of scale. This also means that we are living in a closed economy where we all depend on each other, and market power imbalances do not bring anything good.

The pinnacle of market power imbalance regards the price of money. The cost of money is the interest rate that is paid in the future when someone returns the money that was received from the lender, plus an additional value. Hence, the price of money is an inter-temporal exchange of purchasing power between two human entities. Suppose only one entity is entitled to hold all the money,

while numerous people request an intertemporal exchange. In that case, the money holder is empowered to demand a high interest rate to facilitate the trade. Moreover, the money holder is empowered to control the pace of economic transactions in society.

The written history of interest rates dates back to around 2,000 BC in Babylon, Mesopotamia, where the Code of Hammurabi regulated interest rates and established limits on the amount that could be charged. Similar practices were followed across history. The government's efforts to intervene in the price of money continued in ancient Greece and Rome, where different interest rate limits were established for both short-term and long-term loans. During the Middle Ages, the Catholic Church attempted to develop a moral framework for interest rates and sought to prevent people from lending and borrowing money by prohibiting the practice. Between the 14th and 17th centuries, interest rates varied widely, with some lenders charging as much as 40 percent interest on short-term loans. In the 18th century, alongside the Industrial Revolution, the Bank of England consolidated as a central bank, set interest rates, and controlled the money supply. In the 19th century, with the rise of international trade, central banks spread around the world, and interest rates were used to regulate the money supply and control inflation.⁸⁹

From the 20th century on, the central bank's control over the price of money reached an extreme by setting a well-marked difference between how much money can be bought and how much money can be sold. Credit is purchased and sold under a dictatorial reality and without respect for market balance. For instance, decided

in March 2024, the key interest rates for the euro area are: 1) the deposit facility rate, which banks may use to make overnight deposits with the Eurosystem at a pre-set interest rate; 2) the main refinancing operations rate, which is the interest rate at which banks can borrow money from the European Central Bank against broad collateral weekly and at a pre-determined interest rate that is above the deposit facility rate; and 3) the marginal lending facility which offers overnight credit to banks against broad collateral at a pre-set interest rate that is above the main refinancing operations rate.⁹⁰

By producing money at will, central banks can refuse to pay interest on funds deposited by customers while charging an arbitrary interest rate on loans granted with the money they have just produced. This tremendous control over the quantity of money in circulation and the price of its exchanges in society enables central banks to exercise an overwhelming economic power that the average citizen barely understands. In the 21st century, it has even enabled central banks to resort to negative interest rates.

Negative interest rates constitute a practice in which commercial banks are charged by their central bank for parking deposits rather than being paid interest for doing so. Besides being a massive devaluation of the general public's savings, it is often an excuse for banks to generate profits.

Central banks argued that they were trying to avoid an economic deflationary spiral, noting that in harsh economic times, people tend to save money and refrain from investing while waiting for the economy to improve. However, there is no clear understanding or definition of the economic circumstances in which a deflationary

spiral poses a real peril. Conversely, if you were entitled to produce money at will, would you care about producing \$100,000 while asking people to return to you \$90,000 a year later? Does it cost you anything or require any effort at all?

In 2024, the news agency Reuters reported that one Danish bank even offered a negative mortgage rate to attract business, effectively paying home-buyers to lend them money.⁹¹ This practice created an artificial demand directed to the real estate business. Practices such as this one create severe market imbalances because they induce the use of material and human resources where they are not needed. Manipulating the price of money is a source of biased economic power that is much more pernicious than that of a monopolist facing no competition.

We, therefore, conclude that prices must be left free according to needs, just as long as market imbalances are promptly and naturally taken care of. And that is where ethics and the definition of a proper business environment come in.

Chapter summary

The correct settlement of prices is fundamental to guiding economic activity. Its natural instability must be understood and embraced as a crucial component of a robust and economically powerful society. Although the fluctuation of prices creates uncertainty in society, it is something unavoidable, and the effects of the uncertainty it causes can be harmless if properly managed.

Several factors contribute to the persistent movement of prices, either up or down. First, the producer's arbitrary decision on the selling price is based on self-interest goals. These measures might be beneficial to society as a whole in cases of major force, such as when producers face a poor corn harvest. Alternatively, they might be detrimental to society when producers deliberately reduce the quantity supplied in the market to increase the product's selling price and maximize their profit. Second, and rarely fruitful to overall welfare, there is governmental interference in the final price borne by consumers. Taxes, tariffs, and an arbitrary definition of final selling prices are ways governments resort to in order to shake up the markets' normality. These are coercive practices that occur when governments lack the knowledge to build a thriving economy. Third, changes in consumers' reality trigger changes in the demand faced by producers. These changes might regard individual preferences, income structure, or simply casual fashion. Fourth, changes in the structure of supply desirably cause a downward movement in product prices through the simple effect of increasing the quantity supplied when new firms enter the market. Additionally, changes in the money in circulation affect the demand for different products, either boosting or compromising it. These changes are particularly bitter to society when banks unilaterally decide to raise mortgage interest rates.

Whatever the cause of price fluctuations, the economic power of a society is directly dependent on its capacity to understand what is going on and to safeguard that it is happening to protect society's best interests. Since, in a narrow view, a conflict of interests appears

to exist between producers and consumers, lenders and borrowers, and governments and citizens, variables that cause market imbalances include the regulatory system, political ties, and income asymmetries. Although these are man-made intersubjective realities, society often struggles to address price issues effectively.

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CHAPTER 5

Income

What is an economic income? How can it be an expression of the use of power?

In the realm of economic power, income is the ultimate goal. In 2012, the economist Joseph E. Stiglitz pointed out that, in the United States, from 2002 to 2007, “*the top 1 percent seized more than 65 percent of the total gain in total national income.*” The author further adds that “*while the top 1 percent was doing fantastically, most Americans were actually growing worse off.*”⁹² Therefore, income is a relevant aggregate to understand the dynamics of overall welfare.

The United States provided an interesting puzzle on what income represents in the expression of a society’s economic power. Specifically, from 1947 to 1989, the real gross domestic product per capita increased from \$15,248 to \$40,361.⁹³ During this period, the country's economy grew at an average annual rate of 2.289 percent. However, the country’s pace of income growth was not steady over this period.

In 1994, Paul Krugman outlined “*what real, broad-based prosperity looks like.*”⁹⁴ The author identified three disparate

performance periods of the United States economy from 1947 to 1989. One period, from 1947 to 1973, during which the economy grew at a relatively steady pace, without facing any significant downturns. This period was recognized as the Good Years. Two other periods, one from 1973 to 1979 and another from 1979 to 1989, occurred when the country's economy still managed to grow, but lost much of its prior momentum and faced years of hardship. The author identified a change in the pattern of growth, from a picket fence to a staircase, which signaled growing inequality in family incomes.

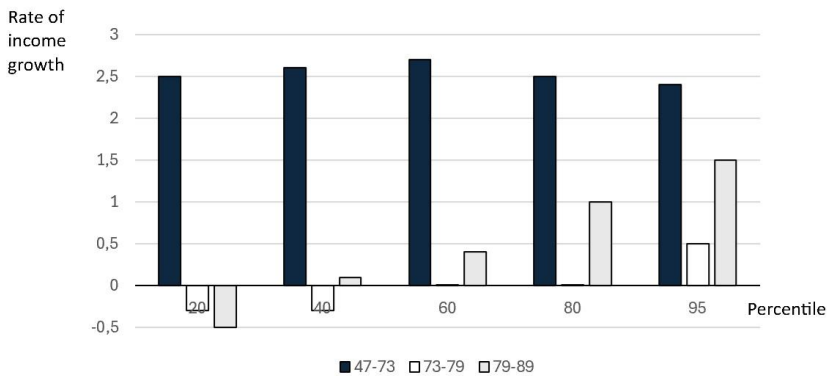
Specifically, from 1947 to 1973, the United States economy grew at an annual average rate of 2.39 percent, without facing any significant difficulties during these 27 years. From 1973 to 1979, the country's GDP per capita grew at an average annual rate of 1.62 percent, while this rate increased to 2.02 percent from 1979 to 1989. Since the country's economic power waned after 1973, it is interesting to identify what has changed from the first period under analysis to the following ones.

Paul Krugman highlighted this change by examining how income growth was distributed across the society's income percentile range over time. Figure 8 illustrates the state of affairs during each of the analyzed periods.

From 1947 to 1973, the income growth rate was evenly distributed throughout the entire society, from low-income households to the wealthiest individuals. That is why, in Figure 8, the rate of income growth resembles a black picket fence when we consider this period. However, when we consider the subsequent

cycles, from 1973 to 1979 and from 1979 to 1989, a gray staircase image emerges, where the poorest members of U.S. society became poorer, and the wealthiest members of society became richer.

Figure 8. The US rate of income growth per percentile



Source: Paul Krugman (1995) “Peddling Prosperity”

Paul Krugman further highlighted that “*the important questions about the rise in income inequality are, of course, why it happened and whether anything can or should be done about it.*”⁹⁵ Considering that the annual rate of income growth in the period from 1947 to 1973 was significantly more productive than what happened in the subsequent 18 years, there seems to be reasons to be worried about the existence of social inequality in the distribution of income.

This concern seems highly relevant to the expression of a society’s economic power. Joseph E. Stiglitz stated that “*by 2007, the year before the crisis, the top 0.1 percent of America’s*

*households had an income that was 220 times larger than the average of the bottom 90 percent.”*⁹⁶ Given the effects that the distribution of income seems to have for safeguarding overall welfare, it is, therefore, intriguing to understand what income is all about, what it is composed of, and how it can grow faster.

What is income

The definition of what “income” means is not always straightforward. According to the Cornell Law School, “*income is money or value that an individual or business entity receives in exchange for providing a good or service or through investing capital.*”⁹⁷ The financial services provider Bajaj Finserv considers that “*income is the money received in exchange for labor or products,*” which, interestingly, poses a direct connection between income and labor.⁹⁸ Almost confirming all of the above, the Cambridge Dictionary posits that “*income is the money that is earned from doing work or received from investments,*”⁹⁹ which restates the link between money and work efforts in society. Being aware of the correct definition of the word “income” in an economic sense is crucial for a broader understanding of what constitutes true economic power.

When hunter-gatherer communities were chasing prey and foraging for food, their livelihood was utterly dependent on the number of products they were able to gather. They did not use money to trade belongings among themselves. They bartered their

surpluses with those of others to improve the situation for both parties. Their living condition were improving or worsening according to each person's or community's ability to acquire the goods they needed. In a strict economic sense, "income" is how we make a living.

In the hunter-gatherer community, if a person found some chickens wandering in the wild, they could put them inside a fence and take care of them. Suppose that the individual found six eggs in the chickens' nests. He or she decides to eat three eggs, to put one egg to hatch, and to save two eggs for tomorrow. In this example, the entire production of the day consisted of six eggs, which was the person's income for that period. In sheer economic terms, income is the amount of output that mankind can produce in a given time.

Income components

Income components can reveal how income grows and the inherent inequalities in its distribution.

Retrieving the above example of the hunter-gatherer handmade chicken coop, we can easily identify how the day's output was split between three different uses. It remains plain that the day's consumption was equal to three eggs, for those eggs were eaten when produced. One egg was not consumed and was set apart to hatch, for the person aims to succeed in the birth of a chick that can grow up and become another hen that lays eggs in the future. On that day, investment equals one egg. Finally, two eggs from that daily

production were saved to be eaten the next day, as the producer did not know what the future would bring. Just in case the hens do not produce on the next day or lay fewer eggs than expected, the person is prevented from facing famine. Savings were equal to two. The output of a community is naturally composed of consumption, investment, and savings.

That is why the above definitions of income become so intertwined. Hence, when we use money (M) to engage in economic transactions, it is used for consumption (C), investment (I), and saving (S). Money has no other use at all. Using a mathematical notation, we can write

$$M=C+I+S \quad (2)$$

which is the economy's fundamental equation.

We therefore conclude that the income of a society is represented by all the money in circulation because it represents the sum of every use of income we resort to for improving our living conditions. Notice that the aggregates of Consumption, Investment, and Savings are three completely autonomous economic dimensions, each independently performing its contribution to safeguard overall welfare.

This is a crucial notion to understand how a society acquires and develops economic power. Currently, because we use money to perform economic transactions, society is not fully aware that income is simply everything we produce. It is merely the result of our work efforts. And no society can ever be flourishing and happy

if its members are unable to produce what they need. Ultimately, income is the reward of human creativity.

The monetary components of income

Because we use money to facilitate trade, we distribute the available money in society to every member, enabling them to make a living. Otherwise, the people will perish.

In Portugal, in the 1960s, in some rural areas, dozens of people worked from dawn to dusk for the landlord, receiving one-third of the entire production. During the cultivation and growth period of the crops, the landlord paid their employees a minimal salary intended to keep them alive while working the fields. The working hours were set by the sun, from sunrise to sunset. My father and mother-in-law worked just like that and are still alive to detail what was going on back then.

In this real-life example, the income of the employer and employees was directly related to the output of their work efforts. The employee's income came from a small salary and a small portion of the total production. The employer's income came from the profit made by selling the output to the remaining members of society. A landholder who was not engaged in work efforts could rent the land and live on that income. Therefore, in monetary terms, the components of income are profit, wages, and rent, and their sum always equals the monetary value of the output produced by a society.

When money gets in the way, economic activity acquires an additional dimension of complexity. We understand that, in hunter-gatherer communities, commodities were exchanged for other commodities to improve people's lives. Nevertheless, when money is used to facilitate trade, the person must first offer their commodity in exchange for cash, selling the product to acquire the products they need. Consequently, adopting the perspective that all that matters is "make money" is losing touch with reality by adopting a narrow view of the economic process.

Profit, wages, and rents are the monetary correspondents of the output produced by a society. They are used to engage in activities such as consumption, investment, and saving. The idea that the United States has been the most economically powerful nation in the world for the last sixty-four years is grounded in the fact that the country has consistently held the highest income in monetary terms. However, the notion that the nation is economically powerful should not be confused with the achievements of individuals or firms, and therefore, it remains under investigation. Because in our modern society, income is distributed through the hands of profit, wages, and rent, it is not possible to consolidate economic power without understanding its inner workings.

Profit

Profit is money. Profit is the difference between total revenue and total cost. Total revenue is the total amount of products sold times

their average selling price. Total cost is the full amount of money paid for all expenses, including operating, financial, and fiscal costs. Total cost encompasses the costs of goods sold, plus all other expenses, such as rent, equipment, inventory, marketing and advertising, research and development costs, insurance, taxes, license fees, the employer's normal wage, and employees' payroll. To the entrepreneur, profit is the income that is left in his or her pockets after the process of production and sale is completed. Hence, profit is the return on the entrepreneur's investment that exceeds the normal rate of return.

Although it may seem an easy concept to grasp, it is a tricky one. First, maximizing profit is not the same as maximizing revenue, nor is it the same as minimizing cost, nor is it doing both. Because this concept is not intuitive, we will detail it in Chapter 10, where we will delve beyond common-sense words. Maximizing profit occurs when the decision maker equates marginal revenue with marginal cost, which is distinct from maximizing revenue alone, minimizing costs, or achieving both.

The quality of management among entrepreneurs, driven by the pursuit of profit, defines the power of an economy. The firm needs to strive to be, simultaneously, the best producer and the best seller, where the term "best" requires clarification.

The firm that better controls costs can achieve higher profit at the same selling price of the final product. Procurement is the strategic process of sourcing, acquiring, and managing the materials used in the production of goods. Knowledge at the procurement level enables the firm to achieve greater success in its individual profit

goals, but extends far beyond the short-term trade. As Brian Uzzi showed in 1997, economic action is embedded in networks of relations that substantiate long-term commercial relationships, enabling control over production costs. The author even reports that *“Japanese auto and Italian knitwear industries are characterized by trust and personal ties, rather than explicit contracts, and that these features make expectations more predictable and reduce monitoring costs.”*¹⁰⁰ On the other hand, being the best producer or service provider, focusing on the market, and delivering high-quality products at even higher prices indicates that the producer is concerned about society's needs.

Maximizing profit is never a process of minimizing costs. A profit-driven society does not prioritize minimizing costs, as long as it can sell the product at a price that covers production costs. If the naive conception of free markets were to succeed, the entry of new firms would continue until the number of firms reached a point at which profit levels were zero, and average production costs were at their minimum. But this is not the case. Accordingly, a profit-driven society incurs higher costs than what is technically required to produce the same product.

Profit differences are measures of human inefficiency. Differences in profit levels between firms of the same industry indicate variations in know-how or market power stemming from financial issues, or both. The persistence of these differences means that society is not sharing knowledge, nor correcting market imbalances. Hence, resources are being wasted, and society has yet to learn to operate in a fully cooperative mode.

Some argue that, without profit, people would have no incentive to engage in investment activities. That is the same as claiming that in hunter-gatherer communities, humans had no incentive to create new weapons and traps that made it easier to catch prey in nature, because they could not foresee an improvement in income. Increasing income is the reward of creativity, and investment activities are meant to safeguard income across time. The relevant income to human well-being is composed of products and services, not money. Moreover, the monetary form of income is the sum of profit, wages, and rents, and is nothing but a representation of the output's value. In purely monetary terms, in society, we have to increase one of these aggregates to increase income; however, it is useless if output does not increase as well, and only prices rise. In this sense, profit helps, but it is far from being the best driver of success.

Wages

Wages are money. Unlike differences in profit, differences in wages are not necessarily related to human inefficiencies. In 1776, Adam Smith provided the first and most widely cited explanation of why income inequality is unavoidable in society. These were his words.

“The five following are the principal circumstances which, so far as I have been able to observe, make up for a small pecuniary gain in

some employments, and counterbalance a great one in others. First, the agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expense of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercised them; and, fifthly, the probability or improbability of success in them.”¹⁰¹

Hence, several situations foster natural income inequality, arising from the nature of employment itself. This inequality stems from labor and the natural heterogeneity of tasks, as well as the existing human and material resources. All of the above show that income inequality among members of society does not necessarily distinguish between entrepreneurs and employees. We can consider profit to be the entrepreneur's wage and realize that all of the above apply equally well. This is essential to be cognizant of, because in a society where firms exhibit only normal profits, it is still possible to identify normal differences in profit levels across industries.

Once again, in a society that relies on accounting practices to establish a balanced business environment, it becomes even more crucial to record the entrepreneur's income as wages. In addition to being the entrepreneur's income, wages are also the price and reward for labor. And, as we have seen in the previous Chapter, there are situations where a monopsonist, holding the power to decide how much to pay for a production factor, manages to acquire the quantity of the productive factor that maximizes profit, even if it leaves resources unused. This has severe consequences for the employment

levels that a society can achieve.

Wages are at the core of the distribution of income among members of society. Profit is the entrepreneur's wage, as it is their sole source of income. Wage is the employee's exclusive source of income. And the rent collected by the landlord is nothing but the wage of his or her labor in taking care of the property. According to the Oxford Learner's Dictionary, wage is "a regular amount of money that you earn, usually every week or every month, for work or services."¹⁰² Generally speaking, when people cannot earn a wage, they must manage to survive at the expense of someone else.

There are several reasons we do not achieve a full-employment economy, but they all boil down to an analysis of income distribution. Despite the average citizen is seldom aware of this reality, the reasons why the human society is not securing a full employment reality is because of the following concomitant causes: 1) entrepreneurs' abnormal profit would be zero almost instantaneously at the expense of employees' wages; 2) workers believe that they had to split income with unemployed people; and 3) politicians are afraid of losing their social function of taking care of the least favored society members. All of the latter encompass the fear of losing income.

Known human efforts to safeguard wage levels began around 1750 BC in Babylonia, when the Hammurabi Code stipulated a prevailing wage in employment contracts for the construction of vessels.¹⁰³ Seeking large-scale cooperation to acquire bargaining power is a behavior observed throughout human history.

Organizations of workers formed to attain improvements in

wages, benefits, and working conditions, which became widespread during the Industrial Revolution in the 18th century, and are known as labor unions.¹⁰⁴ In the United States, in 1786, in the city of Philadelphia, a group of printers went on strike demanding a minimum wage of \$6 per week, which seems to have been the first strike to occur in the country.¹⁰⁵

Now-a-days, the web site of the AFL-CIO (American Federation of Labor – Congress of Industrial Organizations), which encompasses a large number of affiliated unions, such as, among many others, the Actor’s Equity Association (AEA), the Air Line Pilots Association (ALPA), or the American Federation of Government Employees (AFGE), claims, in its home page, that it can grab higher wages of \$191 per week than their nonunion counterparts, and that their affiliated are more likely to have employer-provided pensions and health insurance while enjoying better work places and working conditions without the fear of retaliation.¹⁰⁶

Labor unions have consistently engaged in a fight with employers to secure a larger share of the available income. However, it is not known that a labor union has ever been firmly committed to working with the broader society to achieve the reality of full employment.

This is odd because the highest possible wages can only be achieved under a reality of full employment. Under a full employment reality, where every active person is employed, the only way to expand business or acquire a competitive advantage is by hiring an individual who is working for someone else. For that person to be attracted to a job change, the hiring employer is pushed

to offer a higher wage than the one the worker is currently receiving. Following a similar path, every employer is aware of this threat coming from competition and prevents harassment of their employees by increasing their payroll in anticipation. In a full employment reality, strikes will no longer be necessary to demand higher wages, as wages would soon reach their maximum level.

What precludes unions from struggling for a full-employment economy? As outlined in Chapter 3, Trafigura is one of the world's leading suppliers of critical resources, including oil and petroleum products, metals and minerals, gas and power, renewables, hydrogen, and carbon. In 2023, the company achieved a profit per employee of \$592,451.

Regarding the pertinent level of wages in a human society, a final question arises: What hinders a political party from claiming a reality of full employment? Political parties are raised to defend the most disadvantaged in society, allegedly. The goal of every political party is to become the government. Governments typically claim to have a social function of caring for those who are unable to care for themselves. And they collect taxes to fulfill this purpose. Once again, taxes are a portion of the available income.

In our global society, humanity has never achieved a fully employed economy because fear often takes precedence. Employers fear losing their profit standards. Employees fear losing a portion of their wages. And politicians fear losing their ability to collect taxes. As shown by Daniel Kahneman and his peers, the human fear of loss is approximately 2 to 2.5 times higher than the desire to gain.¹⁰⁷

Rents

Rents are money. Rents are the landlord's gain. This rough definition of rent requires enlightenment.

In 1933, Joan Robinson posed that “*the conception of rent is the conception of a surplus earned by a particular part of a factor of production over and above the minimum earnings necessary to induce its work.*”¹⁰⁸ She began a digression on the subject of rent, arguing that land is closely connected to the idea of a free gift of nature, because it does not require payment to exist. Rent is the payment that someone makes to use the land; it is therefore a surplus over and above the minimum earnings required to use the land.

The importance of this idea lies in its ability to be generalized by other production factors. The author pointed out that “*the necessary minimum for an entrepreneur is the level of earnings which is sufficient to prevent him from relapsing into the ranks of employed labour*”¹⁰⁹ and, obviously, many persons, either employer or employee, receive a real income greater than this necessary minimum. Accordingly, following this token, both profit and wages often enjoy rents.

A property that is not being properly maintained is a resource wasted by society. In this sense, the payment that the landlord receives for looking after their belongings can be seen as the wage for the committed work effort.

Profit, wages, and rents are monetary forms of income. They are nothing less than the reward of the labor of the employer, employee, and landlord. The entrepreneur usually enjoys an accounting wage

plus an accounting profit. The landlord receives the accounting rent. The employee relies on his or her salary to survive. It is easier to view all forms of income as wages because they all reward work effort.

However, regardless of the wages someone earns or their consistency over time, the real well-being delivered by that source of income depends on the prices at which the necessary goods and services are brought to market.

Income effects

Prices and income are, therefore, two sources of uncertainty that mankind must learn to deal with.

In the 1990s, Christopher Carroll and his peers conducted several fascinating studies to understand consumer behavior in the face of income uncertainties.¹¹⁰ They began their analyses focused on observed behavior.

For instance, one of the curious facts outlined by the authors is that “*of the consumers who participated in the Federal Reserve Board’s 1983 Survey of Consumer Finances, 43 percent said that being prepared for emergencies was the most important reason for saving*” and “*only 15 percent said that preparing for retirement was the most important saving motive.*”¹¹¹ The authors ended up concluding that consumers are both prudent, in the sense that they have a precautionary saving motive, and impatient, in the sense that if future income were known with certainty, they would choose to

consume more than their current income.

The authors concluded that consumers have a “buffer-stock” behavior. That is, *“buffer-stock savers have a target wealth-to-permanent-income ratio such that, if wealth is below the target, the precautionary saving motive will dominate impatience, and the consumer will save, while if wealth is above the target, impatience will dominate prudence, and the consumer will dissave.”*¹¹² When impatience is dominating, consumers exhibit a desire to borrow due either to a high time preference rate or to high expected income growth. These studies highlight the significance of income uncertainty in consumer decision-making.

In the United States, the household saving rate averaged 8.42 percent from 1959 until 2024, reaching a record high of 32.00 percent in 2020, when the COVID-19 pandemic brought huge uncertainty to people’s minds. An all-time low of 1.40 percent in 2005, when the economic expansion was firmly entrenched in the country, for payroll employment has increased in the labor market for the second consecutive year, and core inflation remained subdued.¹¹³

Every person can conduct an introspection to evaluate the accuracy of these conclusions regarding their own behavior. These thoughts help to realize how a society’s economic power can be enhanced. A society that can reduce income uncertainty naturally creates conditions for a steady aggregate standard of consumption and investment, while lowering savings as much as possible. And savings, being a portion of the output that is not consumed or invested when produced, represent a potential for future waste.

Real income

In the individual decision-making process, the relevant income depends, simultaneously, on the amount of money we receive from our work and on the prices of the goods and services we need. To consider whether we have a high or low income cannot be measured appropriately unless we have a price reference for the basket of goods and services we want. That is why the United States' national poverty line is considered \$24.55 per day, while Ethiopia's national poverty line is around \$2.04 per day. Real income is simply the amount of goods and services that are possible to acquire with a given wage.

We understand that the entire money in circulation will be used to purchase a given basket of goods and services at the weighted-average price. Hence, when banks grant consumer credit, they enable a person to enjoy an instantaneous budget increase, which is immediately available for spending. This new money will be used to purchase products that are already made, and sellers will request higher selling prices, as they perceive an increase in the purchasing power of demand for their products. They do not want to miss a profitable opportunity.

The same effect occurs when new money is created and thrown into circulation. The consistent creation of new money through the production of credit causes a general increase in the prices of goods and services. It is precisely equivalent to a decrease in income caused by lowering wages.

Inflation, defined as the consistent increase in prices across time,

can only be caused by the continuous creation of new money. The reason people fear inflation is that it can be further destructive through the effect of expectations.

Once producers anticipate a rise in the cost of the productive factors, such as wages and the price of raw materials, and begin asking for higher selling prices even before having to face higher production costs, they enter a destructive economic spiral by being the artificial cause of rising prices that preclude the entire production from being sold. And this emotionally based behavior can bring severe pain to society, as it has happened with Hungary in 1946 and has been so painful to Venezuela in recent years.

Typically, governments struggle to establish a well-functioning economy. They do not even understand much about how they can help consolidate economic power. In 2014, in the United Kingdom (UK), according to a Dods Monitoring poll commissioned by the website Positive Money, 71 percent of the UK members of parliament believed that only the government has the power to create money. Moreover, only 10 percent understood that banks create new money every time they make a loan and that money is destroyed whenever individuals or businesses repay loans.¹¹⁴ But real income depends on the rules that govern market behavior. Good politicians matter a great deal in creating a powerful business environment that consistently improves everyone's real income.

Income for whom?

Employers, employees, rulers, and banks all need to secure a steady portion of society's real income to survive. All these entities are splitting society's income among themselves. When politicians are entitled to a regular wage, society intends to enjoy their contribution to improving everybody's life. Accordingly, they are providing a service that is welcome to all. When banks offer means of payment to facilitate trade and safeguard our savings, keeping our values stored and protected, they are also providing a valuable service. But when banks produce money, the extension of the benefits it brings to society is directly related to the contribution to society's output.

The contribution each economic agent provides to society's output extends far beyond the value of their revenues. While the increase in productivity is usually welcome, people often try to capture an immediate portion of the available income while completely disregarding the costs involved in its production. For instance, when Joseph E. Stiglitz served as an advisor to President Clinton, he proposed the concept of a "Green GDP account" that would account for the depletion of resources and environmental degradation caused by regular economic activity. At the time, the coal industry knew that it would mean higher control over its actions and, as expressed by the economist, "*it used its enormous influence in Congress to threaten to cut off funding for those engaged in this attempt to define Green GDP, and not just for this project.*"¹¹⁵ An expression of human tragedy...

Chapter summary

Income is how we make a living. We produce to raise an income. Income provides satisfaction to a human being through consumption, investment, and saving. The way the income is split among these three uses varies over time, is conditioned by output uncertainty, and requires adjustments in economic activity. Income improvements are the reward of human creativity.

In monetary terms, income is composed of profit, wages, and rent. Their sum expresses the value of society's total output.

Profit is the entrepreneur's abnormal wage. Since the entrepreneur finds purpose in satisfying individual needs, he or she seeks to capture the largest share of available income while expending the least possible effort. This goal is achieved by increasing production up to the point where the cost of producing one additional unit of output equals its selling price; if it is lower, it compensates for the cost of making and selling one more unit. The profit-maximizing entrepreneur does not maximize revenue nor minimize production costs; instead, they equate marginal revenue with marginal cost. Accordingly, a society that relies on profit maximization goals produces at higher average costs than what is technically possible. In an economically healthy society, where waste must be nullified, profit, in its strict sense of an income that exceeds the entrepreneur's needs, is zero.

Wages, in turn, exhibit a natural disparity between employment. This is due to facets such as how agreeable, cheap, easy to do, or difficult to learn the job is. Employees engage in large-scale

cooperative efforts to take a portion of employers' income. However, to achieve the highest possible level of wages, employees must secure full employment in society. As long as everyone who needs a job gets one, their wages will be as high as possible. Some argue that these would pose issues regarding society's productivity. But these problems can be solved in a balanced business environment that empowers every economic agent to act freely in response to the available opportunities. A wage-based society, operating in a fully cooperative mode, can produce at the minimum possible cost, with firms of the proper size —neither too big nor too small —and adequately financed by the financial system. This matter will be addressed in Part 3.

Rent is the third form of monetary income, representing the landlord's wage. Rent is the payment the owner receives for allowing someone else to use their property. However, the property often exists regardless of whether it generates income for the owner. Landlords can only enjoy a steady income while their property is in demand, which carries a dose of uncertainty.

When severe income uncertainty worries hit the community, emotionally driven decisions are made, and society gets mad. Hungary in 1946 and Venezuela currently are examples of such foolishness. We have not yet learned to deal with these difficulties.

As an employer, employee, politician, or banker, every person needs to secure a consistent income. While employers and employees produce highly tangible goods and services, and politicians are responsible for maintaining social order and overall welfare, banks provide essential services such as payment

mechanisms and the custody of valuables. Banks also produce money that has no intrinsic value and is useful only when credit is directed towards financing productive entrepreneurship. This late concept will be addressed in the next chapter.

The economic power of a community is consolidated when society can raise the real income and ensure its distribution among all its members.

CHAPTER 6

Credit

Setting aside the potential bankruptcies, what is good credit, and what is bad credit? When does credit contribute to overall income improvement?

The etymological origin of the word “credit” comes from the Latin “*creditum*,” meaning “a loan, thing entrusted to another,” whose neuter past participle was “*credere*,” meaning “to trust, entrust, believe.”¹¹⁶ Across history, despite its heart-centered origin, the contribution of credit to help mankind improve welfare has been highly clumsy and staggering, sometimes contributing to thriving moments, sometimes contributing to outrageous monstrosities.

The known use of credit began in ancient Mesopotamia, around 3000 BC, when farmers would borrow seeds, promising to harvest the land, and then share their crops to pay their debts. In this instance, the practice of credit contributed to improving the living conditions of both the creditor and the debtor. In the first moment, the seed surplus of one man was used to satisfy the seed deficit of another, while being the creditor entitled to receive in return from the debtor a portion of the surplus in crops that the future was

expected to bring. The agreement was written in a contract tablet.

This contract of good faith evolved into a written form to safeguard the good intentions of participants. In Babylonia, the Code of Hammurabi extols the prior existence of good intentions and trust presiding over the relationship in its rule 48.

Rule 48- *If a man owe a debt and Adad inundates his field and carries away the produce, or, through lack of water, grain has not grown in the field, in that year he shall not make any return of grain to the creditor, he shall alter his contract-tablet, and he shall not pay interest for that year.*¹¹⁷

This enactment reveals how the risk of economic activity was intended to be shared transparently between creditor and debtor, and that there was a broad understanding that both parties should bear major force events. If things went as expected, both parties would have scored a gain. If not, both parties accepted their losses.

However, acknowledging that good faith is not always at the center of every human relationship, the Code of Hammurabi required that, in addition to safeguarding the participants' good intentions, the truth be certified. Hence, the Code foresaw several procedures to ensure people could not engage in deceptive practices. Rules 122 to 125 outlined the procedures that society members should adopt to ensure the truth prevails.

Rule 122- *If a man gives on deposit without witnesses or contracts, and at the place of deposit they dispute with him (i.e., deny the deposit), that case has no penalty. Another silver, gold, or anything else on deposit, whatever he gives, he shall show to witnesses, and he shall arrange the contracts and (then) he shall*

make the deposit.

Rule 123- *If a man gives on deposit without witnesses or contracts, and at the place of deposit they dispute with him (i.e., deny the deposit), that case has no penalty.*

Rule 124- *If a man gives to another silver, gold, or anything else on deposit in the presence of witnesses and the latter disputes with him (or denies it), they shall call that man to account, and he shall double whatever he has disputed and repay it.*

Rule 125- *If a man gives anything of his on deposit, and at the place of deposit either by burglary or pillage he suffer loss in common with the owner of the house who has been negligent and has lost what has given to him on deposit shall make good (the loss) and restore (it) to the owner of the goods; the owner of the house shall institute a search for what has been lost and take it from the thief.¹¹⁸*

Over time, both the use of credit to improve living standards and the need to provide credibility to participants in economic activity have been maintained in tandem. When the development of trade throughout the Middle East and into the Mediterranean evolved, several issues demanding a solution arrived: 1) some people had a surplus of product and others require it but had not the immediate means to pay; 2) the agriculture's output was uncertain in time and quantities, affecting buyers' timing payments; and 3) when goods were conveyed long distances, buyers' wanted to see the product before paying.¹¹⁹ Hence, trust and certainty guide good business practices, and trade development accrues from improvements in credit activities.

Nevertheless, despite the need for formal arrangements of

commerce always being present, the history of credit entered a bleak period due to religious pressures. Both Christianity and Islam condemned usury, the practice of lending money to receive interest at unreasonably high rates, without specifying what is considered to be unreasonable pricing of money. In the Middle Ages, the influence of religion was so pervasive that, in the words of Alain Plessis, society developed a “*very hostile mentality towards anything that resembled usury.*”¹²⁰

Regardless of the institutional environment’s shape, social events involving large-scale cooperation focused on a shared goal have always enjoyed transformational power. At the end of the 11th century, Pope Urban II called for Christians to embark on a crusade against the Muslims, aiming to retrieve control of the city of Jerusalem in the Middle East. When the city came under military control, the call drew people from all over Europe to the city’s temple. As posed by Aaron Wozniak, “*these travelers faced a strenuous and dangerous journey as they traveled throughout several independent kingdoms in Europe, and provided easy targets for robbers.*”¹²¹ In 1119, to protect the pilgrims engaged in such a quest, the Pope ratified the establishment of a military force headquartered in Jerusalem, at the Temple of Solomon. This force became known as the Templars.

During the 12th century, besides receiving donations from many Christians who saw them as pure and upright good men, the Templars set networks of contacts throughout several European kingdoms, organized a mesh of toll roads, charged fees for the upkeep and protection of the areas around Jerusalem, and evolved

into a financial banking system institution that lent money in exchange for income such as mills, livestock, and rents under written contracts that specified when the debt was fulfilled.¹²²

During this period, the Templars adopted practices that foreshadowed the development of modern financial systems. Firstly, they took in local currency and issued demand notes redeemable at any of their castles across Europe. The movement of money without the risk of robbery while traveling became a reality, and the use of credit notes, accepted as a means of payment, began to spread. Secondly, regarding the large amounts of credit the king borrowed, it is said that the Crown Jewels were kept under the Templars' guard as security during the loan.¹²³ Hence, the concept of collateral acquired acceptance as well. The Templars became a class of people who operated above the law, profiting from lending money despite the religious prohibition on the practice. And they utterly understood that it was possible to amass a massive wealth by simply buying and selling debt.

However, regardless of what religious rules dictate, the need to manage surpluses and deficits has always existed in humanity, and human daily practices have set up ways of circumventing the law. In Florence, Italy, two very well-known merchant-banking companies emerged in the 13th century: the Bardi and the Peruzzi.

According to Edwin Hunt, “*the Bardi began business in England as early as 1267 and within a decade participated in wool exports, papal banking, and a Loan to Edward I.*”¹²⁴ The Italians were engaged in a highly profitable import-export wool and cloth business. The wool was purchased from growers in England to be

sold to manufacturers in Flanders and Italy, or to be used in their own facilities in Florence to produce cloth. Contracts were made for several years ahead, and large payments were made in advance. Monasteries were essential growers and enjoyed the credit. This commercial relationship further enabled the Italians to engage in papal banking activities, as English monasteries used some of this credit to pay their dues to the papacy. These events occurred in England under the tacit agreement of the king.

The king needed cash to fund immediate expenses and war efforts and resorted to wealthy merchants for credit. The merchants, in general, and foreigners in particular, knew very well that they could not engage in large-scale commercial activities unless they had the “*purchased favor of the prince.*”¹²⁵ Due to the hypocritical social dominance towards usury imposed by religious formal standards, the king concealed his true intentions. He rewarded the wealthy merchants with prizes such as monopoly rights, duty reliefs, and “*gifts.*”¹²⁶

There are reports that, eventually, everyone involved in raising funds for the monarchy was engaged in cheating. These included exporting merchandise without customs clearance by the open connivance of the wool controllers and collectors, underpaying wool producers, and under-reporting the amount collected.¹²⁷ Moreover, Edwin Hunt outlines the obscure activities of Bardi and Peruzzi by disclosing that “*they, along with most other merchant-bankers in Florence, had firmly supported the wars in the northern Tuscany in the belief that acquisition of territories there would increase the security of their trades with northern Europe.*”¹²⁸

Due to financial and political difficulties in Florence, coupled with the losses inflicted by Edward III of England, who heavily defaulted on loans, the collapse of these firms occurred almost simultaneously: the Peruzzi in 1343 and the Bardi in 1346. These facts highlight the deceptive practices that humanity often resorts to when pursuing selfish goals without considering the full consequences that affect everyone. And credit does not escape from such an envelope.

The valuable contribution of credit to a thriving society is grounded in its capacity to empower individuals who envision a business opportunity but lack the necessary wealth to deploy the facilities and other operational requirements needed to pursue the endeavor. Bardi and Peruzzi relied on a multitude of small investors as the chief source of asset financing, which funded two types of investments: participations in specific commercial ventures and advances on merchandise ordered; the former was called “accomandigia” and the latter was called “depositi.”¹²⁹ These were mainly short-term, limited-risk investments that enabled entrepreneurship to thrive but were “*not intended for lending to improvident monarchs.*”¹³⁰

The evolution of credit in society, for both consumption and investment activities, occurred as a natural consequence of a gradual increase in the use of credit notes as a means of payment, replacing metallic money. The link between metallic and fiat money, institutionalized through the credit note, became necessary.

The use of metallic money for value storage was adopted by mankind because of its essential qualities of cognizability, utility,

portability, divisibility, indestructibility, stability of value, and homogeneity. The use of credit notes, instead of metallic money, demands an equally suitable system to safeguard these properties. This goal was achieved by assigning a specific amount of metal weight to each coin produced. For instance, in England, the silver pence weighted 2 grams of silver, and half-pence a weight of 1 gram of silver.¹³¹ Hence, during the 15th and 16th centuries, when Spanish conquerors brought silver and gold from Latin America's mines, the increase in the money supply was associated with rising prices, and the continuous production of money created room for inflation.¹³² Nevertheless, since credit notes were used to replace metallic money during the 17th and 18th centuries, humanity continued to evolve the processes through which money was created, while maintaining the link with the gold standard.

In 17th-century London, the goldsmiths' business centered on the production of silverware, the trade of silver and bullion, and the exchange of foreign and national coins.¹³³ These firms had secure safe-boxes where the silver and gold products were stored. For this reason, they began to be chosen by the general public as the safe depositories for gold and silver coins.¹³⁴

Initially, the goldsmith issued a deposit receipt in the depositor's name. Later, in the mid-17th century, the receipts were issued to the bearer and began to be used as a means of payment because they were backed by the trust that the gold had been deposited with the goldsmith. Due to the general acceptance of goldsmith's notes as a means of payment, depositors came to demand the issue of a large number of receipts, each representing a small fraction of the value

deposited. And, as posed by Alexander Faure, “*it did not take long for a goldsmith-banker to appreciate that if the goldsmith-banker’s receipt were being used as a means of payment, then loan demand could be satisfied not by coins, but by the issue of new goldsmith-banker receipts.*”¹³⁵

This practice of providing loans rested on the principle that a certain amount of gold was in the safe-box and that the depositors would not come to withdraw their deposits all at once. A fractional reserve system emerged, in which the creation of new money was limited by a shared sense of avoiding exceeding a minimal proportion of gold reserves.

In 1776, Adam Smith explained that in the 18th century, some persons, allegedly entrepreneurs, were able to make a living by simply rolling loans between banks, continually increasing the amount of debt. Although it may seem that these individuals lived at the expense of the banking system, they actually lived at the cost of the general public, as the creation of new money led to a general increase in overall prices.¹³⁶

During the 18th century, in France, under Louis XVI, numerous discounters and local banks ensured the circulation of bills of exchange to finance trade.¹³⁷ This expansion of the banking system was pursued throughout the first half of the 19th century, when approximately 20 respected banking houses were settled in Paris, owned by wealthy families. One of these was James Rothschild, who was in the French capital for the first time in 1812 and became the most prominent financial player in France.

These merchant bankers began controlling the trade of wheat,

tobacco, mercury, and cotton fabrics, launched the country's first savings banks and insurance companies, founded metallurgical and mining firms, and actively participated in railway construction. As posed by Alain Plessis, James Rothschild reached even an essential political role and *“thanks to the solidarity that united him with his brothers, to his frenzied work, to the privileged relations he maintained in the ruling circles without ever linking up with any form of government, and to his exceptional business sense, he was able to move with the times and build up a company that outclassed all of its rivals.”*¹³⁸ He died in 1868, 54 years after arriving in France. At the time of his death, he left an astounding fortune, even by today's standards, of 150 million francs!

This brief exposition on the history of credit up to the 19th century illustrates the evolution of human money creation. It provides a candid insight into how this intersubjective reality shapes the lives of society's members. It reveals how resorting to credit practices can help a society thrive, as well as how their misuse can be detrimental to overall welfare.

Notice that when a myriad of Florence inhabitants deposited their savings with the hands of Bardi and Peruzzi companies, and this money was used to finance either the extravagances of kings or the horrors of wars anywhere, these savings were put in peril of reimbursement. Simultaneously, when a bad harvest time occurred, and the price of food increased, this crowd would naturally come to their banks to collect a portion of their wealth, which would serve to keep them alive until the following season. And the bankers could not fulfill their legitimate expectations. A society's economic crisis

is always a period of diminished income production, and emotionally led events can aggravate it.

Another crucial notion that stands out in history regards the effects on overall welfare due to the development of credit. The impact of this new money creation is quite different, whether it is meant to finance consumer expenses or investment endeavors. The former poses a risk to the financial system and constitutes an increasing peril that grows in proportion to the borrower's uncertainty about their ability to repay the loan. The latter contributes to overall economic development just as long as society can develop new productive facilities that increase overall income.

In 1934, Joseph Alöis Schumpeter highlighted the contribution of credit to economic development by posing that “*the essential function of credit in our sense consists in enabling the entrepreneur to withdraw the producers' goods which he needs from their previous employments, by exercising a demand for them, and thereby to force the economic system into new channels.*”¹³⁹ The argument that only the entrepreneur needs credit was further corroborated by the author by stating that “*means of payment can only perform their capital role in the hands of private individuals.*”¹⁴⁰ Until now, history has shown that, despite the usefulness of credit for boosting economic development by financing investment, the society's lack of control over the levels and paths of credit invariably endangers overall welfare. And the major economic crises always left hard scars from such moments.

Great Depression

The idea that savings are required to enable investment becomes less compelling when we understand how credit can evolve. First, the goldsmith-bankers' creation of new money, out of thin air and just by issuing a paper note, caused the overall money in circulation to increase and, consequently, the price of the goods already produced and available for sale to rise. Hence, the general public, whose budget to spend stood still, was forced to consume fewer quantities of the available products. In this sense, savings equals investment if we consider that creating money out of thin air is an investment activity because the goldsmith-banker is entitled to receive in the future the value of the goods and services that the borrower will acquire with this new money, plus interest. And the full reimbursement will come from the income generated by the borrower through his or her work efforts.

Since the current financial system is entirely dependent on borrowers' success in repaying loans, there is a tendency to create imbalances in regular market functioning that jeopardize overall welfare in several ways.

Firstly, a successful entrepreneur needs to utilize the financial system to implement the initial business plan. Once successful, the entrepreneur is typically able to finance future investment endeavors using the cash flow generated by regular business activity. Therefore, a successful entrepreneur tends to reduce their involvement with financial lenders gradually.

Secondly, because banks fear loan defaults more than anything

else, they increase their focus on lending against collateral only, making it impossible to finance good business ideas from “want-to-be” entrepreneurs who lack any real estate to offer as collateral. Thus, using collateral prevents a competitive economy from happening. With time, both proclivities lead to severe economic imbalances.

In 1929, a severe economic crisis erupted in the United States, which soon spread globally. Roger Backhouse refers to the ‘cutthroat competition’ to illustrate the economic environment in which the United States lived by 1929, just before entering the Great Depression, where the control of fifty percent of industrial activity was in the hands of a mere 200 great corporations.¹⁴¹

In this kind of environment, economic imbalances are likely caused by the economic structure itself, regardless of any government intervention. Moreover, by extending to a few persons the power over market functioning, society lays a wide carpet for a small part of its members to walk freely while taking advantage of others. And ethical behavior is easily put on hold.

The relationship between savings, credit, and investment becomes even more troublesome to society when difficult times, such as these, are man-made disasters. We know that an economic crisis is a period when society reduces output below its technological capacity. However, concluding about the cause of the economic slump is not as straightforward as it may seem.

In the aftermath of the Great Depression, two renowned economists, John Maynard Keynes and Friedrich Hayek, disagreed on its causes. In 2016, Antonio Magliulo addressed the disagreement

between the two famous economists regarding the cause of the Great Depression, which occurred between 1929 and 1933. The author states that “for Keynes, the crisis was caused by an excess of saving over investment; for Hayek, on the contrary, by an excess of investment over saving.”¹⁴² Thus, even for an experienced and qualified economist, it can be troublesome to identify the actual cause of an economic crisis.

The Great Depression was the first major worldwide economic crisis. It loomed at the end of the ‘roaring twenties,’ a period of euphoric economic prosperity, propelled by unprecedented industrial growth.

By 1929, at the end of a decade of prosperity, the United States’ economic system had become unstable. The economic instability was manifested in the October stock market crash, followed by the emergence of bank failures. By the end of 1933, total unemployment reached an astonishing 25 percent. Barry Eichengreen posits that the “distress in the 1930s was sufficiently widespread that commercial banks voluntarily abandoned their investment banking businesses.”¹⁴³ Therefore, the relevant question is to understand what was triggering such instability, leading banks to refrain from engaging in their usual business activities.

One direction in which research explains the economic instability experienced at the end of 1929 in the United States rests on non-market activities. Following the First World War, a broad range of antitrust legislation was enacted to protect the economy against monopolies and monopolistic practices.¹⁴⁴ There was an understanding that markets could break down due to wage and price

rigidities supported by a view that “*mechanical forces of supply and demand did not determine prices but merely determine the constraints within which human psychology would operate.*”¹⁴⁵

Despite such concerns and legislation, the entire industry was highly concentrated in the hands of a few large companies. For the market economy to function correctly, it must absorb aggregate savings through aggregate investment while ensuring equilibrium between aggregate supply and aggregate demand. However, the economy was operating at full employment, and savings continued to outpace investment.

At this stage, some economists point to labor market inflexibility as a cause of imbalances, arguing that only by increasing wages can firms capture the resources they need to deploy new investments. Therefore, in their view, wage rigidities on the economy’s supply side precluded entrepreneurs from engaging in new investments.

Other economists suggested that the failure lay in the capital market, which was unable to channel savings into new investments. Nonetheless, by this line of reasoning, the massive breakdown of competition caused by the growth of monopoly has caused the catastrophe. Allegedly, non-market activities were a contributing factor to the Great Depression, as a few managers had taken control of investors’ wealth and were making business decisions outside of regular market pressures.

Bruce Kaufman provides evidence that the labor market did not fail. The author argues that during the first seventeen months of the Great Depression, from October 1929 until the beginning of 1931, “*wage rates declined by only about 2 percent*” while “*in the final*

eighteen months of the downturn, wage rates decline by more than 25 percent” which poses that lowering wages in a depression might be the ignition for a race to the bottom.¹⁴⁶ So, the author argues that when the so-called downward adjustment in the wage rate occurred, aggregate demand sank even more sharply until the end of 1933, setting up the worsening of the crisis, not its recovery.

Looking at this line of thought, it is possible to accept that both Keynes and Hayek are correct. Firstly, the significant growth in aggregate demand during the 1920s set a path of prosperity that propelled investment to unsustainable levels. According to Barry Eichengreen's research, the banks' perception was that the investment had reached such high levels that their managers decided to abandon their investment banking activities. Hence, if savings indeed increased in banks' vaults during the 1920s, there is no doubt that savings stopped being used to deploy new investments, leading to an excess of aggregate supply over aggregate demand. In this sense, Hayek is correct in posing that the excess of investment over saving was the cause of the catastrophe.

Had people continued to spend at the same pace during the 1920s, there would have been no reason for the large industrial companies to put a hold on new investments. Had people continued to consume at the same pace, new investments would have absorbed the usual savings, and the depression would not have occurred. These arguments give support to Keynes's proposition that the cause of the crisis was an excess of saving over investment. Anyway, a pause on credit operations or financial intermediation was certain.

Milton Friedman introduced a somewhat different perspective to

explain the cause of the Great Depression. Money is typically aggregated into broad categories that measure the total quantity of money in the economy. “M2” is a money aggregate composed of physical paper and coin, plus travelers’ checks, demand deposits, money market shares, and savings deposits. “M2” is thus representative of the money available for all economic agents that use the same currency to engage in their usual business activities. John Duca (2017, p. 53) outlines that, in the United States, “*the cumulative decline in M2 from 1929 to 1933 was a large 33 percent*” and “*despite rising of its bottom in 1933, M2 was still 3 percent below its 1929 level in 1937.*”¹⁴⁷

Furthermore, Milton Friedman posed that “*beginning in the mid-1928, the Federal Reserve System, concerned about stock market speculation, adopted a monetary policy of nearly continuous restraint, despite its desire to foster business expansion;*” moreover, the “*cyclical contraction began in August, 1929, well before the stock-market crash in October, 1929*” which “*no doubt did shake business confidence and may well have produced a rise in liquidity preference.*”¹⁴⁸ When banks stop performing their usual credit operations while keeping the collection of their loans’ regular installments, they are reducing the money available in the economy. Herein, we are in the realm of true economic power.

Notwithstanding the contributions of producers, by engaging in non-market activities, and consumers, by decreasing their propensity to consume, following Friedman’s reasoning, we are persuaded to identify that the reduction in available money in the economy was truly the spark of the Great Depression. It is interesting to note that

overall man-made economic conditions were setting the stage for the crises. Market departure from perfect competition might have a contribution. Additionally, either Keynes's or Hayek's analysis led to similar conclusions regarding the economy's final stage, in which new investments were not being deployed. Therefore, solving the problem is more imperative than identifying who's right about what has caused so much trouble. Milton Friedman might have just fingered the wound by pointing out the role of money in unraveling the plot of the crisis.

The Great Recession

Understanding what the world has learned from the Great Depression can be gained by identifying the differences and similarities between the Great Depression and the Great Recession. The literature highlights a multitude of factors that influenced the emergence and evolution of the Great Depression. In addition to the factors mentioned above, research identifies several other drivers of the crises, including the role of bank failures in undermining credit intermediation, poorly guided monetary policy, deflation, increased default risk, and non-market factors.¹⁴⁹ The Great Depression spilled over into international financial markets and extended its influence into international trade. Finally, according to John Duca, in the incubation period of the Great Depression there “*was high rates of mortgage foreclosures rooted in earlier unsustainable lending practices,*”¹⁵⁰ which was accompanied by a clear asset price boom

before the economic downturn. Those are all commonalities between the two great world economic crises.

The Great Recession began in 2008 and lasted until 2012, exhibiting several notable differences in how economic authorities responded to the situation. First, and perhaps of paramount significance, M2, in the United States, in 1937, just after the Great Depression, was 3 percent below its 1929 level, whilst “*M2 was 65 percent higher in the comparable period of the Great Recession*”¹⁵¹ In the Great Recession, authorities managed to prevent further losses by fueling the aggregate demand side of the economy with additional purchasing power.

It is worth outlining the technical differences in how the Central Bank addressed its interventions in the two crises. Nonetheless, there remains no doubt that the Federal Reserve acted more promptly as a lender of last resort during the Great Recession than it did during the Great Depression. John Duca argues that both cases are evidence of a dangerous combination of low interest rates and weak regulation of shadow-banking institutions, such as insurance companies, investment trusts, and private firms, which allowed for the unfathomable growth of credit. The response from financial policy during the Great Recession focused on bolstering banks with liquidity, ensuring the regular functioning of the securities market, and supporting borrowers. Finally, the author emphasizes the increased degree of international coordination on monetary issues, which has led to coordinated responses, such as interest-rate coordination among lending central banks and the provision of fiscal stimulus packages through negotiations mediated by international

organizations, including the G-7 and the G-20.

Although the literature suggests that much remains to be done to prevent the emergence of economic crises, it must be acknowledged that the world's response to the Great Recession demonstrates that lessons were learned from the Great Depression. Beyond the absurd inefficiencies that always accompany economic crises, it is crucial to eliminate the possibility of their occurrence, especially given the immense human suffering that an economic crisis entails. Past economic crises must spur our determination to thoroughly understand economic relationships and build welfare safeguards to face any future economic outcome that may arise.

Such a feeling motivated Milton Friedman to become an economist. He made his decision in 1932. He said that “*my major problem with the world is a problem of scarcity amid plenty... of people starving while there are unused resources... people having skills that are not being used*”¹⁵² thus outlining the vital contribution an economist may give to our welfare, preventing pain, and enhancing well-being. However, the whole society always contributes to recovery from difficult times.

Setting the pace of an economy

The role of credit in setting the pace of overall welfare is of remarkable importance. In 2008, Gary Gorton and Ping He examined the effects of bank credit cycles on the economy. They provided “*empirical evidence that bank credit cycles are an*

important autonomous part of business cycle dynamics,”¹⁵³ meaning that bank credit cycles are indeed a source of macroeconomic fluctuations.

This happens because banks compete openly with one another for lending credit without knowing their competitors’ credit standards. However, banks are aware of each competitor’s relative performance in the market, as they can access publicly available information, such as accounting statements. Therefore, if a given bank’s competitor is doing better by lending more credit, then the bank itself is persuaded to increase its credit-lending activity. When a given competitor starts showing lower performance, all banks in the market react, applying the handbrake and slowing the whole economy. Drawing on disparate studies, research indicates that bank lending standards play a significant role in explaining aggregate economic activity.

Controlling the money in circulation

Therefore, the effects of growing money are so shocking to overall welfare that controlling the money in circulation is mandatory. There are three main reasons presiding over the need for control.

First, and foremost, a reduction in the money in circulation always causes a decrease in overall income. This effect is caused by the diminution of each person’s budget without being simultaneously accompanied by a reduction in the prices of the various goods and services. Accordingly, following a decrease in the quantity of money

in circulation and at market prices, producers cannot sell the exact quantities as before, and wages do not change either. As a result, some firms are forced to lay off employees, which increases the unemployment rate. Society is induced to produce less than what is technologically possible while wasting available resources.

Second, the continuous increase in the quantity of money in circulation leads to a general price increase which, if unbridled, may reach levels so high that prices are artificially increased by producers in anticipation of future high costs of raw materials and wages, even before employees and suppliers having asked for such claims, as it happened in Hungary after World War One and is currently happening in Venezuela.

And third, given the profusion of different currencies in circulation worldwide, which, at least since the 13th century, have been converted into one another at exchange rates, the decentralized production of money in one place seems to endanger people's well-being everywhere. At a global scale, for these three reasons, the leading players in our financial system argue that this control should be exercised by a central bank holding the power to set the pace of overall welfare.

The emergence of central banks dates back to the 17th century, when people began to realize that the lack of control over the quantity of money in circulation led to inflation and counterproductive effects on overall welfare.

Understanding how central banks emerged in human history provides crucial insights to clarify their usefulness.

In 1624, Sweden introduced the copper standard. One gram of

copper is worth significantly less than the same weight in silver or gold, and the Swedish coins were intended to be used equivalently. Consequently, copper coins were heavier than usual, and the Swedish even minted a 20-kilogram coin, making their use impractical. In 1660, the Swedish government began minting new, lighter coins, prompting the public to rush to their banks and request their old copper plates, which could be used to produce a large number of lighter coins. This run could not be fulfilled, and the Stockholms Bank began issuing deposit certificates called “Credityf.”

The new banknotes were well accepted and, in a very short time, the bank flooded the Swedish economy with a large quantity of money. The massive inflation caused by this action led the general public to lose confidence in the bank. Again, the public ran to Stockholms Bank to exchange their “Credityf” for copper coins. Again, a demand that could not be fulfilled.

In 1668, the bankruptcy of Stockholms Bank forced the government to intervene by deciding that the loans would be repaid and the credit notes withdrawn, thereby founding the Riksbanks Ständers Bank; today, it is known as Sveriges Riksbank. The bank started issuing paper money ever since and is recognized as the first central bank in the world.¹⁵⁴

The Swedish central bank was established through a government effort to look after overall welfare, but this is not always the case with many central banks worldwide.

In 1694, 26 years after the foundation of the Swedish central bank, the Bank of England was established to issue paper money, to

lend to the government, and fund an ongoing war.¹⁵⁵ The Bank of England remained private until 1946, when it was nationalized.¹⁵⁶ In the United States, the Federal Reserve was created in 1913, and is a private bank from its inception.¹⁵⁷

At a global scale, controlling the quantity of money in circulation has become a significant challenge. Indeed, history has shown that holding the power to set the pace of mankind's well-being is distinct from mere military or political power. Military power is established by force, in which violence compels populations to obey, regardless of what good sense would suggest. Political power refers to holding the support of the general public, and it is usually the first step in acquiring military power. Although these two powers significantly shape human reality, they cannot secure overall welfare on their own. That is something that only economic power can do. It cannot be properly done by setting aside ethical behavior.

After World War I, the world began to develop concerns about overall welfare. Raymond Mikesell, a former economist (from 1942 to 1947) in the Division of Monetary Research in the U.S. Treasury Department, and an active participant in many pre-Bretton Woods meetings between U.S. and foreign-country representatives, posed that “*peace was seen as linked with world prosperity, and prosperity, with free trade, free capital movements, and stable exchange rates.*”¹⁵⁸ These arrangements ended up in 1944 when a gathering of 44 nations met in Bretton Woods, in the United States, to agree upon the creation of a new international monetary system.

The preparatory conversations for the raising of the International Monetary Fund (IMF) and the World Bank, as well as and their first

plans, started to be raised, at least, as soon as 1941, during World War II, when the U. S. Secretary of Treasury, Henry Morgenthau asked Harry White, director of the Division of Monetary Research in the U.S. Treasury Department, to write a first draft memorandum on the creation of these institutions after the war.¹⁵⁹

The plans for establishing these institutions were fully developed by the United Kingdom, led by John Maynard Keynes, and by the United States, led by Harry White. Formal and informal discussions took place across time with the presence of many foreign country representatives during the years of 1943 and 1944, and the basic negotiations evolved on exchange-rate stability, foreign-exchange practices, the source of funds, and the lending policies of the Fund.¹⁶⁰

One of the ideas discussed was the creation of an international currency named “Unitas,” which would be drawn from the Fund and accepted in exchange for any country-member’s currency.¹⁶¹ Moreover, discussions evolved around the unconditional right that each member would have to draw an amount of money from the Fund.

The functions of the two institutions, the International Monetary Fund and the World Bank, were meant to be differentiated, as both were intended to engage in financial activities. White’s proposal stated that “*The Fund is designed chiefly to prevent the disruption of foreign exchange and to strengthen monetary and credit systems and help in the restoration of foreign trade, whereas the Bank is designed chiefly to supply the huge volume of capital to the United Nations and Associated Nations that will be needed for*

reconstruction, for relief, and for economic recovery.”¹⁶² Despite all the care that was taken to acquire a global control over the quantity of money in circulation, it was settled that loans to private enterprises performed by the World Bank would not have to be guaranteed by the borrower’s government, thus providing for making it easier to happen. Nevertheless, Article 3, Section 4 (vii) of the Bretton Woods agreement stated that “*Loans made or guaranteed by the Bank shall, except in special circumstances, be for the purpose of specific projects of reconstruction or development.*” Rather than being constrained by the formal agreement, more than one-third of the World Bank loans have been in nonproject form.¹⁶³ The two institutions have had significant control over our global welfare in the last eighty years.

It is crucial to outline the International Monetary Fund's direct actions in several scrutinized countries. Portugal, Ireland, Italy, Greece, and Spain were derogatorily called “PIIGS,” a horrible acronym used by the international financial markets during the European debt crisis that followed the period of the World’s Great Recession.¹⁶⁴

By the beginning of the 2010s, these countries were bearing what was considered to be huge public debts and imbalanced budget deficits. According to Article 126 of the Treaty on the Functioning of the European Union, a country’s debt should not exceed 60 percent of its GDP. Additionally, the government’s budget deficit should not exceed 3 percent of the country's GDP. Whether these figures are reasonable will be addressed in Part 3; however, these guidelines were not the primary concern regarding the financial

stresses of these countries. The Great Recession exacerbated these countries' difficulties in fulfilling their financial liabilities to their lenders, which was the underlying issue.

The IMF support came with the imposition of significant structural reforms in the countries, such as: the reform of labor market, the liberalization of non-tradable commodities and services sector, the privatization of enterprises, the judicial reform, the reorganization of banking system, the reduction of budget deficit, the reduction of social benefits, the increase of taxes paid by enterprises coupled with a reform of the tax system, the reform of universities, the reform of provisions on environmental protection, the reform of the retirement system, and the reform of the health sector.¹⁶⁵ All of these requirements further extend the scope of financial aid to reach the point where the IMF fully replaces the role of the government ruling the country.

The Bretton Woods arrangement, which led to the establishment of both the World Bank and the IMF, was primarily designed to ensure that trust in the international monetary system would never be shaky. From the very beginning, these institutions were focused on stabilizing exchange rates among member countries. They resorted to the gold standard's convertibility of each country's currency to achieve this endeavor. However, in 1971, U.S. President Nixon unilaterally decided to suspend the dollar's convertibility into gold. This measure introduced a floating exchange-rate international system, making it harder for any country's authority to control the money in circulation or assess a society's actual credit needs.¹⁶⁶ We are living in a worrying period.

Chapter summary

Banks buy and sell credit. Banks buy credit when customers deposit their wages, which the bank then takes good care of. Banks may even pay their customers interest on the money customers trust them with. Credit is sold by banks when they produce a loan that will be redeemed in the future. If banks lend the money that was first entrusted to them by their customers, then the difference between the money's buy and sell prices is simply the financial intermediation. In the 13th century, the Bardi and Peruzzi were the first to do it on a large scale and were later successfully imitated by James Rothschild.

Credit has two main goals: Consumer credit and investment credit.

When credit was used to enable the consumption of goods and services by governmental entities, as Bardi and Peruzzi did by lending money to the English kings, the refund of this money was to be ensured by two sources only: the loots of war or the collection of taxes. Either way, the remaining society was suffering from a practice that only benefited the lender and the borrower. Moreover, when new money was created by granting it to the English king, it also exerted upward pressure on England's overall prices.

When new money was created to enable the deployment of new businesses and the further improvement of the existing productive activities, just like James Rothschild did in France during the 19th century, the entire society benefits from the creation of new money, while remaining to identify how the accrued income thus generated is going to be distributed across human society. And that is why

James Rothschild left a vast fortune at the time of his death.

However, when investment credit is performed by using the myriads of savings coming from a large number of small investors, which it was the primary financial source of Bardi and Peruzzi, in Florence, in the 13th century, the entire society benefits from the business development it enables because a fraction of income that is put standing still by the saving process is going to be immediately used by the society without any further waste.

A key consideration regarding the provision of consumer credit with the creation of new money is its impact on small investors' savings. This was precisely what happened with the goldsmith-bankers in England in the 17th century, when they realized they could create banknotes and use them to buy the goods and services they needed at will, as long as they took care to keep the inflation thus generated under control. In this situation, the goldsmith-bankers quickly realized that it was not necessary to pay too much interest on the savings deposited in their vaults, for they could print new banknotes and therefore set the interest rate they wished on the money lent. Consequently, the possibility granted by society to banks to create money at will constitutes a process of immediate devaluation of the general people's savings.

A final crucial notion on credit practices is the understanding of the effect on overall welfare of resorting to collateral to lend money. The Templars kept the Jewels of the Crown under custody, but what happened to those who did not possess any treasure and still needed credit? When credit is granted on collateral, two things may happen: Either the loan is fully repaid in the future, making the prior

existence of collateral useless, or the borrower defaults on the credit. The former means that resorting to collateral enables only a select few to enjoy bank credit. The latter is a problem that can be easily solved in a developed society, provided a source of income is ensured for every member. The only reason the financial system still requires collateral to lend money, whether from a multitude of small deposits or the creation of new money out of thin air, is that human society is currently unable to ensure an income source for all its members.

Controlling the amount of money in circulation enables a person to influence the overall welfare of society. Therefore, a question arises: Is it advisable to have several currencies in use simultaneously?

CHAPTER 7

Exchange rates

Why do we have so many currencies?

The first known official currency, made of an alloy of gold and silver called electrum, was minted in Lydia, now Turkey, in 600 BC by King Alyattes.¹⁶⁷ Since ancient times, rulers have persuaded the general public that the right to control money belongs to them. Coins, like flags, have been used as symbols of national independence and royal sovereignty.¹⁶⁸ The importance conveyed to the king's coinage portrait has been such that there is a British tradition of facing each new monarch's bust in the opposite direction to that of their predecessor. Although the reason for this tradition is not entirely clear, it is a behavior that signals a change in command.¹⁶⁹ Nevertheless, the strong bond between controlling money and holding political power has never been broken yet.

Particularly during the Middle Ages, the royal rights and privileges of monarchs, of which mining, coinage, and tariffs were the most important, were their primary source of income and enabled them to enjoy the highest living standards of their time. Accordingly, these birthrights were examined solely from this perspective, without

a clear understanding of the consequences for overall welfare. Notwithstanding this direct relationship between income and money, monarchs soon discovered that controlling the currency was also a crucial tool of power. And they sought to keep it.

The vast majority of princes used to mint coins in gold and silver, with copper also being possible. The proliferation of gold and silver coinage led monarchs to attempt to establish a fixed exchange rate between gold and silver. The value of either gold or silver coins was defined by the amount of the metal contained in each coin, which the specialist could determine, but the layman could not.¹⁷⁰ This fact allowed people to debase coins by filing the edges to remove a small portion of the precious metal while maintaining the coins' ability to perform regular trade. The widespread acceptance of light coins enabled the general public to increase the amount of money in circulation, thereby creating continuous inflationary pressures and jeopardizing overall welfare.

By the 16th century, the multitude of kingdoms in Europe, each seeking to control its own currency, posed a problem that some monarchs considered too challenging to solve. Adam Smith eloquently outlined these difficulties in an excerpt of his digression concerning the banks of deposit.¹⁷¹

The currency of a great state, such as France or England, generally consists almost entirely of its own coin. Should this currency, therefore, be at any time worn, clipt, or otherwise degraded below its standard value, the state, by a reformation, can effectually re-establish its currency. But the currency of a small

state, such as Genoa or Hamburg, can seldom consist altogether in its own coin, but must be made up, in a great measure, of the coins of all neighbouring states with which its inhabitants have a continual intercourse. Such a state, therefore, by reforming its coin, will not always be able to reform its currency. If foreign bills are paid in this currency, the uncertain value of any sum, of what is in its own nature so uncertain, must render the exchange always very much against such a state, its currency being in all foreign states necessarily valued even below what it is worth.

It is therefore clear that the use of multiple currencies of economies of different sizes created two main difficulties in safeguarding value. First, the general public's continuous coin debasement increased the amount of money in circulation, immediately devaluing each currency unit. This was a mandatory consequence because a higher quantity of money was available to purchase a fixed quantity of already produced goods, leading the price of each good to increase naturally, and the purchasing power of each currency unit, as might be expected, to decline. Second, the continuous devaluation of the currency hindered credit operations, as lenders had to charge higher interest rates to prevent borrowers from losing purchasing power when repaid. Human society began actively addressing these two problems in the 17th century.

By 1600, the Dutch Republic in Central Europe was facing Adam Smith's small-state problems. Amsterdam was a commercial center, and settling debts in a specific coin or metal was impractical. Cashiers and money changers benefited directly from debasement

practices, and minting-ordinance regulations enacted by authorities were ineffective in adjusting the value of coins to actual price changes. There was a total of 54 mints, of which 14 were under governmental control, and 40 were in private hands. As put by Stephen Quinn and William Roberds, *“because they were all legally recognized and created a common pool of coin, debasement was a type of tragedy of the commons whereby the rewards went to the first to debase.”*¹⁷²

Each coin had two values: the value of the metal in it and the known value in terms of its unit of account. Therefore, people would bring their coins to the mints to be converted into bullion, or would do the opposite, according to the most profitable procedure. Coupling this propensity with the debasement problem, lenders could not be protected against the devaluation of their credits.

This state of affairs led the Amsterdam business community to advocate the creation of an exchange bank, the Wisselbank, which would address the debasement problem by limiting deposits to coins above a certain quality, which specialists would confirm, and commercial debts would be embodied in bills of exchange settled through the city's exchange bank. The settlement of bills in bank money reduced the propensity for debasement activities and was the first successful attempt to address the problem. The bank was founded in 1609.

To encourage the community to resort to the Wisselbank, the Amsterdam city council stipulated that private bills of exchange exceeding 600 guilders (a guilder was the Dutch basic monetary unit) had to be settled through the Wisselbank, and cashiers were

prohibited. Over time, deposits with the Wisselbank became the norm, and the bank was able to monitor debtors and disseminate news of defaults. International trade was conducted at a more stable interest rate, as experts guaranteed the value of the metal coins deposited in the Wisselbank. However, within the Dutch Republic, the proliferation of multiple coins persisted, and the problem of debasement remained a pressing issue. For instance, in 1612, the silver patagon and ducatoon were two common coins that originated from the southern Netherlands. This situation made it difficult for the Wisselbank to keep ordinance prices in line with circulating prices, as it was obliged by statute, while making it impossible to be consistent in protecting creditors.¹⁷³

In 1645, the patagon had become the basis of the Dutch Republic's monetary system and had different values inside and outside the Wisselbank. To address this situation, the Amsterdam city council empowered the Wisselbank to issue patagons for withdrawals, with patagons valued at 2.35 florins when deposited, and the withdrawal rate was set at 2.4 florins.¹⁷⁴ Soon, the Wisselbank was allowed to adjust the rate to reflect the lightness of the patagon, and the coin started to be common on both sides of the exchange bank. Afterward, buyers and sellers of Wisselbank funds meet every morning at the square in front of the Amsterdam Town Hall to trade. The floating exchange rate was introduced to protect creditors, as the exchange bank rate and the market rate could differ, allowing the bank to adjust itself according to its needs. Finally, the bank was able to pursue its goal of insulating creditors from debasement while adjusting official prices to the reality of

debasement.

It is worth noting that a money market has developed in Amsterdam due to the potential to capitalize on gains from the variability in the value of multiple coins in circulation and the differences in their prices between inside and outside the Wisselbank. John Maynard Keynes posed that one of the reasons why people seek to hold money is the speculative motive, which he defined as “*the object of securing profit by knowing better than the market what the future will bring forth.*”¹⁷⁵ However, Wisselbank officials were always in a position to know better than the market what the future would bring, and that remains a reality that central banks worldwide continue to enjoy.

This brief historical retrospective on the challenges posed by a society that uses multiple currencies helps us to understand what is at stake when safeguarding overall welfare is our goal. On the one hand, it urges preventing harm caused by inflation. On the other hand, there is a need to protect creditors' interests to ensure savings are consistently used to boost investment activities and avoid waste. However, control of money in circulation has stubbornly remained in the hands of a few, often to the detriment of the rest.

The existence of rules to control the arbitrary creation of money is essential to safeguard human development; however, as a global society, we have yet to determine how to do so effectively. The above exposition on the events that occurred in the Netherlands during the first part of the 17th century highlights the benefits of using a single currency, particularly in terms of controlling the stability of its value and protecting all creditors. Mankind is still

struggling to establish a proper financial system that serves everybody's interests and remains free from individual manipulation.

In 1979, the European Economic Community introduced the European Currency Unit (ECU), a unit of account composed of a basket of several European currencies. Each currency had a fixed value in the basket and a flexible weight, defined by the European Monetary System. The process aimed to establish a flexible exchange rate system with limited flexibility. Typically, each currency could fluctuate by 2.25 percent against the others, and central banks were compelled to intervene in the markets, buying or selling the currency to stabilize its value. The ECU was a scriptural currency or book money, available only on the current accounts of the bank system. Nevertheless, due to its practical effects on the stabilization of the value of each currency, it had practical repercussions in the ordinary citizen's life.¹⁷⁶

When, in 1942 and 1943, Harry White and John Maynard Keynes met to plot the Bretton Woods agreement, they aimed to stabilize international trade by adopting fixed exchange rates, whose value would be uniform through the establishment of a fixed relationship with the value of gold. Harry White even raised the possibility of creating a new international currency unit, called "Unitas," which would be defined in terms of physical units of gold, and John Keynes proposed a currency named "Bancor," of which a vote of the members could change the gold value. It is interesting to note that both men's plans for a single new international currency were developed separately in the United States and the United Kingdom. The American media disclosed the former on April 7, 1943, while

the latter was officially released on April 8, 1943. These thoughts and debates led, later on, to the grounds of the International Stabilization Fund, and, subsequently, to the International Monetary Fund (IMF).¹⁷⁷

The merits of the Bretton Woods agreement, as a mankind's consolidated effort to raise an adequate global financial system, seem to have vanished entirely in 1971 when President Nixon, unilaterally, decided to suspend the dollar's convertibility to gold. This decision is already unusual when considering the importance of monetary stability in safeguarding overall welfare. Still, it becomes even more striking when we realize that the Bretton Woods agreement established the United States dollar as the world's foremost reserve currency.¹⁷⁸ It is therefore pertinent to understand why this happened.

By 1941, the United States' agricultural crop surplus had become a significant political concern, motivating the establishment of an international agreement with a scope similar to that of the Bretton Woods Agreement.¹⁷⁹ The United States needed to secure a solid export market in the years that followed World War II, and this importance was kept highly relevant in the years to come.

As explained by Raymond Mikesell, in 1954, the Agricultural Trade Development and Assistance Act approved by the American Congress had foreign agricultural disposal as its primary goal, and many supplementary purposes as well, including: *“(1) the expansion of international trade; (2) increasing normal (dollar) markets for U. S. agricultural commodities; (3) improving the foreign relations of the United States; (4) encouraging economic development abroad;*

(5) the acquisition of strategic materials; and (6) promoting "collective strength" and fostering the foreign policy of the United States."¹⁸⁰

The link between trade and currency stability cannot ever be ignored. However, in 1970, according to data disclosed by the U.S. Department of Agriculture, the leading purchasers of U.S. agricultural products were Japan, Canada, the Netherlands, West Germany, and the United Kingdom, with Japan alone importing more than \$ 1 billion.¹⁸¹ Therefore, a question emerges: Given this strong engagement of the United States in international trade, what were the motives that led Nixon to abandon the gold standard and let loose a portion of the Bretton Woods agreement?

There are several reasons why an economic environment composed of a single currency, similar to a fixed exchange rate regime, challenges the control of a single individual over the money in circulation. These reasons relate to the dynamics of trade and how money is used to support further economic activity.

First, when an exporting firm negotiates with a foreign trade partner to sell a good produced in the seller's home country, the amount of foreign currency the seller receives is deposited in the home country's bank and exchanged for the export country's currency. For example, suppose Coca-Cola decides to sell \$1 million worth of drink bottles to Chile. In that case, the firm will receive the corresponding value in Chilean pesos, which will be exchanged in a United States bank for \$1 million deposited into Coca-Cola's home bank account. This means that the total amount of money in circulation will rise in the United States, remaining under Coca-

Cola's control and free from any liability to the United States' financial system.

Second, following the prior export operation in our example, under a regime of fixed exchange rates, such as the one established by the Bretton Woods agreement, the amount of Chilean pesos now deposited at the United States bank can be exchanged for its corresponding value in gold at the Chilean central bank. This means that the gold reserves of the Chilean central bank cannot be sustained indefinitely in the face of a persistent trade deficit, in which the country imports more than it exports.

Third, still under the same example, since commercial banks are usually allowed to create new money up to a fractional limit of the amount of money that is resting deposited in the institution, the amount of money in circulation in the United States is stimulated to an additional increase by the usual lending process, posing inflationary pressures. Suppose the markets are allowed to move freely. In that case, the rise in home country prices will lead to a general price increase, including wages and the cost of raw materials, and the export firm will face a higher domestic production cost. The export firm will start to face difficulties in exporting its product because it has become more expensive. But this obstacle can only be actual if the same good can be produced abroad. Often, that is not the case.

Fourth, the increase in the amount of money in circulation in the export country puts downward pressure on the interest rate. In our example, this effect encourages holders of savings deposited in the United States financial system to withdraw them and replace them

with another asset abroad, where the return may be higher. The search for higher interest rates abroad results in a decrease in the exporting country's financial system's money in circulation, in the opposite direction of the effect produced by the export operation.

These four numbered reasons explain why our global financial system operates under a flexible exchange rate system. Under a fixed exchange rate regime, the central banks of an exporting country lose their ability to control the amount of money in circulation, have to bear an increase in domestic prices, and, the bitter cherry on the top of the cake, they lose their ability to control the fraction of overall income they can secure. And they lose this last power to the exporting firm. On the other hand, in the importing country, because exchange rates are fixed under a mandatory relationship with gold that central banks must comply with, they are continuously pressured to go bankrupt as long as the trade deficit is maintained. Accordingly, no central bank wants a regime of fixed exchange rates or a single world currency that would come to a similar meaning.

Under a regime of flexible exchange rates, the natural effects of manipulating exchange rates according to central bank interests are left to the general public to resolve, just as they were in the 17th-century Wisselbank in Amsterdam. If the domestic currency is devalued, the importing country's population will bear the increased price of imported goods. Consequently, the importing country's living conditions deteriorate due to a devaluation of the home currency. Conversely, the devaluation of a home country favors the export firm whose goods and services become cheaper to trade abroad. When the money from export sales enters the home country,

creating inflationary pressures, in the eyes of the central bank, it can still be seen as a problem to be solved by the general public, as long as the central bank can secure its share of the overall income.

Understanding these dynamics enables us to align the course of historical events with the numerous political decisions made by governments worldwide. After World War II, when the world seemed genuinely concerned about consolidating peace and fostering a global economic environment of prosperity, efforts were made to establish effective institutions that would ensure this goal. The United States had an agricultural surplus to deal with and was also worried about being duly refunded by its international partners. Undoubtedly, a regime of fixed interest rates was the way to solve this issue. So, mankind engaged in it.

However, due to the clash of micro interests encompassed in economic activity, such as those held by a central bank, an exporting firm, and a government official seeking to remain in power, the fixed exchange rate regime established through the Bretton Woods agreement had to be abandoned.

By 1968, the United States' balance of payments had a deficit of \$610 million.¹⁸² This huge deficit, which the country had accumulated during the 1960s, stemmed from the depletion of its gold reserve. The country's gold stock decreased from \$15 billion in the mid-sixties to \$10 billion in 1971. Before the giant deficit and the considerable reduction of gold reserves, as foreign banks had been exchanging dollars for gold, Nixon's administration was pushed to abandon the gold standard for the dollar.¹⁸³ The remaining world countries, including Japan, which was the top international

trade partner of the United States, had the options of “A,” absorbing the dollar influx in their home countries, or “B,” allowing the value of their currencies to float against the dollar. For all the above, the world took option “B.”

In a 1972 study by William Branson on the effects of devaluing the dollar by 7 percent, the author concluded that the measure would increase United States exports by \$3.3 billion and decrease imports by nearly \$2.6 billion. In reality, from 1971 to 1973, the United States' trade balance improved by \$3.2 billion after the collapse of the Bretton Woods agreement.¹⁸⁴ The following table displays the evolution of the balance of payments in the United States in millions of dollars from 1970 to 2023. The balance of payments encompasses all financial transactions between a country and the rest of the world, including the balance of trade, records of transactions in goods and services, and transactions in the current account. The data was gathered at the World Bank’s website.

Year	US Balance of Payment (million USD)
1970	-610.0
1971	-5,040.0
1972	-10,120.0
1973	-1,140.0
1974	-6,400.0
1975	+9,970.0
1976	-6,820.0
1977	-27,640.0
1978	-30,167.0

Year	US Balance of Payment (million USD)
1979	-24,966.7
1980	-18,953.0
1981	-15,680.0
1982	-23,537.0
1983	-57,135.0
1984	-108,277.0
1985	-121,102.0
1986	-138,527.0
1987	-151,675.0
1988	-114,660.0
1989	-93,126.0
1990	-80,852.0
1991	-31,180.0
1992	-39,207.1
1993	-70,311.0
1994	-98,511.0
1995	-96,387.0
1996	-104,035.0
1997	-108,288.0
1998	-166,130.0
1999	-255,813.0
2000	-369,689.0
2001	-360,373.0
2002	-420,666.0
2003	-496,251.0
2005	-716,537.0
2004	-610,833.0
2006	-763,533.0
2007	-711,000.0
2008	-712,352.0
2009	-394,779.0

Year	US Balance of Payment (million USD)
2010	-503,078.0
2011	-554,517.0
2012	-525,907.0
2013	-446,857.0
2014	-483,951.0
2015	-490,773.0
2016	-479,461.0
2017	-516,935.0
2018	-578,600.0
2019	-559,394.0
2020	-653,694.0
2021	-848,072.0
2022	-994,770.0
2023	-784,891.0

The existence of floating exchange rates enables the rich countries to import goods and services from poor countries while managing the purchasing power of their currency according to internal needs. This management practice aims to safeguard that the internal level of prices does not increase too much, which would result in a decrease in the well-being of people whose primary source of income comes from credit operations. Moreover, this means that the investment of domestic companies abroad is made easy because they would effortlessly own the means of production abroad. That is why Nike shoes are made in Indonesia, and the United States has such a massive deficit in its balance of payments.

The following table presents the balance of payments for the

world's countries, whose data were disclosed by the World Bank for the year 2023. As expected, Indonesia enjoys a surplus!

Country (2023)	Balance of Payment (million USD)
Albania	-1,275.1
Algeria	+7,300.0
Angola	+13,272.7
Antigua and Barbuda	-83.4
Argentina	-9,352.7
Armenia	-193.7
Australia	+67.997,4
Austria	+10,221.6
Azerbaijan	+10,470.0
The Bahamas	-267.7
Bangladesh	-14,287.6
Bahrain	+7,970.2
Belarus	-249.4
Belgium	-3916.9
Belize	-37.1
Bhutan	-939.2
Bolivia	-1,083.3
Botswana	-829.6
Bulgaria	+4.219,9
Bosnia and Herzegovina	-3,243.8
Bulgaria	+4.219,9
Burundi	-1,054.7
Brazil	+52,175.7
Brunei	+2,497.2
Bulgaria	+4.219,9
Burundi	-1,054.7

Country (2023)	Balance of Payment (million USD)
Cabo Verde	-456.7
Canada	-9,809.2
Chile	+4,541.7
China	+386,063.2
Congo, Dem. Rep.	-4,030.2
Colombia	-7,956.4
Comoros	-355.6
Costa Rica	+5,270.3
Croatia	-1,746.3
Curacao	-657.8
Cyprus	-282.8
Czechia	+17,294.8
Denmark	+33,168.5
Djibouti	+607.4
Dominica	-229.1
Dominican Republic	-8,612.5
Ecuador	+109.8
Egypt	-14,047.3
Estonia	+350.7
Eswatini	-176.2
Ethiopia	-12,086.0
Finland	+871.0
France	-43,852.1
Gambia	-736.2
Georgia	-2,643.0
Germany	+179,880.0
Ghana	-659.0
Greece	-12,016.8
Grenada	-121.5
Guatemala	-15,696.2
Guinea	+3,643.1

Country (2023)	Balance of Payment (million USD)
Haiti	-4,208.5
Honduras	-8,087.6
Hong Kong	+2,755.6
Hungary	+10,642.2
India	-86,329.7
Indonesia	+28,222.4
Ireland	+181,476.4
Iraq	+26,672.7
Iceland	+177.8
Israel	+18,844.1
Italy	+29,796.2
Jamaica	-2,590.8
Jordan	-6,736.1
Japan	-69,106.1
Kazakhstan	+18,164.1
Kenya	-9,420.8
Cambodia	-1,668.2
Kiribati	-276.5
Kosovo	-3,206.8
St. Kitts and Nevis	-96.6
Korea, Rep	+8,432.4
Kuwait	+32,045.3
Lao	+1,101.2
Latvia	-1,581.1
Lebanon	-11,542.6
Lesotho	-1,188.6
Lithuania	+3,120.8
Luxembourg	+28,000.3
Macao	+20,432.2
Maldives	-83.4
Mexico	-24.966,1

Country (2023)	Balance of Payment (million USD)
Moldova	-3,974.1
Morocco	-12,012.7
North Macedonia	-2,057.5
Malawi	-2,469.0
Malta	+4,009.3
Malaysia	+20,435.0
Mauritania	-1,316.0
Mauritius	-2,532.4
Mongolia	+1,956.4
Montenegro	-1,399.0
Mozambique	-1,891.1
Nauru	-85.3
Nepal	-11,083.4
Netherlands	+128,905.4
New Zealand	-9,382.6
Nicaragua	-2,267.5
Nigeria	-5,161.4
Norway	+69,254.5
Oman	+17,337.3
Pakistan	-21,646.2
Panama	+433.2
Peru	+10,336.7
Philippines	-47,199.5
St. Lucia	+141.0
Suriname	+329.7
Sweden	+25,477.7
Switzerland	+97,824.0
Thailand	+10,442.6
Tajikistan	-3,826.4
Timor	-501.9
Tonga	-288.1

Country (2023)	Balance of Payment (million USD)
Trinidad and Tobago	+2,771.7
Tunisia	-2,220.9
Turkey	-29,641.0
Tanzania	-2,078.4
Uganda	-4,768.3
Ukraine	-37,737.0
United Kingdom	-18,844.5
United States	-784,891.0
Uruguay	+2,746.1
Uzbekistan	-17,596.9
West Bank and Gaza	-8,224.0
Zambia	+599.4
Zimbabwe	-2,690.3

The existence of a deficit or a surplus in a country's balance of payments reveals that the country is engaged in international trade only, and does not have any other meaning at all. The trade itself develops economic dynamics that influence the amount of money in circulation within the country and escape the control of both national monetary authorities and the government. However, because of the need to control for its effects, they have consistently tightened the rules that enable them to set the overall economic pace.

The link between the government and control over the currency is a simple yet unavoidable connection between political and economic power. Nevertheless, the interaction needs to be symbiotic, and not amensalistic. At times in the past, benevolent intentions have given rise to fierce competing views on how to address economic problems

properly. In this case, ethics is not the problem; however, a lack of communication and understanding of the underlying assumptions can be a significant issue.

In 1976, Friedrich August Hayek outlined that *“if we are to preserve a functioning market economy (and with it, individual freedom), nothing can be more urgent than that we dissolve the unholy marriage between monetary and fiscal policy, long clandestine but formally consecrated with the victory of 'Keynesian' economics”* and *“we need not say much more about the unfortunate effects of the 'needs' of finance on the supply of money.”*¹⁸⁵

Friedrich Hayek openly disagreed with John Keynes' ideas. Keynes correctly argued that it is impossible to maintain a full-employment economy given regular human behavior in our current economic environment, and supported the notion that it was up to the government to ensure the investment required to achieve and maintain employment levels. Hayek, also correctly, was not sharing this view because legitimating the government to engage in investment activities to create employment is nearly the same as allowing either a tax increase on the private productive sector of the economy or an invitation to the creation of new money, which always spurs the harms of inflation.

Indeed, today, the global society does not have control over these matters, and the marriage between monetary and fiscal policies is, more than ever, consecrated by a regime of floating exchange rates.

This problem applies to every firm from a developed country that wants to export to a developing country. Here, we are in the realm of intrinsic economic power, where the rules we choose to abide by

make the difference, and the political power must be healthily intertwined with the economic power. That is another symptom of mankind's current lack of ethical behavior.

The idea that we are engaged in free money markets, where private entities act in such a way that no participant can dictate the fate of a business deal, is akin to a child's charade. And the behind-the-scenes maneuvers are the ones that trigger the most dangerous threats to overall welfare.

On 6 September 2022, Liz Truss was elected Prime Minister of the United Kingdom. Liz Truss was the head of the UK government's shortest-lived ever. Her government lasted for 44 days, from September 6, 2022, to October 20, 2022. In 2021, the UK's GDP accounted for 2.33 percent of the world's global economy, making it the fifth-largest economy, behind the United States, China, Japan, and Germany. Particularly because governments are supposed to be the guardians of overall welfare, the analysis of the political and economic consequences of her government is, therefore, an undeniably vital mark to learn from.

Let us begin with the economic consequences of the Liz Truss government's economic measures. The most significant and controversial economic measure was the proposal to implement a £45 billion tax-cutting package, funded by increased public debt. Some tabloids reported that the announcement triggered a fall in the pound and a surge in borrowing costs. The way the announced measures and consequences could affect British immediate welfare is thus under scrutiny.

First, it is hard to understand how a tax cut can be discouraged by

the general public. Taxes are a portion of somebody's work effort that is going to be enjoyed by someone else. It is mathematically easy to prove that the greater the effects felt regarding taxation, expropriation, or theft, the lower the citizens' work effort. Hence, it is hard to believe that the general public stood up against Liz Truss's governmental measure and genuinely felt threatened by it.

Second, we address the concerns about the falling pound. The devaluation of a country's currency often makes it easier to export goods and services produced within the country, while making it more expensive to acquire goods and services produced abroad. However, no figures were disclosed for the UK's trade balance in September 2022, making it difficult for the general public to inquire. Moreover, governmental measures that reshape the institutional environment in which economic activity takes place require a certain amount of time to produce significant effects on the behavior of economic agents. People do not adjust at once. Hence, the good or bad effects that might be coming from a falling pound have not been translated into a real welfare perception in a matter of a few days.

Third, the surge in borrowing costs is a natural consequence when the lender funds an increasingly indebted borrower whose probability of default is rising. This raises several related questions. Who is the lender? Why was the fifth-largest economy in the world at risk of bankruptcy? What was the scope for renegotiating any current debt to a potentially more adequate installment plan? Ultimately, it will always be the British people who must bear the cost of any public debt restructuring. The answers to these questions provide objective data on which an informed analysis can be based

regarding Liz Truss's governmental measures. Yet, it is undisclosed information.

In economic terms only, by the time of the shortest government ever demise, it was not possible that the UK's population had already felt any objective consequence coming from Liz Truss's government announcements. Yet emotional turmoil had been set in motion, leading to her government's dismissal. Society often overlooks the importance of economic power, to the detriment of political power, and, even worse, of military power. Understanding the political context is, therefore, paramount.

Liz Truss attended Philosophy, Politics, and Economics at Merton College, Oxford. At the time, she served as president of the Oxford University Liberal Democrats and was also a member of the national executive committee of Liberal Democrat Youth and Students. Until the moment of her election as Prime Minister, she was considered to be embracing a right-libertarian ideology, and she had held cabinet positions in several prior UK governments. Specifically, she had positions under the governments of David Cameron, Theresa May, and Boris Johnson. She was, therefore, an experienced politician.¹⁸⁶

Liz Truss has a deep understanding of economic matters that extends far beyond the average citizen's awareness. She knows that it is not possible to have a healthy economy while allowing economic imbalances to persist. Accordingly, she noted that the UK was having the highest tax burden in 70 years. She decided that the best way to safeguard the British people's overall welfare was by engaging in a tax-cutting program regardless of any ideological prejudices. Her economic worries had just overcome her political

proclivities.

In the UK, the political power has been distributed between two political parties: the Conservative Party and the Labour Party. The latter claims that the party was formed to give ordinary people a voice and, traditionally, supports left-wing measures such as tax-cutting programs. In this political context, government programs directed by politicians from the Conservative Party are expected to favor *laissez-faire*, *laissez-passer* policies, tending to favor employers even when detrimental to employees. Conversely, the Labor Party is hoping to take governmental actions in the opposite social direction.

Liz Truss had just frustrated everybody's political expectations. On one side, she decided to embrace a pretense left-wing solution, leading the members of the Labour Party to claim that a "kamikaze budget" should be reversed to restore market confidence.¹⁸⁷ That is, the Labour Party did not want to let go into the hands of the Conservatives any pro-social policies. On the other hand, within the Conservative Party, controversy arose over the ideas Liz Truss advocated, which were at odds with the party's usual guidelines.

This state of affairs gives a lot to think about. First, it is irrefutable that the action of a 15-day government cannot produce any meaningful economic result. Two weeks are not a period long enough for citizens to perceive a change in their level of welfare. Hence, the disclosure of public jokes regarding Liz Truss's government cannot have stemmed from public opinion. Second, those behind the social media campaign against Liz Truss's governmental measures must have been driven by their own beliefs

or interests. Third, it becomes undeniable that, at least in England, and likely around the globe, each political party is more concerned with gaining access to government than cooperating with the entire parliament to achieve the best possible level of overall welfare for its citizens. More than ideology, what our global political system is missing is a clear understanding of how it can establish the institutional economic framework to safeguard every person's well-being.

Occasionally, politicians decide to take a genuine course of action, one that they truly believe is in the best interest of everyone. Regardless of the discussion on the appropriateness of Liz Truss's governmental measures, the truth is that she seems to have been stricken by such a resolution. Otherwise, given her political experience, she would not have dared to go ahead as she did. In this vein, Liz Truss's bravery is something to extol.

We can, therefore, draw several conclusions. Firstly, under our current political system, regardless of the Prime Minister's name, if a politician lasts longer than six weeks, there is a good chance they are favoring the most powerful interests. Secondly, the financial markets loom as an adequate tool to dictate any government's activities, with minimal concern for the country's population welfare. Thirdly, the political parties of our so-called democracies are currently totally unable to engage in a cooperative *modus operandi* to safeguard overall welfare. And fourthly, economics is often treated as holding a secondary role in the hearts of political parties, compared with some particular motivations that remain paramount.

Society is supposed to be organized in its own best interests, but

is it? Liz Truss has just delivered a crucial lesson to the world. A lesson we all need to learn and be aware of: Every human society faces a significant challenge in regulating the quantity of money in circulation while ensuring it is not dependent on the decisions and discernment of a single individual.

Chapter summary

Considering exchange rates is necessary due to the presence of multiple currencies involved in economic activity. Despite the troubles and difficulties caused by this reality, there are power-related issues that hinder mankind's ability to solve the problem. The strong bond between controlling money and holding political power has never been broken yet.

Resorting to rules, regulations, and institutions is necessary to prevent chaos in regular market activity that would result from allowing individuals to create new money at will. The harmful effects on overall productivity caused by the artificial and consistent general price increase, due to incorrect expectations, always jeopardize overall welfare and serve nobody's interests. Hence, controlling the money in circulation is essential for our global society, but it cannot be done by allowing a financial system where floating exchange rates persist.

Trade, in general, and international trade, in particular, enables those who produce goods and services to exchange them among themselves. Accordingly, producers enjoy the available income

while leaving the financial system in a fair secondary role. That is, the financial system is entitled to a fair share of its contribution to overall income through facilitating means of payment, providing a safeguard of values, and credit intermediation services, but is not entitled to more than that, either directly or indirectly. This desirable state of affairs is currently compromised by tax and tariff policies that are intended to serve only individual interests, but in reality do no good to anyone.

The worldwide existence of surpluses and deficits in almost every world nation's balance of payments illustrates that we are living in a global village. Under a fixed exchange rate system, akin to a single global currency, central banks lose their ability to control the pace of economic activity, as they have been able to do so far. The separation between fiscal and monetary policies is crucial in any society because the interdependence between the two spheres of interest leads some individuals to take advantage of the rest of society. Liz Truss's brief tenure as Prime Minister highlighted this need and emphasized the deep interconnection between public debt and monetary policy in our current economic environment. The persistence of a global financial system of floating exchange rates serves only to perpetuate the promiscuity of individual, very well-organized interests.

PART 3

The rules that make us free

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CHAPTER 8

Infrastructures

History has a relatively significant role in determining the future. For instance, in 1994, Paul Krugman outlined that industry localization demonstrates path dependence and stated that “*Silicon Valley is where it is because of the vision of Frederick Terman, vice-president of Stanford, in supporting a few entrepreneurs in the 1940s, forming a seed around which the famous high-tech concentration crystallized.*”¹⁸⁸ But the powerful role of history in shaping the economy is not absolute.

The Yassa and the Holy Bible are examples of past events whose deterministic power was highly significant in shaping human behavior. However, the concept of a war-oriented society has changed, and so has the idea of what constitutes a heresy.

Mankind has managed to create a pulpit for the expression of economic power by Pisistratus’s hand, more than five hundred years before Christ, in ancient Greece, albeit it lost its momentum. Conversely, we have evolved from the militarily organized society of Genghis Khan in the 13th century to the political organization that the world is currently stuck in.

The infrastructure left by history for future generations was both material and immaterial. And infrastructure matters for consolidating a given evolutionary path. But what are economic infrastructures after all, and which are impactful in overall welfare?

According to the Cambridge Dictionary, infrastructure refers to the basic systems and services, such as transportation and power supply, that a country or organization uses to work effectively.¹⁸⁹ However, an economic infrastructure encompasses a lot more than the things embraced by this definition.

The production of our income requires the use of resources that are manipulated to obtain a specific good, which, in turn, satisfies human needs and desires. Resources and working time are combined to create our overall welfare. When we examine bridges, roads, electric power facilities, or domestic sewage networks, we are examining economic infrastructures. When we examine schools, training facilities, and technical books, we are evaluating economic infrastructure. And when we are listening to a teacher, coach, or working colleague, we are in front of an economic infrastructure. Hence, in a strict economic sense, infrastructure is capital: the things involved in the production of our income.

Capital is often confused with the financial resources used to start, run, or grow a business. However, in this sense, money serves only to acquire capital.

Infrastructures are of two kinds, of material or immaterial nature, while none has anything to do with money. Examples of material infrastructure include man-made structures, such as roads, bridges, buildings, walls, transportation facilities, and communication

devices and networks, as well as natural resources, such as forests, seas, and wildlife. Examples of immaterial infrastructures include knowledge and know-how, language, communication codes, regulatory and litigation procedures, institutions, and every intersubjective reality that connects human minds under a widely accepted standard. Whether material or immaterial, they all determine what humans can do. Infrastructure is therefore paramount to safeguarding overall welfare.

The remainder of this chapter will focus on three crucial aspects of infrastructures: 1) consequences of being raised; 2) contribution to both human cooperation and human competition; and 3) the financing of infrastructures. First, infrastructure has several consequences for overall welfare, both short- and long-term, and understanding the differences between these dual effects is crucial to enhancing mankind's economic power. Moreover, human behavior depends on how much a person can trust an infrastructure. Second, there are infrastructures designed to define the business environment, as well as those built to function as strategic resources. A well-balanced economy can forget none. And third, understanding infrastructure financing is where the ultimate muscle of economic power exerts its full strength. A comprehensive understanding of the importance of specific infrastructures to human well-being enables one to identify the most prominent infrastructures that fulfill particular needs and the care that should be taken in their creation.

Infrastructure short-term consequences

When infrastructures are absent in society, it is impossible to generate income to satisfy human needs. This straightforward conclusion collides with human creativity to find solutions where, sometimes, it seems we have none, intuitively. But human creativity is always a resource. Nevertheless, it takes time to be of practical assistance. In the short term, the absence of proper infrastructure directly and immediately constrains the level of income that society can reach.

When an infrastructure is available in society, regardless of its nature, it incurs a maintenance cost. Even the infrastructures provided by nature have a maintenance cost. For instance, as we are all well aware, if we do not take proper care of the seas, the air, the wildlife, or the way we creatively disclose our knowledge and expertise, we risk being unable to safeguard humanity's standard of living soon. The infrastructure's maintenance costs should be acknowledged before raising any new ones.

In the early 1940s, when Harry White and John Maynard Keynes met to discuss the terms of the Bretton Woods agreement, which ultimately led to the creation of the IMF and the World Bank, one of the subjects discussed was the salaries of the executive directors. The salary recommendations were initially proposed by the American side of the negotiations, following an initial standard that was higher than the U.S. cabinet-level salaries and significantly higher than the salaries of British officials. In 1944, they advanced a salary of \$30,000 for the managing director.

The Americans argued that higher salaries were necessary to attract competent individuals, while the British claimed that salaries out of line with those of government ministries would create administrative difficulties.¹⁹⁰ Regardless of the arguments that both sides fenced to justify their positions, either for or against the proposed figures, it is irrefutable that they were all fully aware of the maintenance cost involved in the creation of these institutions. Moreover, they have not only examined the constant costs associated with salary payments but also considered the potential side effects that could impact the economy's regular functioning.

Infrastructure long-term consequences

The long-term consequences of infrastructure mainly encompass four attributes: 1) productivity; 2) ambiguity; 3) consistency; and 4) adaptability. Each of these attributes requires inquiry because it enables us to understand which infrastructures are missing, which are too costly, and which need to be transformed.

The propensity of economic infrastructure to determine a society's productive level is straightforward. The most critical infrastructure concerns the main productive factors required for any economic activity to be successful. Infrastructure related to power and water supply, transportation facilitators such as roads, maritime ports, and railways, as well as communication devices and networks, are crucial for bringing physically distant productive units closer together, enabling trade.

The ambiguous effect of every infrastructure is related to its opportunity cost. When a society decides to build a bridge that connects the two banks of the river, trade between the locations will increase. They will be able to move from one side to the other at will, but they will be constrained to use these infrastructures. In contrast, an alternative could be a better choice to spur economic development. However, resources have already been committed, and constructing another bridge nearby might be impossible.

The ambiguity of an infrastructure further extends to the relationship between the stability it provides to communities and either the chaos or uncertainty that will prevail after its existence. At first glance, it appears that there is a symbiosis between avoiding chaos and stabilizing a given economic standard. However, often, due to the existence of conflicting interests and maintenance costs, that might not be the case regarding the development of economic infrastructure.

A straightforward example of the former is the decision to set up bus stops along a street. Every householder in that street wants the bus stop right at his or her front door. On the other hand, every bus passenger wants the number of bus stops to be reduced to a minimum to enable him or her to go from origin to destination as fast as possible and, therefore, does not want to face too many bus stops along the way. Knowing that a bus transportation service is available is generally beneficial for the community. Still, once it is in place, it will likely spur biased individual behaviors to claim their “superior” interests.

On the other hand, safeguarding maintenance costs is crucial to

ensure the infrastructure's continued usefulness to society over time. One example of the pernicious effects of raising infrastructure without being able to safeguard its maintenance costs is illustrated by Nelson Mandela's efforts to build infrastructure in South Africa after stepping down in 1999, after one term as President. Nelson Mandela established two institutions to support his initiative to develop the country and promote overall welfare: the Nelson Mandela Children's Fund and the Mandela Rhodes Foundation. Through these institutions, he organized the construction of schools and hospitals throughout the country.

According to Zelda la Grange, his right-hand in these projects, President Nelson Mandela persuaded firms, both local and international, to build schools and hospital facilities even in the most remote locations in the country. More than 100 schools and 50 clinics were built thanks to this initiative. His tactics were grounded in inviting the entrepreneurs to breakfast or lunch with the President and seizing the opportunity to request a contribution to the project. Later on, people joked that one should be cautious when accepting lunch with the President, as it could be the most expensive meal of their lives. In 1999, following the change in government, the new officials ceased providing teachers, equipment, nurses, and resources to support the initiative.¹⁹¹ In 2014, teaching was still one of the lowest-paid professional activities in South Africa and was unable to attract motivated individuals to pursue it. Nelson Mandela's example in South Africa illustrates that the positive economic effects of building schools and hospitals throughout the country were either tenuous or absent altogether because they lacked consistency:

consistency across time and consistency in public commitment.

Finally, the ability to adapt infrastructure to meet changing needs in response to social and physical changes in our surroundings is a valuable attribute of every infrastructure. Specifically, when a society enjoys a drawbridge that efficiently accommodates both road and river traffic, everybody wins. Although this example conveys a short-term advantage for both uses, the adaptability of infrastructure is also required in the long run.

This attribute is sometimes highly relevant. In particular, when rules and regulations are enacted, they are created under specific circumstances and aim to achieve a particular goal. Often, either circumstances change, or the goal being targeted cannot be met. Then, it is time to adapt. When infrastructure is stubbornly maintained in place while disregarding the possibility that it may have become obsolete, the costs borne by society are substantial.

It is worth mentioning another example of why infrastructure needs to be adapted to meet needs. Today, worldwide, the General Data Protection Regulation (GDPR), which is widely deployed and accepted, is urgently seeking bright minds to oversee it. In 2024, a Portuguese driver operating an international road freight transport service was involved in a traffic accident on a Spanish highway. The driver was rescued and transported to the hospital. The Spanish traffic police informed the Portuguese employer's firm that the man had gone to a nearby hospital, and his physical condition was unknown. When the employer's officials called the hospital to ask for an update on the employee's condition, they were told that no information could be provided because they had to comply with the

GDPR. This answer did not serve the interests of the victim, who was resting alone in a foreign country, deprived of any means to return home and hindered from making the necessary arrangements to organize his return.

The driver had a head trauma and was not able to communicate with anyone. His condition remained unknown for several days, and it was necessary to engage the formal diplomatic services of a Portuguese consulate in Spain to obtain information on the driver's health. Procedures and behaviors that originate from man-made intersubjective realities cannot account for every future human response at the moment of their design. Therefore, particularly the adaptability of rules and regulations to the general social needs is always mandatory to safeguard overall welfare.

Another striking real-life example was provided by Katharine Gun, who, during the immediate run-up to the 2003 Iraq invasion, leaked a top-secret U.S. National Security Agency (NSA) document to a friend, who then passed it to *The Observer*. The newspaper disclosed the information. The information consisted of an alert that the NSA was acting to set the United Nations (UN) vote of six "swing nations" on the Security Council to determine whether the UN approved the invasion of Iraq. In the face of backstage manipulation, Katharine Gun sought to prevent the outbreak of a war that would result in many innocent deaths. Nevertheless, she was brought to court charged with an offense under section 1 of the Official Secrets Act 1989.

The Official Secrets Act 1989 is an Act of the Parliament of the United Kingdom, led by the Prime Minister Margaret Thatcher, that

removed the public interest defense as an acceptable justification for a government employee to disclose information considered confidential by other government officials. Therefore, the law enabled the government to act as it pleased, regardless of the perils that someone of good faith could understand were being raised against mankind.

The details of this event are boldly disclosed in the 2019 film “Official Secrets,” with Keira Knightley, Matt Smith, and Matthew Goode. In 2023, the United Kingdom's parliament enacted the National Security Act 2023 to amend the prior legal framework on this matter. The mistaken motto that “he who can, commands; he who must, obeys” must be rethought in the prevailing mindset. Rules must indeed be obeyed, for otherwise chaos would dominate our daily worries, and productivity could not be improved. It is also true that rules must be questioned and changed promptly to safeguard overall welfare whenever people of good sense find it proper!

A timely adaptation of infrastructures is one of the most significant exhibitions of a human society's economic power. However, we are still so far away from being able to do it. The pernicious long-term effects of taxes, tariffs, the persistence of multiple currencies, and other infrastructure developments that impede human freedom require scrutiny. These four attributes define which infrastructures need to be built, which need to be adapted, and which need to be destroyed. These three actions must attend to the guidelines signaled by ambiguity. Nevertheless, productivity is the primary motive for building an infrastructure, which, to be credible and effective, must be consistent and adaptable over time.

Hence, chaos and uncertainty are constantly in dialogue with stability to define the economic environment. When uncertainty dominates public sentiment, there is no investment in infrastructure, as everybody waits to see what the future will bring. It is therefore easy to understand its importance for exerting economic power and consolidating overall welfare.

Trust structures

Globally, the confidence we have in our infrastructure network determines mankind's productivity. When a firm from a developed country considers deploying facilities abroad in a developing country, it begins by analyzing fundamental factors, such as the stability of the electricity supply. Furthermore, it considers the legal framework, law enforcement, know-how, culture, traditions, and productive habits of the target country to determine whether a local partnership is required. The effects of infrastructure extend far beyond their physical nature and strongly impact human decision-making at both short- and long-term horizons.

The level of trust embodied in any human infrastructure reaches physical and emotional effects, severely conditioning what mankind can do. In 1994, in General Electric's (GE) 1994 Annual Report, Jack Welch, the company's CEO, disclosed that the firm was engaged in a quest to remove bureaucracy and the inefficient layers in its hierarchical superstructure for, at the time, it was possible to find documents around GE businesses requiring five, ten, or even

more signatures before an action could be taken! In 1999, Paul Simon Adler not only further disclosed this situation but also proposed that the more familiar type of bureaucracy “*serves the purpose of coercion and compliance.*” The author also outlined that there is a second type of bureaucracy that serves the purpose of “*enablement,*” where “*bureaucratic structures and systems function to support the work of the doers rather than to bolster the authority of the higher-ups*” and “*the increased formalization of the work roles tends to increase satisfaction and commitment*” across the workforce.¹⁹²

Therefore, the legislator's goal in attempting to channel human behavior becomes another factor for analysis, as it affects how freedom is granted to society's members. In this domain, the rise of hierarchical structures acquires great relevance.

Hierarchical structures are often conceived of as tools of control, based on questioning others' capacities. These infrastructures are usually based on bounded rationality, aiming to centralize decision-making in a single person. Steep hierarchical structures often end up functioning as tools of biased, totalitarian power, raising unproductive barriers that impede economic development. Severe hierarchies are structures of distrust.

Trust structures are a very peculiar kind of economic infrastructure. The formality required to establish these trust structures need not be formalized in a written protocol. Trust in physical structures, such as “knowing” that electrical power will be supplied without failures in a given developing country, as it is in a developed one, depends only on experience or physical evidence of

modern supply facilities. Nevertheless, trust in immaterial infrastructures requires a mind connection that transcends the requirements of physical evidence to reach the realm of heart-centered expectations.

In 2000, Ranjay Gulati, Nitin Nohria, and Akbar Zaheer stated that “*social networks promote trust and reduce transaction costs in several ways*” and “*they can also facilitate due diligence so that each partner has greater knowledge about the other’s resources and capabilities and greater confidence in their mutual assessments.*”¹⁹³ These are immaterial infrastructures designed to ensure consistent cooperation across time.

Later, in 2002, Bryan Uzzi presented an example of informal inter-firm networks, focusing on the garment industry. He observed that, in the business world, arm’s-length ties, such as those enacted by a written contract, are more frequent than close ties but less significant for the company’s overall business success. There are situations where more informal relationships take the lead. The author noted that embedded ties, or special relationships, “*have three main components that regulate the expectations and behaviors of exchange partners: trust, fine-grained information transfer, and joint problem-solving arrangements.*”¹⁹⁴ For instance, a supplier may choose a different tissue when facing a break on the usually used raw material, manufacturing a slightly different final product than the one that was previously accorded with the retailer, even without announcing this change, to do not waste time, and ensuring that the retailer will be able to have his collection on-time throughout his wholesale network. The author posits that “*trust develops when extra*

effort is voluntarily given and reciprocated,” thus pointing out that the trust-based exchange extends over time and does not require an immediate win-win transaction.¹⁹⁵

This suggests that the more fundamental structure of a societal organization is based on security, first and foremost, physical security, and then economic security. Dependent relationships require a solid foundation of safety to achieve the highest possible level of social coordination and interaction.

Building a society focused on enhancing welfare for all its members requires two foundations: (1) a developed communication ability enabling the society to develop positive formal and informal institutionalism for all its members; and (2) a well-established physical and emotional state of security upon which human relationships can evolve. Such a basis qualifies the society to accept mutual dependence relationships among its members. Ethical behavior plays a significant role in this regard.

These relationships will rely on a given institutional framework, which ultimately legitimizes the actions of every organizational actor. No past human society has evolved through inner conflicts, and interestingly, since dependent relationships need to be underpinned by both trust and safety, we may even conclude that, rather than being naive, wishing other people well may be an excellent starting point.

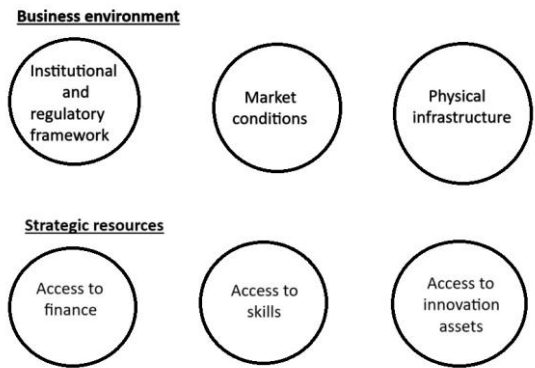
Since civilization, by definition, regards the quality of the relationships established between the whole members of a society, the existence of trust structures determines the level of civilization that humanity has reached.

Infrastructures' contribution to cooperate and compete

According to the OECD SME and Entrepreneurship Outlook 2019, there is a conceptual framework on which mankind depends to reach higher levels of productivity. Figure 9 summarizes this concept.

It is crucial to assess the merits of this conceptual model and determine whether anything significant has been overlooked. The business environment defines the conditions for safeguarding large-scale human cooperation. None of the three settings — the institutional and regulatory framework, the market conditions, or the physical infrastructure — can be deployed without the engagement of human relationships among two or more persons for mutual benefit. However, what are considered strategic resources can all lead to an individual increase in the productive capacities of a person, a firm, or a nation, compared to the remaining members of society. This terrific conceptual model suggests that human society is simultaneously demonstrating its dependence on large-scale cooperation and its internal competition for higher income performance. The most outstanding merit of this framework lies in highlighting how competitive and cooperative behaviors interact to enhance overall welfare. What is missing is a comprehensive, circular framework of Ethics encompassing everything.

Figure 9. SMEs and entrepreneurship policy governance

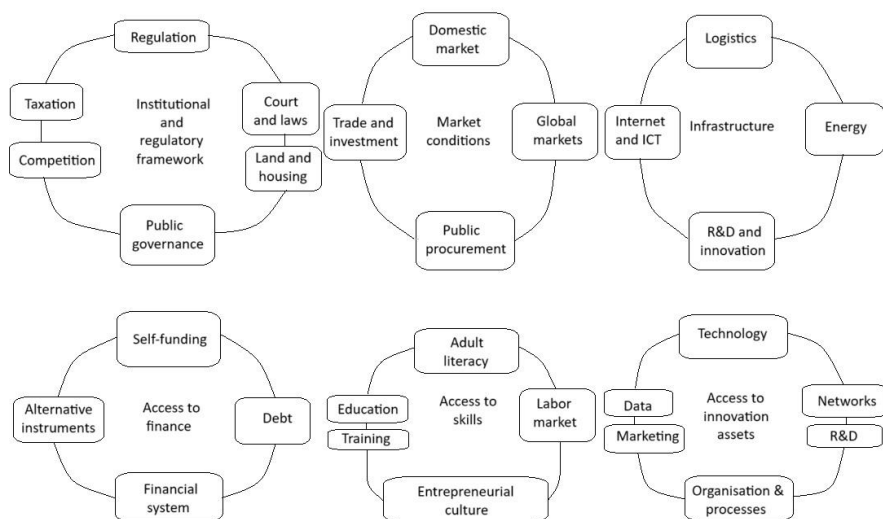


Source: OECD SME & Entrepreneurship Outlook 2019

The OECD details each component of its conceptual model, as illustrated in Figure 10.

When someone has the power to establish the institutional framework, they can define practices of taxation, litigation, and public governance that impede fair competition, disrupt normal trade, and, often, divert resources into misallocated investments. Hence, these tools can be misused, leading to market imbalances. Economic equilibrium depends on the coherence and control of the measures established by society to improve overall welfare. Often, government programs are incoherent, and overall well-being is not the main priority. The way public funds are used in the European Union (EU) is an example of this handicap.

Figure 10. SME&E Outlook: detailed conceptual framework



Source: OECD SME & Entrepreneurship Outlook 2019

The financing of infrastructure

In April 2025, the European Commission's website displays a list of funding programs implemented through the 2021-2027 multiannual financial framework, organized by heading and cluster. When detailing the European strategy and policy, it is advertised that “the largest stimulus package ever (...) a total of € 2.018 trillion in current prices is helping build a post-COVID-19 Europe.” And that “it will be a greener, more digital and more resilient Europe.”¹⁹⁶ Notwithstanding the allegedly benevolent reasons behind the

endeavor, which may not be confirmed by truth, this policy restricts human freedom in many ways.

First, European rulers decided to flood the money in circulation within the European Union with the “largest stimulus package ever,” which, all else being equal, will likely cause inflation. The money is liberated through the financial system, where commercial banks are only allowed to finance economic activities arbitrarily chosen by the European Commission. They lend money under previously established guidelines and preclude themselves from pursuing other credit opportunities because of their wide range of financial requirements. Hence, not only is the general public deprived of the freedom to invest in their choice, but commercial banks are also hindered from financing every good business plan they encounter.

Second, there is a huge temporal gap between the moment the entrepreneur applies for European funds and the moment they receive confirmation of the project’s eligibility. Afterward, the entrepreneur must complete the investment, present documentary evidence of compliance with the initial business plan, and wait for reimbursement of the allegedly helpful European funds. Years have passed between the moment the entrepreneur develops their business idea and the European fund finally arrives in their hands.

The practical functioning of this centralized economy is that the entrepreneur who truly needs access to finance cannot obtain it at the right time. Sometimes, the lag between the moments of design and execution of the business plan is significant enough that the equipment predicted in the initial business plan becomes outdated by the time of execution. Conversely, successful and timely investments

are made by companies that do not require any monetary support, invest at the moment the opportunity is foreseen, and still submit their applications according to the rules, receiving generous European funds afterwards. They think that whenever the money arrives, it will be welcome!

However, when those funds flooded the economy, the entire population bore the cost of higher prices, even though they were unnecessary. The European Commission has been institutionalizing a giant resource-wasting machine, which, rather than being helpful and productive, is currently serving the ongoing process of an unacceptable bureaucratic burden that only impairs economic balance.

Access to finance, skills, and innovation assets all matter in enhancing a community's economic power, provided access to these resources is timely and tailored to market needs. No government can do so in advance, for no one holds a magic wand to foresee every technological change that will arrive next month. What about the next six years?

Accessing strategic resources in a timely and accurate manner must be fostered by society through infrastructure that enables people to take advantage of opportunities as soon as they arise. Entrepreneurs and the financial system, whether through commercial banks, crowdfunding, or simple partnerships with business angels, must be able to execute their deals to establish their productive structures as quickly as possible. This is when cooperation and competition work hand in hand, allowing each person to contribute at their best at all times and build a thriving society together. That is

why the financial system is paramount to a prosperous economy.

The easiest source of financing is private self-financing. Hence, despite the timely assistance provided by the financial system to enable many start-ups, profitable private firms do not need credit forever. In 1934, Joseph Schumpeter stated that *“according to our view, the capitalist would first have to lend his capital to one entrepreneur and after a certain time to another, since the first cannot be permanently in the position to pay interest.”*¹⁹⁷ And the impossibility of having the financial system continuously financing the same private firm happens whether the firm succeeds in marketing its products or goes bankrupt. This becomes a pressing issue for the survival of those whose income comes from the financial system.

The funding of public debt is currently addressing this weakness of our financial system. By lending money to governments, just like Peruzzi and Bardi did in the 13th century to Edward I of England, the financial system ensures that a portion of the overall income is channeled to them through the tax system. When a public infrastructure project is initiated, the implications of its financing can be diverse and complex.

There are two primary sources of financing public debt.

First, it involves creating new money out of thin air and using that fund to purchase the resources required to build and maintain public infrastructure. In this case, the money thus created enters the economy, increases the amount of money in circulation, and, therefore, induces an increase in the overall prices borne by the entire society. This “public debt” should not be refunded to anyone,

for it originates in money that costs nothing to be produced, and the whole society has already had its share of contribution through bearing the general price increase of the available goods and services. Schumpeter, citing Ludwig von Mises, referred to the effect of creating new money as a process of “forced savings,” because the general public is compelled to reduce consumption of goods and services due to rising prices.¹⁹⁸ At the same time, the government uses the increase in the money in circulation to build infrastructure.

A second source of public debt financing is to resort to credit from the financial system. In this instance, the money either comes from the private savings of a multitude of commercial bank customers or is created by the financial system out of thin air. In the first case, there is an effective debt because the work of so many people in the general public is used to finance public infrastructure that serves everyone. In this instance, the subsequent tax collection is therefore aligned with ethical behavior. However, in the situation where the financial system produces “public debt,” which should be better called “banking system indirect tax,” the general public pays the procedure twice: When it feels the effects of inflation, and when it is asked to pay additional taxes soon to feed the financial system unreasonably.

These disparities in the financing of public debt are easily illustrated by two significant examples: Japan and Greece.

Japan is a country that manages its currency, and the monetary authority in the country is the Bank of Japan.¹⁹⁹ As of April 18, 2025, the central bank’s website discloses that the amount outstanding of Japanese Government Bonds held by the Bank of

Japan was 569,026 trillion yen, representing a debt of 93.37 percent of Japan's GDP. Article 5 of the Bank of Japan Act (Act No. 89 of 1997) states the Bank's public nature and property, as well as its commitment to conduct its business in a proper and efficient manner.²⁰⁰ Japan's debt-to-GDP ratio is the highest in the developed world, reaching 263 percent of the country's GDP by January 2025. However, the country does not have a problem because a significant portion of this debt does not need to be repaid.

Greece, in turn, is one of the heavily armed countries in the entire North Atlantic Treaty Organization (NATO) per inhabitant. The Greek army ranks among the top military forces within the alliance, with 429,050 personnel, including 142,700 active personnel and 221,350 reserves. Its armed forces are the 6th-largest in Europe and the 32nd-largest in the world, based on firepower, in a country with only 10.4 million inhabitants as of 2023.²⁰¹ The country has managed to build an infrastructure based on foreign manufacture or foreign design, whose financing has been mainly from foreign banks. In 2010, the Greek government was unable to meet its public debt installments to foreign creditors, and the country faced the risk of bankruptcy. The country was compelled to comply with the demands of the Troika, an entity comprising the combined interests of the IMF, the European Commission, and the European Central Bank. The Troika imposed a set of economic measures designed to ensure that the country's foreign creditors would be refunded. The German reporter Harald Schumann discovered that French and German weapon manufacturers, as well as banks, were among the immediate beneficiaries of the Greek debt boom.²⁰² Nevertheless, in

2010, Greece's public debt reached 148.3 percent of its GDP, slightly above half of Japan's current public debt.

Greece faced a severe economic problem in 2010, whereas Japan does not currently have one. Despite the obscure reality of the Greek public debt, of which no detailed information has ever been disclosed by those who exert political power, there is no doubt that European governmental officials conspired with the IMF representatives to deliver pain to 10 million people on behalf of some bankers, who lent money that nobody knows where it came from. Financing public infrastructure highlights the importance of ethical behavior in maintaining economic stability. And, often, how the world is missing it.

Chapter summary

Infrastructures are capital in a strict economic sense. Infrastructure is the resource that enables us to produce an income. It is impossible to hold economic power without possessing the proper infrastructure.

Infrastructure is of both material and immaterial kinds, with the former referring to physical infrastructure and the latter comprising skills, know-how, and the intersubjective reality that connects human minds under an accepted standard.

Infrastructure is a determinant of a society's economic power, exerting both short- and long-term consequences. The primary result of infrastructure is its contribution to overall productivity. In the

long run, an infrastructure must be consistent over time. Consistency, in turn, requires that society be able to adapt its infrastructure to meet needs and to safeguard its maintenance costs over time. An example of the former is the way that institutions, such as the IMF and the World Bank, created in 1944, have been able to change over the years, while an example of the latter is well illustrated by the lack of follow-up of Nelson Mandela's legacy of schools and clinics in South Africa after Madiba's demise.²⁰³

The contribution of infrastructure to setting the pace of an economy, either by stimulating cooperation, competition, or both, is overwhelming. Furthermore, some infrastructures determine the degree of freedom of society members and have an immediate impact on overall productivity and income distribution. For instance, Genghis Khan's generals were likely worse warriors than many soldiers, but certainly enjoyed a higher social position and access to income. The business environment and the existence of strategic resources upon which individual and collective behaviors can evolve determine the outcome of a society. That is why the economic reality of developed and developing countries is so different. And this contribution is tremendously dependent on ethical behavior.

Finally, infrastructure financing is of great relevance because it can influence individual behavior along a specific path. How an infrastructure is financed not only defines the level of overall welfare that a society can reach, but also immediately specifies the level of centralization of an economy and the degrees of freedom of individuals, corporations, or nations to engage in activities of their choice.

Infrastructure must be cared for and monitored to identify related needs, such as constructing new ones, reusing and adapting existing ones, or destroying harmful ones. Building the required and proper infrastructure depends on the quality of the communication a society enjoys among its population and the existence of a healthy physical and emotional environment that supports human relationships. It is impossible to raise the proper infrastructure when physical and emotional safety is absent in the business environment. Moreover, as public-private partnerships are increasingly prevalent worldwide, no infrastructure can be developed appropriately when ethical behavior is lacking. Ultimately, infrastructure is a tool, and its adequacy defines human civilization.

Raising a set of rules that sets us free is the most precious infrastructure that Economics can offer. But one thing is the tools we have at our disposal, and another is how we use them.

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CHAPTER 9

Practices

“Life is too short to play silly games. I’ve promised myself I won’t do that again.” Eddi Reader sang these words, the lead vocalist of the soft rock band named Fairground Attraction, in a marvelous work launched in 1988.²⁰⁴ But, beyond the meaningful performers’ art and talent, the song extols that humans engage in behavioral patterns, led by emotional standards, that often escape from what each one of us recognizes as being rational to do. We do things that we know we should not!

The economic power of a society depends on the coherence and control each person exhibits. Otherwise, we get chaos. That is why what we practice every day matters so much. But we can never forget that, rather than rules, emotions lead the way.

Mankind engages in practices of pollution, unemployment, corruption, market imbalances, deception, and self-sabotage. However, we also promote ethical behavior while fostering embedded ties and benevolent networks of connection designed to help one another. Therefore, understanding why and how such practices contribute to overall welfare is paramount.

The history of Finland has provided us with an enlightening example of what drives a society's practices to consolidate into a particular form of culture.

Due to its specificities, the country's history can be broadly divided into periods of pre-statehood, each under a different ruler. The territory was first settled around 9000 BCE. In the late 13th century, Finland became part of Sweden. Later, in 1809, following war conflicts, it became an autonomous grand duchy within the Russian Empire. Finally, following the Russian Revolution of 1917, Finland fought for its independence and became a republic in 1919. During this challenging walk to freedom, practices were developed to unite the society towards a common goal.

At the beginning of the 19th century, Finland had a system of government based on Swedish constitutional laws. By 1840, the nationalist movement gained strength, and an imagined community began to take shape, in which all members shared an understanding of their collective identity and fraternity, and were loyal and proud of their shared heritage. The population was Swedish-speaking, but a firm belief began to emerge that a distinct national culture could only be achieved through linguistic unity. Accordingly, having Finnish as the dominant language became a goal. Tina Dacin, in her outstanding academic paper "Isomorphism in context: The power and prescription of institutional norms," citing Wuorinen, discloses the Finnish motto: "*We are not Swedes, we cannot become Russians, therefore let us be Finns.*"²⁰⁵ People sought a set of shared values that united them by bonds stronger than those provided by institutions or the state. Nevertheless, the goal was to be achieved

through practice alone.

By the mid-19th century, the population had achieved total literacy, and many Finns did not consider that political autonomy from Russia would be enough to protect them from absorption or from the dominance of Swedish speakers. At the time, government appointments were often made to individuals with little to no knowledge of the Finnish language, which caused general resentment among the population. Furthermore, educated people and the high society were referred to as Swede-Fins because they used Swedish, while the Finnish language was reserved for peasants. Under these circumstances, the struggle for nationalism became inextricably linked to the issue of language.²⁰⁶

In 1847, a Finnish-language newspaper called *Suometar*, meaning “Suomi,” the Finnish name for Finland, was founded in the essentially Swedish-speaking city of Helsinki. As outlined by Tina Dacin, “*this newspaper was founded by a group of university scholars who were inspired by ideas of Finnish nationalism and freedom.*”²⁰⁷ A cornerstone of nationalism, as a norm embraced by Finnish society, had just been called into action, and the support of a Finnish identity was firmly grounded.

By the 1860s, a language ordinance had elevated Finnish to the same level as Swedish. Finnish was granted official status, but some Swedish Finns continued to resist its institutionalization. Nevertheless, both Finnish and Swedish speakers supported nationalism, and the use of Finnish in secondary and higher schools was intended to be enforced. This movement led many Swedish speakers to desire their children’s education in Finnish-language

schools, without anyone ever resorting to force or coercion to achieve their goals.

Some Swede-Fins, who held privileged social positions, began to feel that their *status quo* was in peril and mobilized to defend it. The perception extended into the Russian tsarist regime, which, at least since 1850, had recognized that its authority could be questioned by the movement triggered by the language focus. In an attempt to react, the tsarist regime coercively defined that only texts on economic and religious matters could be published in Finnish, while censorship was not applied to the Swedish-language press, which was not considered to be a threat.²⁰⁸

During the last two decades of the 19th century, the democratic principles invoked by the nationalists provided a voice to the bottom social classes of Finnish society. The Finnish labor movement arose and divisions between old and young people became prominent; the former claiming focus to the pursuit of the language reform and the latter, as outlined by Tina Dacin, aiming to “*extend the use of Finnish beyond daily speech and interaction to the arena of laws, justice, and public administration and to undertake measures necessary for the emergence of a Finnish-speaking upper class.*”²⁰⁹ At this stage, economic, political, and intellectual reforms began to shake social unity, once solidified by the ideal of nationalism.

At the beginning of the 20th century, Russia intended to increase control over the Finnish population. The cleavage between the population's social classes vanished as Finns and Swedish-Finns of all classes united against foreign control. One significant measure was the formal removal of state support for Swedish-language

schools, which relegated Swedish to a minor language and ultimately led to its eradication in some parts of the Finnish territory. In the opposite direction, the Russian imperial administration introduced the Russian language into government and made an apparent effort to control both the press and secondary education. The tsarist regime's actions have posed difficulties for both Swedish- and Finnish-language newspapers, leading many of them to shut down temporarily; however, it has not completely ended the activity of Finnish newspapers.

At the end of the 1910s, the Finnish population fought against the Russian regime in an armed conflict and declared independence in 1919, establishing a republic. It was the culmination of a long and arduous journey.

The example of the Finnish people in the 19th century illustrates how political power affects economic power. Firstly, the union of people around the idea of nationalism triggered actions to promote the development and use of the Finnish language through newspapers and education. Secondly, the claims of the youngest individuals within a dominant economic realm highlight how the interaction between the individual and society depends on the existing normative prescriptions, whether informal, such as culture, or formal, such as an institutional decree.

This example illustrates how suitable the OECD's conceptual model, as outlined in the previous chapter, is for fostering economic development. In Finland, at the beginning of the 19th century, the business environment was dominated by nationalist ideas, and physical infrastructure began to be developed in line with this goal.

Simultaneously, literacy was the primary strategic resource enabling a successful endeavor. This resulted from a national ordinance issued in the 18th century, which required Finns to demonstrate literacy to receive confirmation or to be married by the Lutheran Church. If parents could not assume this financial duty, it would become the responsibility of their parish. When this state of affairs was coupled with social imbalances and incoherence, such as the appointment of Swedish-language government officials only when the peasants' language was Finnish, and the privileges granted to some members of the Swedish-Finn society were evident, a general call to action became a natural outcome. Today, one hundred years after the culmination of the Finnish people's journey, according to the World Happiness Report 2025, Finland is the happiest country in the world.²¹⁰ And the dominance of ethical behavior has a lot to do with it.

It is therefore crucial to understand that the business environment, combined with strategic resources, enables a given practice. Moreover, resources are strategic when their use is indispensable for achieving a specific goal. However, the adequacy of the goal we choose depends on ethical balance. It is in the intertwinement of these three axes that the economic power of a human society lies, for these are the determinants of how an opportunity is identified and taken.

In my prior work, I have outlined that human beings take advantage of opportunities while being aware of the consequences of such actions on their overall welfare. There are two types of opportunistic behavior, classified as either positive or negative,

regardless of whether they are subject to any moral standard. Positive opportunistic behavior occurs when an individual acts to improve their welfare, aware that their well-being further improves if the remaining members of society act similarly. Examples include producing goods and services and avoiding pollution. Negative opportunistic behavior occurs when someone acts to improve their welfare, but this same person's welfare decreases if the remaining members of society act similarly, such as stealing or bribing. The pace of economic development is defined by the opportunistic behavior that occurs in society.

Human practices depend simultaneously on collective organization and individual capabilities. Ethics defines how practices consolidate a certain behavioral tendency. Ultimately, it sets the coherence and balance of the whole society.

Throughout this book, we have already addressed some perverse practices that mankind engages in, which reduce overall welfare if everyone does them. Practices such as coercive bureaucracy, social loafing, the arbitrary creation of new money for consumption purposes only, the perpetuation of a floating rates monetary system, the use of collateral by the financial system, the raise of barriers to business free entry, the engagement in political ties, the adoption of deceptive commercial practices, bribery, corruption, or robbery, none can contribute to enhance the economic power of a human society.

The most harmful practice that compromises human safety is the habit of obeying rules and orders that must be disobeyed. Edward Snowden and Katharine Gun are bold heroes who, at personal risk,

chose to act ethically. The second most dangerous practice we are prone to is maintaining active non-ethical regulatory systems, as seen with the Official Secrets Act 1989. It is plain that both compromise individual safety consistently.

Nevertheless, other harmful practices compromise society's economic power on a global scale. In this realm, the prominent is the cult of unemployment. And mankind does not seem to be aware of its full implications.

The cult of unemployment

Some economists praise the existence of a natural rate of unemployment. According to the record, this category includes individuals who are not currently working by choice. People who decide to change employers, learn a new professional activity, and are currently engaged in either an educational or training process, as well as those who choose to take a break, see the world, travel, or enjoy a specific experience that cannot be done while working. However, the situations mentioned above do not represent people who want a job but cannot find one in society.

A little more worrisome is the formal definition we can find from some macroeconomic experts who state that the natural unemployment rate is the "minimum unemployment rate resulting from real or voluntary economic forces" that "reflects workers moving from job to job, the number of unemployed replaced by technology, or those lacking the skills to gain employment."²¹¹ This

approach presents technological development as a significant caveat that intends to justify the existence of unemployment. A vital distinction worth outlining between those who do not want to work at all and those who do but cannot “gain employment” is that the former are not applying for a job, whereas the latter may even be begging for one.

The naive conception of unemployment as something that must be legitimized by society grounds its foundations on the idea that it is possible to gradually develop society’s infrastructures, creating new employment by raising new investments by private firms, and, step by step, reach a full employment economy, for those who do not work are the least prepared to do it. This approach struggles to explain why, in 2023 and for OECD countries, the average unemployment rate for people under 25 years old is above 14 percent, and above 20 percent in several developed countries. Considering that these are among the people who had just been prepared to enter the job market, holding the finest hot skills that universities and training institutes can provide, then what explains why they cannot find a job?

The reasons for what we do

Emotions play a significant role in human decision-making. Consequently, the economic activity is a resulting sub-process. Empirically, emotion-based purchases or deliberately deceptive sales confirm the assertion daily. But assuming that we are emotion-based

animals, whose decisions are not so rational after all, deserves inquiry.

In 1999, the neuroscientist António Damásio outlined that a simple organism made of a single cell, “*not only is alive but is also engaged to be alive.*” In this realm, the “*desire and urgency*” for survival has a place inside the boundaries that define a body. The author noticed that a distinction between human beings and an amoeba lies in our awareness of our attachment to life, which we possess, and the amoeba does not.²¹²

The relevance of this matter is grounded in the relationships that each living organism establishes with its surrounding environment. These relationships, when it comes to the economic subject, definitely affect how disparate economic agents interact with one another. Furthermore, the author stated that the existence of a coherent “*set of first-order neural patterns*” that constantly monitors the organism's physical structure is the apparatus that enables our brain to continuously regulate our body, even without our awareness of its existence. Survival is thus the first need of any living body.²¹³

Additionally, António Damásio distinguished between a feeling and the awareness of having a feeling, outlining that there is no evidence that we are always aware of all our feelings. However, there is considerable evidence suggesting that we are not. Moreover, the author posits that emotions of different types and tonalities give rise to feelings, which, in turn, may trigger an image framework in our brain. When this happens, those images could signal feelings that may become an object of our awareness. Then, our superior reasoning gives rise to a set of responses that may translate into

actual behavior and may also produce a dynamic in the opposite direction, affecting the stream of our feelings, emotions, and even our basic metabolism. Improving our welfare requires taking care of the process by which a general sense of well-being is built. And that requires a continuous renewal of positive emotions.

Understanding our basic emotions helps to frame economic behavior. According to António Damásio, fear is one of the basic emotions that enables an individual to learn from unpleasant situations experienced throughout life. Pain is an emotion associated with punishment, loss, and stagnation. Therefore, it is reasonably expected that a person experiences pain and fear when facing a similar unpleasant situation they have already lived through. Institutional pressures exerted by society towards conformity, and punishment follows when behaviors deviate from the societal norm. Conversely, pleasure is an emotion associated with rewards and is linked to behaviors such as curiosity, quest, and closeness. Since a general state of joy and happiness demands a continuous renewal of pleasant emotions, the proper institutional environment for welfare improvement must provide such conditions.

Our behavior is shaped into a collective organization through an emotional mechanism that involves both fear and greed. Perhaps, in economic thinking, this could be summed up as individual interest. Each time a member of society foresees an opportunity to engage in an activity that will yield a pleasant outcome, the individual will endeavor to achieve his or her goal, provided no unpleasant outcome is foreseen. When this happens, the potential benefits will be weighed against the possible penalties, and a rational decision-

making process will develop.

In 1933, Joan Robinson explained that “*marginal cost represents the rate at which total cost increases as output increases.*”²¹⁴ Hence, when it is possible to sell the output at a price higher than its cost of production, the entrepreneur chooses to increase production because he or she would be missing the opportunity to earn a profit.

This process of marginal thinking, which appears to be highly rational, has its roots in an emotionally driven foundation. First, the entrepreneur needs to secure an income to survive. Second, the producer tries to capitalize on every profitable opportunity, as it provides a pleasant experience. However, counter-intuitively, this perfectly acceptable human behavior is the cause of the cult of unemployment.

Notice that, in a reality of unemployment, the entrepreneur enjoys a labor market in which potential employees are not a scarce resource. Accordingly, the price of hiring that labor must be sufficient to both sustain the employee and generate a profit for the entrepreneur. The entrepreneur will employ an additional person as long as the individual’s productivity, measured in potential revenue, overcomes the wage to be paid. However, when unemployment is reduced in society, the resource becomes scarce, and the employer must pay higher wages not only to the new employee being hired but also to existing employees. Accordingly, regardless of the technological reality, the individual decision-making process will always stop hiring an additional person before the firm’s profit drops to zero. And that means that there will always be someone unemployed.

Suppose we extend the analysis to the level of an industry, where a given number of firms enter the market to create new jobs. In that case, the result regarding the consistency of unemployment will be similar. Notice that no entrepreneur will be inclined to deploy an additional start-up, given the prospect of diminishing profits. Hence, the cult of unemployment is substantiated by both the fear of losing profits, driven by emotionally based marginal thinking, and the fear of nullifying investment activities, which will further exacerbate the number of unemployed persons.

The current state of affairs

Mankind is engaged in silly practices that we know for sure are not the best for us all. At the beginning of the 19th century, the Finnish people knew that they were not Swedes, they could not become Russians, so they had to be Finns. It is now time for humanity to understand that we are not irrational animals; we cannot become amoebas; therefore, let us be human.

We have reached a stage of knowledge and understanding of who we are and what we do that enables us to identify what needs to be done. We have the technology to ensure that everyone can live in plenty. We possess the expertise to create a business environment that fosters economic growth and development. However, we are still lacking an ethical guideline that requires us to treat each human being as one of us. Mankind is not yet one single nation. And that is compromising our economic power.

Chapter summary

The existence of a given set of infrastructures, whether of material or immaterial nature, whether of formal or informal character, does not ensure a given practice. One thing is the tools we have at our disposal, and another is the way we use them. One thing is the regulatory framework that someone says should be followed, and another thing is whether we choose to abide by it. The reasons we act in a given way depend on both the environmental context and the interpretation of that context by organizational actors. Both found roots in human emotions.

The strength of our emotions sets the boundaries of our rationality. It is not possible to be coherent and balanced while giving in to every mood we have. Moreover, it is not possible to firmly adopt ethical behavior when survival is at stake. But history has shown that we can step up. A balanced, widespread sense of nationalism was the secret ingredient explaining the Finnish people's success. We can upgrade our global environment to a full-employment economy, but we must learn to do so without threatening anyone's survival. Only then will we be as productive, safe, and peaceful as possible. This is why ethical behavior is paramount to a society's economic power.

Practice is what we do regularly to reach a given goal. It can attend to ethics, or it may not. There can be no freedom without ethics, because disrespect for others and ourselves becomes a practice. This practice of kicking ethics consolidates an unbalanced and incoherent society. On the opposite direction, and invariably, the

rules we choose to abide by determine the outcome of what we do.

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CHAPTER 10

Just in time

Suppose that adapting to the circumstances at hand is crucial to being successful. How shall one prioritize change?

When the outcome matters, focusing on how we produce the output becomes crucial. Consequently, choosing a given action plan requires identifying the available resources and understanding why attention must be paid to essential details. Mankind has been slowly evolving in this domain.

The history and work of Taiichi Ohno provide an enlightening example of how embryonic the stage of human civilization is in relating the targeted outcome to what we are doing to produce a given output.

Taiichi Ohno was born in 1912 in Japan. He graduated in Mechanical Engineering from Nagoya Higher Technical School and, in 1943, he joined Toyota Motor Company. At that time, the corporation was experiencing severe financial difficulties that threatened bankruptcy. There was no money to proceed with new investments, and profit, growth, and sustainability had to be met by

focusing on inner resources. That is when Taiichi Ohno developed the Toyota System of Production, which later became known as “Just in Time” manufacturing.

The system was fundamentally grounded in the ideas previously disclosed by Henry Ford in 1926 regarding Ford’s method of car production, combined with empirical observations of how commodities were replaced in United States supermarkets as soon as they were sold. According to the University of Cambridge, *“it originally referred to the production of goods to meet customer demand exactly, in time, quality and quantity, whether the ‘customer’ is the final purchaser of the product or another process further along the production line.”*²¹⁵ Hence, more than a management technique, it was a management philosophy that has now come to mean producing with minimum waste.

As put by Saran Narang, *“Just-in-time (JIT) manufacturing is not about the final product being made just in time, but rather that the raw materials are being delivered for assembly as close to when they are actually needed.”*²¹⁶ By reducing waste to a minimum and focusing on the firm’s internal productive processes, Taiichi Ohno could lead Toyota to thrive.

They have succeeded because focusing on the outcomes to be reached always explains why something was being done. They reduced inventory to a minimum, thereby lowering storage expenses and related costs, including obsolescence and damage. The productive process was continuously monitored to minimize delays and waste. Because less capital was tied up in stocks, a cash flow was freed for investment opportunities. A closer coordination with

the supply chain was developed to ensure timely deliveries, prevent inventory shortages, and enable the firm to quickly adapt to changing consumer demand by producing only what was needed. At each productive step, the spotlight was on the outcome of each action being carried out.

In the 1970s, many Japanese manufacturing organizations were applying JIT principles. According to Kunio Saito, Japan's GDP rose at an average annual rate of approximately 10 percent between 1963 and 1972, driven by rapidly rising labor productivity and substantial private investment in plant and equipment.²¹⁷ However, the use of JIT has some drawbacks, such as exposure to supply chain disruptions, unexpected price changes, or dependence on accurate forecasts and disciplined staff, which can negatively affect its efficiency.²¹⁸ Nevertheless, it has never been abolished, for it is not possible to reach higher levels of economic success while forgetting about the outcome of some deeds. It is irrefutable that producing with the least waste possible is essential to consolidate economic power.

The success of the JIT methodology depends on both individual capacities and collective organization.

Individually, it focuses on continuous improvement. Things like attacking fundamental problems that do not add value to the product, devising systems to identify problems, making production processes as simple as possible, and making each worker responsible for the quality of their output are all individual-centered topics meant to be solved by the person or the firm, and do not encompass a collective engagement.

Collectively, a supply chain is deployed while recognizing that many firms depend on it. Eliminating waste can only be successful through the commitment of a large number of suppliers, who are highly focused on satisfying their customers. Avoiding waste through overproduction, waiting time, transportation, processing, or excessive inventory can only be achieved by developing a mutual understanding between customers and suppliers to the highest standards of coordination and collaboration. It is only when the whole society is engaged in producing work efforts to mutual benefit that an economy can thrive. JIT is a successful methodology for safeguarding both individual and collective goals simultaneously.

Nevertheless, one remarkable criticism of JIT is the heavy dependence of each firm on its supply chain. This view tends to avoid establishing long-term business relationships with suppliers because the failure of one entity might threaten the success of the remaining entities and, therefore, can undoubtedly compromise one's success. This approach abhors human error and aims to prevent consequences arising from others' mistakes. By this token, individual-based organizations are seeking to be universal in controlling material resources and skills, while outsourcing as little as possible. These kinds of organizations are rarely specialists in their field. They do not try to minimize waste, but rather aim to maximize their sense of safety.

However, the improved efficiency, recognized as a result of the JIT methodology, cannot be achieved by the universal firm. Because a society is composed of a multiplicity of productive entities that intertwine to deliver a given level of overall welfare, whether of a

private or public nature, producing an outcome with the least possible cost is paramount. Hence, the exposition of a society to human error becomes a critical factor of analysis.

Exposure to human error

In the final two decades of the 20th century, particularly through the work of Oliver E. Williamson, several studies have been made to increase our understanding of the most efficient economic organization. The author posed that the existence of governance structures “*with which to mediate the exchange of goods or services*” and “*assessing the capacities of different structures to harmonize relations between parties*” has been recognized by economics as “*central to the study of institutional economics.*”²¹⁹ Human responses occur within the boundaries set by the deployed governance structures, which define the rules of the game.

However, the existence of regulatory infrastructures does not necessarily translate into a given common practice. This means that the practice is a matter of individual choice. Oliver Williamson outlined that “*opportunism makes provision for self-interest seeking with guile,*”²²⁰ highlighting that individuals may act to satisfy their self-interest without regard for others' feelings, and positioning the contract as a key tool to increase economic efficiency. Moreover, the author argued that a general focus on efficiency requires concern “*with the manner in which human assets are organized.*”²²¹

In 1995, this worry was detailed by Mark Suchman, who

delineated that the dynamics in the organizational environment stem from material and technological conditions, as well as from cultural norms, symbols, beliefs, and rituals, which demand addressing “*the normative and cognitive forces that constrain, construct, and empower organizational actors.*”²²² Indeed, we consider a given decision or policy legitimate according to the set of beliefs we rely on and the rules we choose to abide by.

The above theoretical exposition magnifies that our human decision-making process is boundedly rational. We lack hyper-rationality, yet we are not entirely irrational either. In 2011, Andrew W. Lo advances “*what, then, is the source of irrationality, if not emotion?*” and considers that “*market equilibrium requires a rather sophisticated theory of mind, and presumably a high level of abstract thought.*”²²³ The discussion on JIT’s merit or debacle can easily be deviated from rationally based arguments.

We fear the consequences of human errors and want to eradicate them. But we cannot do it. Yet the JIT methodology requires us to trust large-scale human cooperation, which is inevitably subject to human error. It is therefore crucial to understand the diverse answers that human organizations have provided to address this issue.

First, entities operate under severe hierarchical structures, in which a superior controls the performance of their subordinates. In this type of organization, each person is left to themselves, performing their work role as demanded. Subordinates tend to hide mistakes from their bosses, and quality control is often based on an authoritative, controlling management style. Hence, mistakes are rarely promptly identified and corrected, while their negative

consequences can easily be amplified. The exertion of firm control allegedly prevents chaos, but it comes at the additional cost of stifling subordinates' initiative and creativity. The Genghis Khan society, based on the Yassa's guidelines, constitutes an example of this.

Second, some organizations accept human error but aim to identify it quickly. This type of organization employs a standardized methodology to promote a shared understanding of the overall workflow. The human error is accepted and corrected as soon as possible. Mutual aid and control are provided between equals to enhance everybody's performance and identify mistakes. This is a JIT-based organization.

Finally, it is worth noting that the primary reason humans engage in work is to earn income. The two different types of organizations not only tend to reach disparate levels of productivity but also employ dissimilar practices regarding the production and distribution of income. The eventual emergence of human error is used to justify a steep hierarchical structure socially. Still, it is always based on the portion of the overall income that goes to those at the top of the organizational hierarchy. The economic power of a society depends on the type of organization chosen, which, in turn, is determined by ethical considerations. The core of a free society finds its roots.

The rules that make us free

Freedom is a very special kind of ability, for its value depends on what someone can do with it. And we are often prone to withdraw freedom from someone else.

Currently, mankind is not free. People are not free to engage in the economic activity of their choice without asking for a permit. People cannot move to a country or location of their choice without obtaining a visa. People cannot reveal all the truths they know because some information is considered classified or socially unacceptable. Children cannot learn in the school of their choice unless their enrollment is accepted. We claim together that these requirements are necessary to safeguard overall welfare. We implicitly assume that we are a danger to ourselves. We are accepting regulatory environments that do not provide the best quality of life. We are trying to grab the largest share of the pie rather than focusing on making it bigger for everyone. We are playing silly games.

The loss of individual autonomy carries the loss of freedom. However, providing freedom to act imperils social order. That is why the rules we choose to abide by are crucial and must both magnify individual initiative and safeguard collective harmony. Knowing the game we want to play helps us identify the best rules to make it fun.

The five basic principles

Before defining the rules that we chose to abide by, we need to identify the principles that constitute the foundation of a sound regulatory system to safeguard overall welfare. There are five principles upon which the economic power of a society consolidates: 1) eradicating deceptive deeds; 2) ensuring the free movement of people, commodities, and money; 3) eradicating taxes; 4) ensuring that production processes occur with the minimum possible cost; and 5) ensuring the full contribution of all society members to the production of income. The five principles combine to enable mankind to enjoy life to the highest possible standard. Yet, they all require further inquiry.

Eradicating deceptive deeds

The human engagement in deceptive deeds is an unavoidable impulse. The human's rationality is based on marginal thinking, that is, we are always prone to accept a cost as long as we expect to be able to grab a higher gain. In particular, it explains why we work to earn an income that will provide greater satisfaction. Hence, our reasoning is based on evaluating how much I can gain from a slight increase in my cost. If the expected gain supersedes the anticipated cost, then a call to action is triggered.

This positive stimulus to human creativity reaches its limits when an individual's actions jeopardize the welfare of the entire

community. This situation happens when the person themselves will end up worse if the remaining members of society act similarly.

Science has shown that the human quest for value is remarkably consistent across all societies. The works of Daniel Kahneman and many other researchers have shed light on the consistency of human choices when faced with the potential to gain or avoid a loss. Specifically, the identification of nonlinear preferences in choices made in the face of uncertain outcomes led to an understanding of human behavior regarding risk aversion, risk-seeking, and loss aversion.²²⁴ Depending on the circumstance, the relationship between the value that the individual seeks through the exertion of a choice to either take a gain or avoid a loss is now perfectly known. We engage in risk-seeking activities when the probability of scoring a significantly higher gain seems to justify the potential cost, even when it does not.

In 1992, Daniel Kahneman and his peers found out that we perceive a loss of one unit 2 to 2.5 times more intensely than what happens by scoring a one-unit gain.²²⁵ This means that when we feel someone has hurt us, we tend to be resentful at least twice as intensely as the real damage. This human characteristic pushes mankind onto a destructive path, for someone who has been hurt will intend to fight back at least with the same intensity that was felt. Our bounded rationality explains why it is so challenging for humanity to achieve peace. Our emotion-based decision-making system is the primary reason why, as a community, we need to establish robust regulatory systems to control individual choices collectively.

It is interesting to note that about 2250 BC, in ancient Babylon,

King Hammurabi was already aware of this need. Retrieving the Code's Rule 124, we understand that the king intended to punish the person who engages in litigation of bad faith by forcing that man to pay double whatever the disputed value.

Rule 124- *If a man gives to another silver, gold, or anything else on deposit in the presence of witnesses and the latter disputes with him (or denies it), they shall call that man to account, and he shall **double** whatever he has disputed and repay it.*

The king was aware that a double punishment would induce people to avoid bad-faith litigation instinctively. Despite its use in ancient Babylon, humanity still struggles to address the frequency of deceptive acts properly, and the scope and usefulness of such a rule remain misunderstood.

The occurrence of fraud or misunderstandings in trade agreements is recurrent, sometimes because a participant deliberately seeks to take advantage of the remainder, and sometimes because the economic environment has changed during the agreement period. During this time, a firm may face external circumstances rendering economic difficulties for a business player, such as a change in the political situation of the player's country, a financially adverse price change in production factors, and so on. The risk of engaging in the economic activity extends beyond moral hazard to encompass practical situations that may be of a force majeure nature. Nevertheless, typically, regardless of the cause, no one accepts being harmed by others' misfortune and reacts accordingly. Hence, a

sound regulatory system is always required to enable order and prevent chaos.

At least since the time of the Templars, in the Middle Ages, mankind resorted to documentary transactions to trade goods internationally. A regulatory system and a general and widely accepted business practice became the pillars of economic activity. Hence, a steady form of large-scale cooperation among humans was mandatory, and chambers of commerce were organized.

The term “chamber of commerce” first appeared in Marseille, France, in 1599.²²⁶ Later, in 1919, the International Chamber of Commerce was founded, establishing its international secretariat in Paris. The institution is governed by its Constitution, which sets forth its structure, and membership is gained through affiliation. It aims at “making business work for everyone, every day, everywhere.”²²⁷ Currently, it provides practical trading tools essential to doing business, including Incoterms rules, a standard in international business rule-setting, model contracts and clauses, and dispute resolution services.²²⁸

One interesting feature of international commercial contracts is the applicable choice-of-laws principles.²²⁹ In 2015, at the Hague Conference on Private International Law, the latest set of principles was approved. It is stated in Article 2, number 1, that “a contract is governed by the law chosen by the parties.” This freedom is extended to everyone by the entire human society and will naturally lead to the choice of a regulatory framework that best suits the parties’ overall interests. Accordingly, trade participants may choose to adopt the French Law, the Anglo-Saxon Law, the Arab Law, or

any other widely accepted legal framework that they consider most suitable for the business agreement. By this token, contracts are primarily entered into in good faith. These principles significantly contribute to the success of large-scale human cooperation.

Setting up uniformly accepted regulatory frameworks aims at ensuring trust in economic transactions. In 1985, Paolo Grassi outlined that “*the principal and most important task of documentary transactions is therefore to provide security to the parties with respect to the fulfillment of the reciprocal financial obligations.*”²³⁰

The involvement of a bank fosters trust in economic transactions and unlocks a wide range of new business opportunities. The financial system provides the seller with a guarantee of payment and the buyer with a guarantee that the seller will comply with the business agreement. This situation enables the buyer to sell the goods before paying for them, and the seller to find a financing source that might not have been available otherwise. Either way, upstream and downstream of the economic transaction, society benefits from the financial system's increase in trust.

The International Chamber of Commerce published The Uniform Customs and Practice for Documentary Credits (UCP). These rules have been adopted worldwide. When the adoption is declared by the national organization, as in the United States, Switzerland, and Germany, all banks are bound by the UCP rules in those countries. When banks individually adhere to the UCP, as is the case in Egypt or China, the rules will apply only to credits issued by those banks. Currently, even some Eastern European countries have adopted the UCP and, according to Paolo Grassi, “*of the 159 countries in which*

the U.C.P. rules are applied by banks, 76 represent adoption by individual declaration.”²³¹

Despite the worldwide secular efforts of disparate “chambers of commerce” to normalize trade, they have not yet been able to eradicate deceptive practices. Specifically, situations of fraud happen. For instance, Paolo Grassi describes that “*cases appear in which the beneficiary presents forged documents like invoices or bills of lading describing goods which have never been shipped.*”²³² Therefore, the use of local law at the national level can seldom ignore the *lex mercatoria*, for the principles and commercial practices adopted across time are relevant to every business participant’s decision-making process.

History has shown us that the most effective rules for influencing human behavior in a positive direction are those that focus on benefits. The creation of the International Chamber of Commerce and the enactment of several sets of rules were efforts aimed at the benefits society can achieve from mutually beneficial trade. Moreover, by requiring the bad-faith litigator to pay double, King Hammurabi intended to enable businesses to continue while safeguarding the fact that the benefit eventually acquired through a deceptive deed would vanish if it were to be unmasked. Paul S. Adler referred to this type of regulatory system as an “enabling bureaucracy,” in contrast to the cost-based regulatory frameworks, which represent a “coercive bureaucracy.”²³³

The development of regulatory systems and practices that encourage mankind to thrive is still in its infancy. We have not learned enough from the Code of Hammurabi. We have not fully

understood that the principles we choose to adopt determine our quality of life. Specifically, the UCP consecrates the duties of care and good faith when the bank intervenes in the process of verifying documentary compliance.²³⁴ These duties define the expected attitude of the bank in the examination of documentary compliance and, being known by everyone, influence the propensity for overall standard compliance. Trust is a tremendous trade catalyst. It is impossible to enjoy freedom when trust cannot rest. It is impossible to enjoy solid economic power when trust in human activity cannot be secured. Therefore, we have a duty to eradicate deliberate deception in economic activity.

Ensuring the free movement of people, commodities, and money

The awareness that freedom is at the forefront of economic development has been slowly awakening in mankind. The exercise of power always involves a form of large-scale cooperation, but it also entails different levels of human freedom. These levels of freedom vary with the type of power a society aims for.

In the realm of military power, as it happened in Genghis Khan's world, the exercise of power was in the hands of Temudjin alone. The vast majority of Genghis Khan's society was allowed to behave as outlined in the Yassa code. People were not free to engage in the activities of their choice, nor to treat other human beings kindly, particularly if they were considered to belong to a people that had

not submitted to Genghis Khan. Freedom is absent in a society where military power is the ruling force. In this case, the society's ability to efficiently use the available resources is meager.

In the realm of political power, where people adopt a common way of thinking around a given ideal, as when religious doctrines are in place, people's freedom is subordinated to the dominant guidelines set in the past. In this case, the enforcement of the law is slightly less severe than when military power takes the lead, and a higher level of tolerance for debate and raising new possibilities arises. However, resources are rarely utilized to their full potential because the legal framework is unable to adapt to changing circumstances promptly. And people are pushed to behave according to the political guidelines only.

The economic power of a society that consecrates freedom encompasses a complexity that extends beyond the simple formal allowance of people to act as they please. For instance, as we saw in Chapter 1, in Ethiopia, the legal framework formally allows people to move from agricultural territories in the country to industrial jobs in the city. However, the rule "use it or lose it" encourages people to stay in agrarian activity even when they do not know how to work the land, as it is the only source of steady income they can depend on. In practice, the rule "use it or lose it" denies the Ethiopian people their freedom. Even if they are not able to extract a high income from their free piece of land, at least they will not risk being left with nothing. Freedom can only be fully understood when the rules a society chooses to abide by invigorate people to enthusiastically take advantage of the perceived opportunities without fear of potential

negative consequences.

Through sheer military power, a single individual can control all available resources, leaving the remaining members of society with little to no freedom. Hence, in this case, productivity is necessarily compromised.

In a politically organized society, human behavior is allegedly directed towards fulfilling everybody's best interests, as long as it remains aligned with the guidelines previously set by someone under a given circumstance that may or may not be currently applicable. In a politically organized society, good judgment is often set aside, and following past rules can become perverse and even counter to the beneficial goals they were intended to achieve when they were created. A politically organized society can easily become cynical and destructive because it is unable to address the demanding reality adequately.

Much more important than owning the resources is knowing how to utilize them, whether these be material resources or human resources. Because no individual knows everything about everything, it is therefore required to provide people with the freedom to move from being an employer to being an employee, with the freedom to express their suggestions and creative ideas to improve the production of goods and services, and with the freedom to express their talents and skills to the highest standard of their possibilities. Otherwise, as a society, we will narrow our capacities to the bounded rationality of those in power.

The economic ideal of providing freedom entails a significant political responsibility to empower people to act while safeguarding

overall welfare. That is why the way education is provided, knowledge is disseminated, and resources are promptly made available to those who know best how to utilize them, are solid determinants of a human society's economic power. That is also why the correct use of political power extends beyond the property issue to focus on the matters of production and distribution of income. And mankind is still far away from reaching such a higher level of civilization.

Eradicating taxes

Taxes are a precise way of withdrawing income from society members in favor of a given goal. Whether this goal is collective or individual remains to be determined. Individually, we know that a person's work effort decreases when the expropriation of the produced output increases. Consequently, the compulsory contribution to state revenue, levied by the government on workers' income or business profits - the wage of the entrepreneur - always induces a decrease in society's work effort unless that contribution is felt appropriate at the individual level. Only then can the collective goal of tax collection be recognized and socially legitimized.

In Chapter 3, we saw that many Chinese enterprises are among the world's top 500 and operate at the international and private levels while being publicly owned by the state. In practice, these are corporations mainly driven by the individual goals of their board of directors. They produce and sell one good or service, and their

contribution to overall welfare is limited to this scope. When taxes are collected to finance these companies that engage in private activities, they have the same practical effect as if a person decides to invest some of their savings in an investment fund. However, in the latter case, the individual is legitimately expecting to be refunded in the future and usually has the right to be informed about the investment fund's activities. Hence, taxes are not required to finance corporations involved in economic activities of the private domain.

Taxes are typically viewed as necessary for ensuring education, justice, safety, roads and transportation services, as well as public infrastructure, such as sewer networks and communication facilities. However, every society can rely on these services, even when private corporations provide them.

Today, worldwide, Iridium Go and Starlink provide internet and communication services, delivering global connectivity for our mobile devices.²³⁵ These are private companies operating in a private niche of economic activity whose products and services will be purchased as long as they are useful to the buyer. And they do not depend on taxation from the population of a given country to survive. Similarly, the construction of roads, bridges, schools, courts, and other public infrastructure can be financed privately, as long as they are beneficial to society.

The main difference between paying for a product or service and paying taxes is significant. In the former case, the person knows that they can continuously perform a cost-benefit evaluation and end the economic relationship when it is considered unfruitful. In the latter case, taxes are collected over time without any allowance for a

meaningful cost-benefit assessment or the ability to end the expropriation process when the contribution to the government's income is deemed useless.

In the mid-1990s, Mona Sahlin was identified as the next leader of the Swedish Social Democratic Party, which, at the time, was the dominant force in the Swedish political arena. However, it was revealed in the media that she had used her work expenses credit card to buy two bars of chocolate, causing a scandal known as "Toblergate." In comparison to her early political success, she has since struggled with a decline in her popularity ratings.²³⁶

Sweden has been a leading country in transparency in government-related matters. At the Swedish government website, it is stated "The principle of public access to official documents" which, in two sentences, advertises: 1) "In order to guarantee an open society with access to information about the work of the Riksdag (Swedish parliament), Government and government agencies, the principle of public access to official documents has been incorporated into one of the fundamental laws, the Freedom of the Press Act;" and 2) "This openness gives the Swedish people the right to study public documents, a right which may be exercised when they so wish."²³⁷ This principle brings the Swedish government's actions closer to those of any private entity, as the general public continuously scrutinizes its usefulness. This means that, rather than paying taxes, Swedish people are paying for the products and services provided by their government. And they will do so as long as they consider it suitable for everyone.

The importance of eradicating taxes to safeguard welfare is

overwhelmingly outweighed by the Greek situation during the Troika intervention. The Greek people were subjected to outrageous austerity, forced to pay the debts contracted by their successive corrupt governments, who were previously induced to do so because they could enforce the collection of taxes. However, this reality is prevailing elsewhere in the world.

For instance, in Portugal, in 2014, the “Operation Marquis” judicial procedure began against the former Prime Minister José Sócrates and some other relatives and associates. The investigation revealed that, between 2004 and 2011, several million euros were deposited into Swiss banks under the name of Carlos Santos Silva, a childhood friend of José Sócrates, and subsequently wired back into the Portuguese financial system. The Public Prosecutor's Office has been monitoring the money collected in Switzerland and believes that the millions belong to José Sócrates.²³⁸ The trial of the accused is now scheduled to begin on July 3, 2025, eleven years after the incident. When the people's tax money is used to buy products and services that they cannot control, lootings like this one will always be ready to go.

Ultimately, these situations make the production processes more expensive. Justice, education, mobility, energy, defense, and environmental care are services that can be provided by public or private entities, as long as society identifies what it is paying for. In this way, society buys the services instead of being exploited by them and precludes their use as an excuse for expropriation. The economic power of a society is severely jeopardized when it fails to take care of its tax system.

Ensuring that production processes occur with the minimum possible cost

As a society, if we are not producing at the minimum of the technological average cost, then we are producing waste and being economically inefficient. Unfortunately, that is what a profit-driven society does.

When an individual is maximizing profit, he or she does not care about increasing the unitary production cost if the unitary selling cost remains higher. That means that it is possible to increase profit by increasing the quantity produced. That also means the individual firm increases its production capacity beyond the quantity that minimizes the unitary production costs.

Maximizing profit is different from maximizing revenue or minimizing costs. Those are three completely different matters.

Marginal thinking can only occur when we have several possibilities for action from which to choose. The entrepreneur has the potential to increase production or maintain the current level. He or she evaluates the available options and chooses the situation that appears to be more immediately advantageous. Usually, these are short-term temporal decisions because, in the short run, life unfolds. In the 1990s, Christopher Carroll demonstrated that consumers adjust their consumption patterns in response to the uncertainty of future income and according to their preference for present consumption.²³⁹ Hence, emotionally driven feelings push us to grab an immediate gain without considering too much about the possibility of making a mistake that jeopardizes our future.

Marginal thinking is, therefore, a consequence of having options to decide upon. For instance, when considering the possibility of hiring another facility to increase the firm's productive capacity, it is advantageous for the entrepreneur to have a wide range of available resources to choose from. In this instance, the entrepreneur will choose the cheapest one, for that means securing the highest profit. However, notice that the entrepreneur is not minimizing costs. He or she is increasing costs by spending financial resources to purchase one additional productive space. Nevertheless, this mindset arises only because resources are unused.

If every existing productive space is occupied, the entrepreneur can access a new productive facility only by offering the owner a higher profitability than the owner is currently earning. The bidding entrepreneur must earn a return on their economic activity that exceeds what the current owner of the facility earns from their own business. This process will continue until the returns in both entrepreneurs' businesses are the same. Hence, when the available resources are fully employed, society faces only average returns and bears unitary production costs at their minimum.

When every business provides the same average return, the only way for an individual to increase their income is by reducing the average cost of production. A focus on efficiency in productive processes becomes crucial, and the "Just in Time" methodology is paramount. Producing at the minimum of the average costs, given the available technology, becomes a consistent reality. But that means that every available resource must be in use.

On the other hand, when spare resources that are not in use are

available, the resource is not rare. If the resource is not rare, then it should be possible to use it freely, just like the air we breathe. In this case, society would not waste resources and would utilize available material resources only as needed. Production would be cheaper.

However, we are still unable to utilize all available resources while minimizing production costs. That can only be done if we produce things “just in time,” in the sense that we will be making them for immediate use only. The reason we see so many empty productive facilities worldwide is that humanity has produced them beyond the threshold of necessity, rendering them useless. Waste has been created and, fueled by a profit-driven mindset, remains unused, yielding only a meager return to the owner.

Hence, ensuring that productive processes occur at the minimum possible cost requires that every available resource be in use. In this case, every business would be providing the same level of profitability. Otherwise, productive facilities would be changing hands until a similar return is provided across the entire range of factors of production. When we produce houses, factories, or work the land beyond the threshold of necessity, not only do we waste our work efforts, but we also waste material resources. These superfluous products make marginal thinking seem rational, and the profit-driven mindset prevails, as resources are no longer scarce.

In terms of human resources, this means we live in a situation in which entrepreneurs have the permanent ability to hire new employees from a pool of available workers. Hiring new employees from an unemployed situation means utilizing the human resource, as long as the marginal utility derived from the person’s productivity

is higher than the salary to be paid. A sheer management decision is made accordingly.

If human resources were scarce, every available employee would have to be hired from another competing firm. To succeed, the bidding entrepreneur would have to pay a higher salary than the employee is currently entitled to. This means that entrepreneurs would harass the competitors' best employees and increase their own employees' wages to prevent competitors' potential initiatives on their staff. This process would continue until the entrepreneur's profit is reduced to a normal salary, and every person would choose to be either an entrepreneur or an employee based on their talents, skills, and personal profile.

In this instance, if we consider that the entrepreneur is enjoying the income from their work effort, then profit is zero, and only wages are the outcome of economic activity. In addition, this means that the profitability of the disparate economic activities is zero, since every available resource that is not rare is used. Resources that are not scarce will be used freely according to individual needs. The eradication of unemployment from a society naturally pushes mankind to produce at the minimum of the technological average production costs, and it is the only way to avoid producing waste. Consequently, only by eradicating unemployment can a society enhance its economic power to the highest possible standard.

There is a considerable difficulty in taking this step forward. To those who own the means of production, consecrating a society of full employment would mean immediately giving up a fraction of the current income in favor of those who now receive whatever the

owners decide to give away. Regardless of the eventual realization that this posture jeopardizes resources and reduces productivity, the person fears that any future increase in income production does not compensate for this short-term sacrifice. To mankind, eradicating unemployment requires awareness that some individuals will forgo a short-term gain in exchange for future compensation, enabling society as a whole to end up significantly better off. And this is true even to those who now own the world.

In 1995, Gregory Gundlach, Ravi Achrol, and John Mentzer, addressing the structure of commitment in exchange, asserted that “*commitment implies a willingness to make short-term sacrifices to realize longer-term benefits.*”²⁴⁰ But it takes a solid understanding of why to do so, and it is even harder to reach when someone is socially entitled to a fraction of the income without having to commit work efforts at all.

Ensuring the full contribution of all society members to the production of income

Ensuring the full contribution of all society members to the production of income is, therefore, mandatory to enhance a society’s economic power. Currently, several factors are preventing humans from contributing to income production. Some are voluntarily avoiding it, while others are hindered from meaningful contribution!

In a society that uses money to facilitate trade, some cause-and-effect relationships follow: 1) it is possible to consume the goods

and services available just by making new money and without providing any meaningful contribution to society; 2) the simple production of new money causes an increase in the prices of the existing goods and services, thus artificially valuating the goods already produced; 3) those who control the material resources, either by force or under a legal framework, are induced to resort to the contribution of other humans only if they can perceive an immediate benefit by doing it; and 4) the production of new money can benefit society if, and only if, it enables the control of material resources to those who better know how to use them. A society of full contribution requires these relationships to be fully understood.

It is not difficult to grasp that the ability to create new money confers massive individual power on those who are entitled to do so. In 17th-century London, goldsmith house owners quickly realized that they could issue goldsmith-banker receipts and exchange them for goods that had already been produced.

Just as in the 13th century, when the Bardi provided the first loan to Edward I of England, the financial system creates new money for consumption, jeopardizing the savings of the general public and causing them to lose value. This loss of value arises from the increase in prices caused by the new money available, forcing housekeepers, in the future, to buy fewer quantities of the available products with their savings, while raising the probability of default when their savings are to be reimbursed.

One additional indirect effect of the creation of new money for consumption purposes is the concentration of income in the hands of those who own the goods already produced, whilst the obligation of

returning the new money just created without any work effort is left for the borrower, who must endeavor to work to pay back the money lent. This is the cause of the consistent inequality in income distribution with which mankind has always been struggling. Since it is a form of expropriation, it reduces overall committed work effort.

The production of new money for consumption purposes prevents humans from contributing to the production of income in two ways: those who are entitled to make new money while grabbing the products already produced by others will gladly do it, and the person who feels that they have received a proportionally smaller income than their fair contribution will reduce work efforts in the future. They are both voluntarily stepping away from making a full contribution to income production: one does not need to bother, and the other does not want to. It is irrefutable that a society's economic power is compromised when this happens.

Since the human decision-making process is grounded in a cost-benefit evaluation, in a society that uses money for trade, an investment decision is always preceded by analyzing whether the potential revenue outweighs the foreseen cost. Accordingly, those who own the means of production will not hire an additional worker unless a potentially profitable relationship is spotted. Therefore, it is unavoidable that a portion of the human workforce available will always remain unemployed. Regardless of their will, these individuals will be prevented from contributing to income production.

Ultimately, it is challenging to determine the value of creating new money. When some creative ideas enable a better use of

available resources, individuals with bright project ideas need to be able to put them into practice. Since we use money to trade, they need access to money to rent or buy properties and other production means. When the financial system provides these loans, even by creating new money out of thin air, the entire society benefits if the newly created money enables the production of new products and services society needs. In this instance, the increased cost of the available products and services at the time of creating new money will soon be offset by the latest products and services that will be produced shortly. In this instance, the full contribution of those who hold bright ideas is enabled by society, and freedom is extolled to its maximum potential. Otherwise, those who currently control the means of production will continue to use them as they do, regardless of whether they employ savvy processes.

The rules that make us free

The rules that make us free are those that extol the five principles mentioned above. These rules must be designed to give practical sense to these abstract principles. However, the enactment and enforcement of any regulatory system depends on the use of power.

The differences among military power, political power, and economic power are therefore meaningful.

Military power is the sheer use of brute force to subjugate every material and human resource to the commander's will. It can never be efficient in providing overall welfare.

The use of political power is someone's capacity to find support from other society members around his or her ideas. Accordingly, the use of political power tends to consolidate by serving the interests of a fraction of society, detrimentally affecting the remaining. Whether it be a professional class, a union, an employers' association, a nation, or an international alliance, the use of political power will always struggle to safeguard overall welfare.

Nevertheless, the exercise of political power is tremendously vital for mankind to strive. When used correctly, the application of political power amplifies economic power to its full potential. When political leaders are not very astute, they often resort to using military power to compel large-scale cooperation in pursuit of their individual goals. It is not difficult to observe that these weaknesses are more likely to occur when ethical behavior is absent among both those who command and those who follow them.

The regulatory system combines several sets of rules that only make complete sense when put together. Every human being has the potential to be both a producer and a consumer simultaneously. Overall welfare depends on both actions. Accordingly, a sound regulatory system that enhances mankind's welfare cannot overlook either. And must be changed according to circumstances, whenever the rules induce human behavior that prevents mankind from reaching its goals.

Our current financial system is used to grant new money only on collateral. This means that those who do not own anything are precluded from accessing material resources, regardless of their ideas for how to use them. This sort of rule narrows down the

society's economic power and is, therefore, to be questioned.

Our ongoing financial system also creates new money indiscriminately for either consumption or investment purposes. We know that it is required to ensure that consumption credit comes only from householders' savings to have a healthy monetary market. Moreover, we recognize that the creation of new money is beneficial for society if it facilitates successful new business investments. And combining these two forms of credit has been troublesome for our financial system.

In 2019, professors and economists Fernando Alvarez, Martin Beraja, Martin Gonzalez-Rozada, and Pablo Andres Neumeyer showed that the frequency of price increases and decreases is similar when inflation levels are low. That is, economics has shown that inflation has adverse effects on the economy only when it exceeds a given threshold. The authors focused their study on empirical data provided by the economies of Argentina, the Eurozone, Poland, Mexico, Brazil, the United States, Israel, and Norway. They concluded that, in general, the adverse effects of inflation are felt only when it exceeds 5 percent per year.²⁴¹

Today, society recognizes that the creation of money by banks is beneficial to economic development when it is dedicated to granting investment credit, provided the investments are successful. Hence, it is possible to upgrade our financial system by establishing a regulatory framework that prevents the creation of new money for consumption credit and allows the creation of new money for investment credit, provided the inflation rate remains below 5 percent. Cumulatively, if the judicial system functions well,

resorting to collateral is not required to provide credit. Banks will focus on sound business ideas rather than political influence, property, or individual interests when granting credit.

The rules that make us free cannot be chosen without having a complete understanding of their economic scope.

Chapter summary

In the mid-20th century, Taiichi Ohno saved Toyota from bankruptcy by adopting the JIT production methodology. Similarly, as a global society, we are now in a position to act promptly.

The importance of ethical behavior in enhancing a society's level of well-being cannot be overstated. Eradicating deceptive deeds is a necessity that extends far beyond ensuring trustworthy relationships and guaranteeing safety. Society may choose to enact a punishment twice as severe for those who breach contracts, or adopt another regulatory format that induces individuals to avoid deceptive deeds voluntarily. Whatever the rules, they must be adjusted according to circumstances, and whenever they are not achieving the goal for which they were initially designed.

Ensuring the free movement of people, commodities, and money is necessary, as it is impossible to use human creativity to its full potential otherwise. However, it cannot be confused with a lack of control over the freedom that is being granted. We know that humans take advantage of every available opportunity, just as long as an immediate short-term gain is within range, regardless of long-

run consequences. Hence, it is necessary to provide individual autonomy while knowing that deceptive deeds are voluntarily rejected.

Eradicating taxes becomes a necessity because tax collection induces deceptive practices by entitling someone to a portion of income without specifying what is provided in exchange. It constitutes a form of expropriation, leading the general public to reduce work efforts. A tax is always an inefficient cost borne by society.

Ensuring that production processes operate at the minimum possible cost is not only a matter of efficiency but also a safety concern. What can we expect from the future we are building if we consistently expend more material resources than technologically required to produce the exact quantities of goods and services? What future are we raising if we work too much time and do not provide the due attention and care to our children? We know that a society's economic power is magnified when unemployment is eradicated. We can eliminate unemployment by retiring people sooner rather than later, increasing paid holidays, and reducing working hours, among other measures. It is something that can be easily done. We have not done it yet because we live in a politically organized world that is still more concerned with individual interests than with full-scale cooperation. But we are just in time to choose the rules that will help us succeed.

The set of rules that ensures the full contribution of all society members to the production of income is complex. Its complexity stems from the multiplicity of intertwin relationships in society.

Nonetheless, they are not complicated. Suppose we combine the rules that consolidate the first four principles with the ability to adjust the financial system into an efficient mode. In that case, we will be able to raise the regulatory framework that sets us free and provides society with the highest possible economic power.

By applying the five principles, the reader will determine the most effective way to contribute to overall welfare.

CHAPTER 11

Beyond the words of common sense

Humans are prejudice-based decision-making living creatures. Therefore, reality must be thoroughly understood before any change can be consistent.

We cannot assume that people understand every idea presented under the words of common sense. Often, it is required to dispense the foundations of our arguments to persuade people of the correctness of our reasoning.

History has provided a curious and straightforward example of great magnitude. This event is notable not only for the media coverage it garnered but above all for the way it highlights the impact of prejudice on human decision-making. It is known as the “Monty Hall Dilemma.”

“Monty Hall” was the stage name of Maurice Halperin, an individual who hosted a television contest in the United States. The contest ran from 1963 until 1986. The host presented several games to the audience. Contestants had the opportunity to choose between keeping the prizes they had already won or exchanging them for unknown prizes hidden behind three doors. However, the Monty

Hall problem gained recognition in 1990, after the show went off the air. At the time, Marilyn vos Savant was a writer and columnist for the popular magazine “Parade” and had a dedicated space called “Ask Marilyn.” In this space, readers asked questions about mathematics and advanced science, and she answered them.

One day, in September 1990, a reader posed a question that became known as the “Monty Hall Dilemma.” The problem is quite interesting. Suppose you are in a television contest and you are given the chance to choose a prize that is behind each of the three doors that are closed in front of you. The presenter informs us that behind two of the doors is a goat and that behind the other door is a magnificent automobile. Then the presenter asks you to choose a door. After the contestant has chosen a door, the presenter opens one of the two unchosen doors to reveal a goat and asks whether the contestant wants to keep the prize behind the chosen door or change it. Is it advantageous for you to accept the exchange?

This seemingly simple problem induces most people to stick to their starting position. In the final moment, when he or she has to make the last decision, the contestant is looking at two doors and is perfectly aware that behind one of them is the desired car and behind the other is a goat. The ordinary human being is induced to think that he or she is facing a fifty-fifty situation and, in that case, he or she chooses to maintain the initial position. Some people even claim that we should stick with our initial gut feeling.

Marilyn vos Savant responded to her reader, informing him that not only is it in their best interest to accept the trade, but that doing so doubles his chances of winning.

This response triggered unexpected reactions across the country, even among mathematicians and university professors, with thousands of letters addressed to the magazine “Parade” protesting the response to the reader. Marilyn vos Savant reported that nine out of ten readers disagreed with her resolution of the problem.²⁴² The pressure exerted on the magazine and the writer was such that, on February 17, 1991, she felt obliged to publish a second article explaining the solution. Despite her efforts, the dispute was only definitively eradicated when, on July 21, 1991, John Tierney published an article in the “New York Times” in defense of Marilyn vos Savant.

Effectively, at first sight, and for any one of us, it seems that we are facing a fifty-fifty solution. This mistaken intuition happens because we mentally position ourselves in the evaluation of the final situation and disregard the route that led us to the moment of taking the last decision. At the beginning of the problem, the competitor can choose between two goat doors and one car door. Your chance of success in hitting the car with the first choice is 1 in 3 (or $\frac{1}{3}$), and the possibility of getting it wrong with the first choice is 2 in 3 (or $\frac{2}{3}$). Thus, whenever the contestant accepts the exchange proposed by the presenter at the final moment, he will reverse his initial situation: he will win whenever he chooses wrong the first time, and doubles his chances of success!²⁴³

Nevertheless, if such refutability arose from something superfluous like the solution for the “Monty Hall Dilemma,” what can we expect from how the world is embracing the ideas herein disclosed? Rather than making a hasty objection, I hope that the

reader will be able to reason on economic power matters, inquiring into the entire range of assumptions that are made herein. Accordingly, in the remainder of this Chapter, I will detail the mathematical analysis that supports the prior words of common sense.

For the reader least keen on math calculations, I suggest making an effort to understand the notation of the equations while learning from their solutions. To those who do not follow such abstract analysis, I advise skipping the remainder of this Chapter.

Economics refers to the systematic study of human and material interactions aimed at delivering the highest possible level of overall welfare. The analysis of the economy is divided into four interconnected branches, each with its unique characteristics and complexities. These are Microeconomics, Macroeconomics, Positive Economics, and Normative Economics. Microeconomics studies the individual behavior that occurs within a given regulatory framework. Macroeconomics examines how individual behaviors combine to yield a specific collective outcome. Positive Economics identifies and explains how economic events happen regardless of society's awareness of its contribution to overall welfare. Ultimately, normative economics examines the fundamental regulatory foundations for consistently enhancing and protecting society's overall welfare. Understanding the fundamentals of Normative Economics enables the economist to make a difference.

The contribution of Normative Economics to safeguard overall welfare is determinant to combine the understanding of “what we are” with “what we do.” By this token, an inner awareness of who

we are as individual living beings is combined with understanding what we do to bring “value” to our lives. The core of Normative Economics is to establish a methodology for developing and adjusting rules and regulations that promote consistent overall welfare.

I frame Normative Economics as the study of the adequate regulatory environment to foster overall welfare. This places Normative Economics within a scope different from that to which it is usually considered to be economic normative theory. For instance, in 1980, Richard Thaler stated that normative theory “*describes what rational consumers should do,*” while the author is particularly notable in that individuals do not always behave rationally.²⁴⁴ Herein, not only is the lack of hyper-rational behavior addressed by Normative Economics, but its action as a determinant of individual behavior is both explored and exploited.

The remainder of this Chapter will go as follows. First, I will alert you to the value function, as disclosed by Daniel Kahneman and his peers, which is crucial to understanding the human decision-making process. Second, I will follow Joan Robinson’s steps to demonstrate that maximizing profits is not the same as either minimizing costs or maximizing revenue. Third, grounded in Alfredo de Sousa’s guidelines, I will explain why free competition among firms cannot lead an economy to full employment under imperfect competition. Fourth, I will explain why it is natural to face negative interest rates under our current economic system. Fifth, I will disclose the equations of “how it must be” that show how optimal work efforts enhance overall welfare to its full potential. The equations were

developed from a model first designed in 2010 by Timothy Besley and Maitreesh Ghatak. Finally, a brief mathematical example is provided to illustrate why the solutions presented herein consider the interests of all parties, including those who currently fully control the distribution of income.

The Value Function

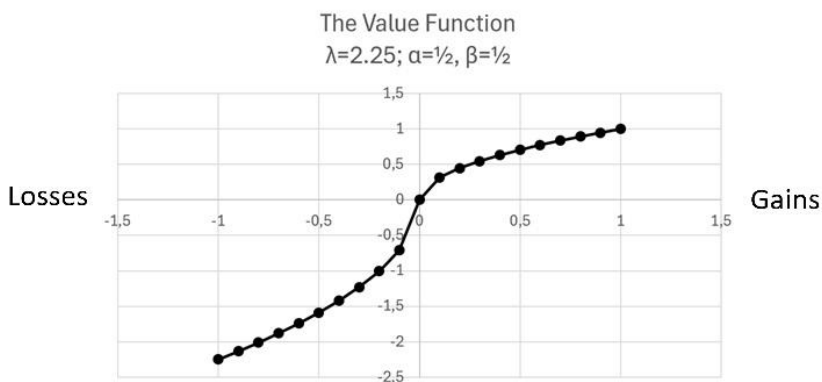
Science has shown that the human quest for value is highly homogeneous across all members of every society. The works of Daniel Kahneman and many other researchers have shed light on the consistency of human choices when faced with the potential to gain or avoid a loss. Specifically, the identification of nonlinear preferences in choices made in the face of uncertain outcomes led to an understanding of human behavior regarding risk aversion, risk-seeking, and loss aversion. Depending on the circumstances, the relationship between the value sought by the individual through the choice to take a gain or avoid a loss is now perfectly understood. Hence, a spot of homogeneous overall interest has already been identified and is of the utmost importance for the continuous development of Normative Economics.

The form of the Value Function results from the preference homogeneity exhibited by individual behavior. As put by Amos Tversky and Daniel Kahneman, in 1992, “*preference homogeneity is both necessary and sufficient to represent v as a two-part power function of the form*”

$$v(x) = \begin{cases} x^\alpha & , \text{ if } x \geq 0 \\ -\lambda(-x)^\beta & , \text{ if } x < 0 \end{cases}$$

where the median λ was 2.25, $\alpha \in]0,1[$, and $\beta \in]0,1[$.²⁴⁵

Figure 11.



Source: Based on Kahneman, D. (2003) “A Perspective on Judgment and Choice: Mapping Bounded Rationality”

Furthermore, in 2003, Daniel Kahneman outlined that “*the value function is a psychophysical mapping*” and “*is defined on gains and losses and characterized by four features: (a) it is concave in the domain of gains, favoring risk aversion; (b) it is convex in the domain of losses, favoring risk-seeking; (c) most important, the function is sharply kinked at the reference point and loss averse – steeper for losses than for gains by a factor of about 2-2.5 (Kahneman, Knetsch, & Thaler, 1991; Tversky & Kahneman, 1992); and (d) several studies suggest that the functions in the two domains*

are fairly well approximated by power functions with similar exponents, both less than unity (Swalm, 1996; Tversky & Kahneman, 1992).”²⁴⁶

Figure 11 provides a clear view of the value function's shape. In the domain of gains, the function outlines that people often prefer a certain gain over the probability of winning a much larger prize, even when the expected value of the gamble is higher than the sure gain. For instance, people often prefer to pocket a certain gain of €10,000 over the possibility of taking a gamble with a 25 percent chance of winning €50,000. Hence, humans are risk-averse. On the other hand, in the domain of losses, Tversky and Kahneman posed that *“people often prefer a small probability of winning a large prize over the expected value of that prospect.”*²⁴⁷ By this token, it is clear that people opt for a certain loss, albeit with a near-zero chance of winning, when offered the lottery.

In the domain of losses, the function indicates that humans are risk-seeking. Moreover, the Value Function outlines that people often prefer a sure loss over a substantial probability of a much larger loss. For example, people usually choose to pay €200.00 to avoid the possibility of losing €10,000.00 with a 1 percent chance. This human propensity is the core of the insurance industry. Hence, humans exhibit a preference for security, or loss aversion, that extends beyond the threshold provided by the mathematical fair value. Taking gains and avoiding significant losses are often the goals of the human decision-making process. However, humans frequently opt to take losses without even being aware of it. And that is something that needs to be understood to maximize welfare.

The assistance provided by the Value Function in enabling the enactment of an adequate regulatory system is remarkable. One of its notable characteristics regards the value of λ . Researchers have determined a median value of 2.25 for λ , indicating a significantly steeper slope of the function in the domain of losses than in the domain of gains. This finding is consistent with past research.

In 1980, Richard Thaler documented that the maximum amount people are willing to pay for a good is often half of the minimum amount required to give it away. In 2003, Daniel Kahneman proposed a straightforward interpretation of these findings, stating that “*a good is worth more when it is considered as something that could be lost or given up than when it is evaluated as a potential gain.*”²⁴⁸ Therefore, individual choices are quite disparate according to the circumstances that each person faces regarding their welfare reference point.

In the institutional realm, the Value Function is a crucial provider of objective insights into the creation of a regulatory environment that maximizes overall welfare. Human opportunistic behavior is developed to seek value. Since the identification of the opportunity depends on both the circumstances available and holding executive power to act, opportunities are necessarily dependent on the regulatory system that society chooses to abide by. The identification of what constitutes an enabling bureaucracy and what constitutes a coercive bureaucracy becomes crucial in establishing an adequate institutional environment.

The value function helps to explain the human decision-making process. Still, it does not provide insight into why the marginal

thinking process inherent to a profit-driven society fails to minimize costs or maximize revenues.

What profit is all about

In 1933, in her book “The Economics of Imperfect Competition”, Joan Robinson detailed the geometry applied to the analysis of any “*two quantities of which one is determined by the value of the other.*”²⁴⁹ The analysis helps to understand the loss of efficiency when we live in a profit-driven society.

We begin the analysis of the decision-making process of a productive unit of control by assuming that it is the only one in the market and sells its production to a multitude of heterogeneous buyers. Since this unit of control faces no competition, it is acting under a monopoly. In this instance, the first concern for the firm’s owner is the unitary cost of each unit produced, as he or she needs to ask for a higher selling price to make a profit with each sale. To do this, the entrepreneur sums all costs incurred and divides the result by the total quantity of the final product. The monopolist needs to know the unitary average cost.

The second concern of the monopolist is to look for opportunities for higher-profit deals. Profit is secured because the firm defines the product’s selling price, and everything produced is intended for sale; the entrepreneur primarily focuses on opportunities to lower the product’s average unit cost.

Consider the entrepreneur who manages to hire a new worker

from another industry. This new worker possesses a specific skill that enables a significant increase in production. However, this new worker also requires a higher wage and a new work infrastructure to be effective. In this instance, the manager will proceed with hiring the employee whenever the proportional increase in final production (or total revenue) exceeds the rise in total costs. These additional changes in both costs and output (revenue) are marginal values. The entrepreneur will increase its productive capacity as long as the increment in marginal costs does not override the rise in marginal revenue.

The definitions of average and marginal values are insufficient to fully understand their effects on the regular functioning of an economy. Marginal values are the ones that define the course of a society's welfare because they set up opportunistic behavior. Note that average values are always the outcome of a static decision-making process.

For instance, the product's average unitary cost is always the outcome of total costs divided by total output, and the firm's average unitary revenue is always the result of the ratio between total sales and production sold. However, marginal values are the ones that induce a change by creating the opportunity to score a gain. The opportunity might exist whether the firm's marginal costs are rising, falling, or remaining constant.

Tables 11.1 to 11.3 provide evidence of rising, falling, and constant marginal costs. The three situations can occur within any business, depending on the evolution of the firm's processes and technologies.

Table 11.1. Example of rising marginal costs

Units of Output	Average Cost	Total Cost	Marginal Cost
10	20	200	-
11	21	231	31
12	22	264	33
13	23	299	35

Source: Based on Robinson, J. (1933) “The economics of imperfect competition.”

Table 11.2. Example of falling marginal costs

Units of Output	Average Cost	Total Cost	Marginal Cost
10	20	200	-
11	19	209	9
12	18	216	7
13	17	221	5

Source: Based on Robinson, J. (1933) “The economics of imperfect competition.”

Table 11.3. Example of constant marginal costs

Units of Output	Average Cost	Total Cost	Marginal Cost
10	20	200	-
11	20	220	20
12	20	240	20
13	20	260	20

Source: Based on Robinson, J. (1933) “The economics of imperfect competition.”

If marginal cost is greater than average cost, average cost must be rising. The addition of a unit above the average necessarily leads to an increase in the average of a given set. Conversely, if marginal cost is less than average cost, average cost must be falling. And if marginal cost is constant, average cost is also constant.

The first subtlety that arises from analyzing marginal and average costs is that marginal costs initially fall until a certain point, after which they begin to rise. This scenario is quite likely to happen in the real world for several reasons. For instance, we may consider a machine that requires a significant amount of power to be activated, leading to a continuous decrease in unit costs as long as output is produced. This same machine must be continuously operated by a worker whose performance declines over time due to exhaustion. In cases such as this one, marginal costs initially fall, then invert after reaching a certain level of production, resulting in a U-shaped curve when represented in the space (Q, P) . This leads to the existence of a locus of rising marginal costs and falling average costs, which requires close analysis by every firm's manager. When marginal costs begin to increase, managers may be tempted to hold production levels constant. However, even when marginal costs are rising, it is still possible to reduce the average cost by increasing production, as long as the marginal costs remain below it. Table 11.4 evidences this locus of rising marginal costs and falling average costs.

In this example, notice that, from producing 13 to 14 units of output, there is a locus of rising marginal costs and falling average costs. Figure 12 illustrates how the two curves evolve against each other, highlighting that, in situations such as this one, the marginal

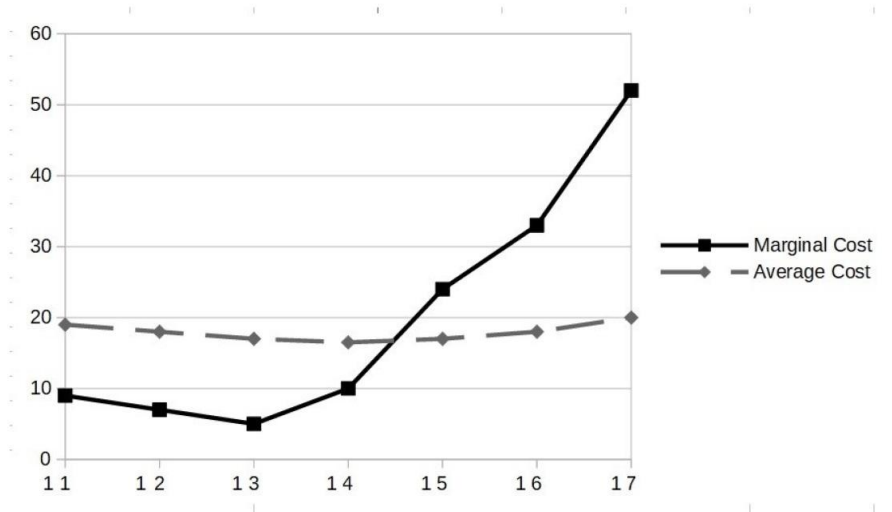
cost curve cuts the average cost curve at its minimum.

Table 11.4. Locus of rising marginal costs and falling average costs

Units of Output	Marginal Cost	Total Cost	Average Cost
10	-	200	20
11	9	209	19
12	7	216	18
13	<u>5</u>	221	<u>17</u>
14	<u>10</u>	231	<u>16.5</u>
15	24	255	17
16	33	288	18
17	52	340	20

Source: Author’s creation

Figure 12. Marginal and average cost curves



Source: Author’s creation

The impact of marginal cost on the management decision-making process is always dependent on simultaneous marginal changes in revenue, as it is impossible to gain when the marginal cost increases more than the marginal revenue. Suppose the addition of one more unit of a productive factor does not translate, at least, into the same marginal increase in the firm's revenue. In that case, the entrepreneur will not proceed with increasing productive capacity.

Table 11.5 illustrates the calculation of both average and marginal revenue under market behavior observed when there are budgetary restrictions and when a decrease in the selling price results in an increase in the quantities sold.

Table 11.5. Marginal revenue and average revenue

Units of Output	Price	Total Revenue	Average Revenue	Marginal Revenue
10	36	360	36	-
11	34	374	34	14
12	32	384	32	10
13	30	390	30	6
14	28	392	28	2
15	26	390	26	-2
16	24	384	24	-6
17	22	374	22	-10

Source: Author's creation

It is essential to note that the average revenue is determined by the selling price when the producer does not engage in price discrimination across different markets. Suppose we calculate the profit that can be collected from the production and sale of a given output over a given period. In that case, we can determine the optimum production from the entrepreneur's point of view.

Table 11.6 provides a perspective on the conjunction of the primary data from Tables 11.4 and 11.5. The firm maximizes profit by producing and selling the quantity at which marginal cost equals marginal revenue. In this example, since we are dealing with indivisible units of output, we identify that by producing 13 units of production, we have a marginal revenue of 6 (see Table 11.5, marginal revenue when selling 13 units), while recording a marginal cost of 5 (see Table 11.4, marginal cost when producing 13 units). However, the total profit is given by the difference between the average unitary revenue and the average unitary cost, multiplied by the traded quantity ($169 = (30-17) \times 13$).

It is crucial to outline that this managerial decision is not the same thing as minimizing unitary costs or maximizing unitary revenues. Further examining the numbers in our example, Table 11.7 summarizes the profit maximization process by showing how the difference between average revenue and average cost evolves as quantity produced and sold changes over a given period.

Table 11.6. Profit maximization

Units of Output	Price	Total Revenue	Total Cost	Total Profit
10	36	360	200	160
11	34	374	209	165
12	32	384	216	168
<u>13</u>	30	390	221	<u>169</u>
14	28	392	231	161
15	26	390	255	135
16	24	384	288	96
17	22	374	340	34

Source: Author's creation

It is worth highlighting that the entrepreneur who maximizes profit does not minimize costs; for if they did, in our example, they would produce 14 units instead of 13. Moreover, the entrepreneur who maximizes profit does not maximize revenue. Finally, as shown in Table 11.7, the entrepreneur who maximizes profit does not maximize the difference between average revenue and average cost. The entrepreneur who maximizes profit simply maximizes the difference between total revenue and total cost, and that is achieved when marginal cost equals marginal revenue.

Table 11.7. Recap of profit maximization

Units of Output	Average Revenue (AR)	Average Cost (AC)	AR-AC
10	36	20	16
11	34	19	15
12	32	18	14
<u>13</u>	<u>30</u>	<u>17</u>	<u>13</u>
14	28	16.5	11.5
15	26	17	9
16	24	18	6
17	22	20	2

Source: Author’s creation

This is a manifestation of human behavior seeking value, regardless of the opportunistic nature it may take. A profit-driven society is not very smart. And we know this, at least, for 92 years!

Imperfect competition

In a world where “the secret is the soul of the business,” as it is quoted among Portuguese business people, competition is imperfect, for information is kept on hold as much as possible.

When firms operate under imperfect competition in the market, there is a relatively small number of producers offering close

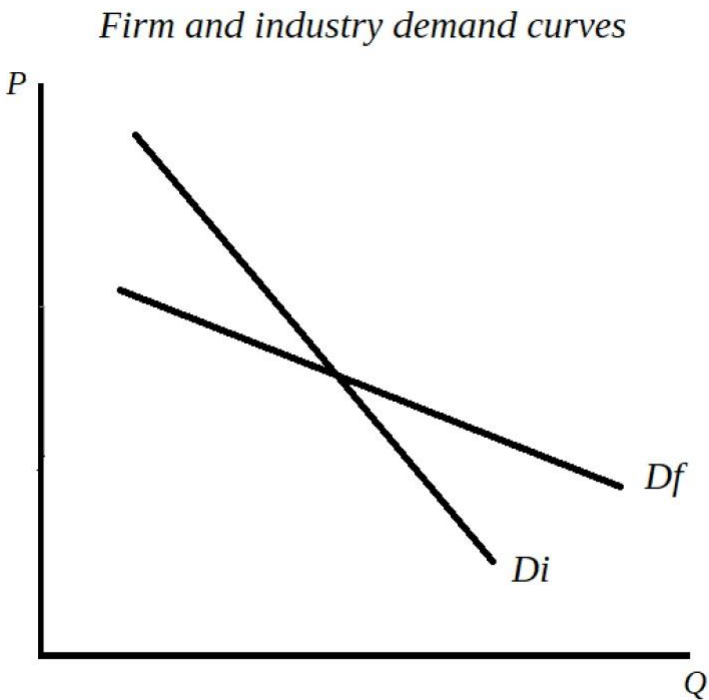
substitutes at a given price, each enjoying abnormal profits. If we consider the set of firms as an industry, then the demand curve faced by the industry is necessarily less elastic than each firm's demand curve. This is because, with minor changes in its product's price, the individual firm might lose or gain some of the industry's customers who are currently buying from the competition.

Figure 13 illustrates the different possible positions of the demand curves of both the firm (D_f) and the industry (D_i) where the curve D_f is more elastic than the curve D_i (assuming the simplification of replacing the notion of elasticity with the curves' slope).

In this market of imperfect competition, information is imperfect, and firms resort to various means to maximize profits, such as modifying product characteristics (aiming for a monopolistic position) and adjusting product prices and/or advertising to capture competitors' customers.

This type of strategic behavior is followed by the competitor's adjustment, which leads society into a dynamic process of successive action and reaction. We may consider a starting situation where each firm's chosen pair (Q, P) of the produced quantity and selling price is defined by following the industry's demand curve. In this instance, the individual firm will deliver the quantity Q_I and sell it at price P_I , where Q_I is the quantity at which the individual firm's marginal cost equals the marginal revenue.

Figure 13.

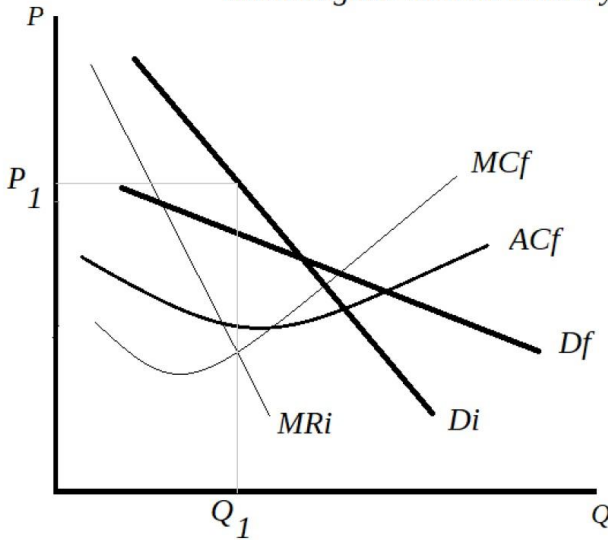


Source: Based on Sousa, A. (1988) “Análise Económica”

Figure 14 illustrates this starting point, where the firm is wholly aligned with its industry.

Figure 14.

*The individual firm choice
when aligned with its industry*



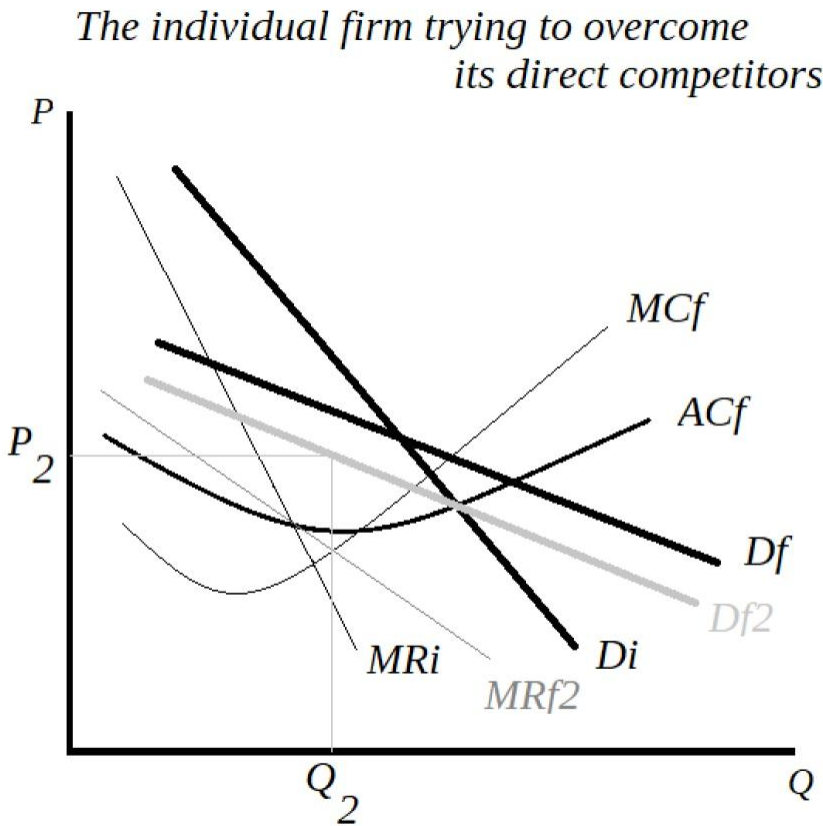
Source: Based on Sousa, A. (1988) “Análise Económica”

In Figure 14, the firm follows the industry’s demand curve as a guideline. It maximizes its profit where its marginal cost (MC_f) equals its relevant marginal revenue (MR_i), which, in this case, is given by the industry. Hence, the firm chooses to produce quantity Q_1 and sell it in the market at price P_1 , just as the remaining competitors do.

But the individual firm believes it can increase its market share by reducing its selling price, assuming its demand curve is relevant. However, the money in circulation did not change, nor did the customers’ budgets. If the firm is considering selling a higher quantity at a lower price, it is equivalent to adjusting its demand

curve downward. Now, the firm’s chosen quantity-price pair (Q, P) will be at the point where the firm’s marginal production cost, MC_f , cuts its marginal revenue, MR_{f2} , as illustrated in Figure 15.

Figure 15.



Source: Based on Sousa, A. (1988) “Análise Económica”

The firm chooses to produce the quantity Q_2 and sell it in the market at price P_2 . However, at price P_2 , the entire competition will likely adjust their prices as well and sell higher quantities in the

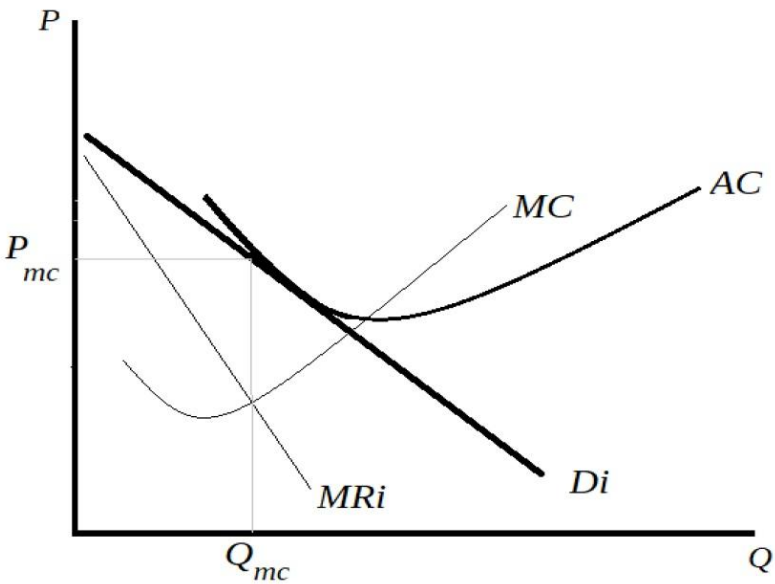
market, following the industry demand curve. For the individual company, this is equivalent to forcing its demand curve to shift further downward. This process of continuous adjustments of the particular firm of an industry ends when it does not have an incentive to proceed with a price-war strategy, i.e., when the competitors' reaction will push its own demand curve to a point where the profit collected by considering the industry's demand curve is higher than the one that is perceived as possible by following a further reduction in the individual firm's sell-price.

The dynamics illustrated in Figures 14 and 15 outline how stable income inequality arises from the producer's human behavior. Entrepreneurs are easily induced to abide by their industry's abnormal profit standards and often make their decision-making process by following the industry's demand curve. Accordingly, they consistently score abnormal profits over time. Under our current regulatory system, income is skewed toward the entrepreneur.

In a free market, where members of society readily seize opportunities, if firms in a given industry are earning abnormal profits, new firms will enter. This can only occur if every productive factor is allowed to adjust its quantity-price pairs according to market needs. In this case, since new market participants are entering the industry, the industry's relevant demand curve shifts continuously to the left until no point on the curve is above the average cost curve. Otherwise, a new firm could enter the market and sell its product at a lower price, pushing the industry's demand curve further to the left from each firm's perspective. Figure 16 illustrates this situation, in which a sufficient number of new firms

enter the market and attempt to capture the available value, i.e., they follow a profit-maximization strategy of producing the quantity at which their marginal cost equals their marginal revenue. This is often the case of monopolistic competition, where the firms serve the same end market by offering differentiated products.

Figure 16.
Market equilibrium under monopolistic competition



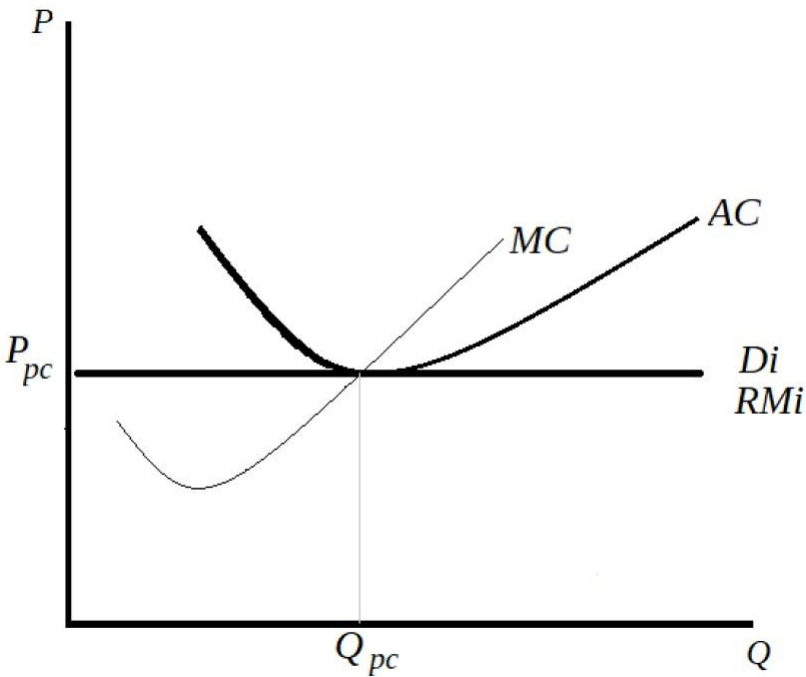
Source: Based on Sousa, A. (1988) “Análise Económica”

Under monopolistic competition, even when, in the long run, a sufficient number of new firms enter the market to bring the product's selling price to its production average cost, the profit

maximization process leads firms to produce less, and at a higher average unitary cost, than what is possible with the existing technology. In this case, the dimension of each firm in the market is smaller than what is desirable in society. The quantity offered is less than what is required by aggregate demand, and it can be provided at a lower price under the existing technology. It is, therefore, clear that the usual situation under economies of imperfect competition is the existence of firms that are smaller than the optimum dimension, as illustrated in Figure 16, even when markets are free enough to induce the entrance of new firms.

However, under a perfectly competitive market, firms are of optimum dimension. Every firm is facing the same market prices of inputs and outputs, and each firm's cost structure is the same. Prices are given, and marginal revenue equals average revenue. In this economic environment, there are no unused resources. Specifically, in the labor market, there is no involuntary unemployment; i.e., every person is employed at a wage level that equals their average productivity in firms and their average utility as consumers. If it were not so, it would be possible to either hire another employee to make a profit or accept a lower wage for the same unit of labor. The same thing happens in the markets of the remaining production factors; otherwise, it would be possible to adjust quantities and prices to earn a profit. Figure 17 illustrates the firm's dimension under a perfectly competitive environment.

Figure 17.



Source: Based on Sousa, A. (1988) “Análise Económica”

In Figure 17, the firm’s cost structure is precisely the same as the one considered in Figure 16. It is evident that, compared to monopolistic competition, the individual firm’s dimension increases under a perfectly competitive environment, while the product’s selling price decreases and the available output increases. The optimal dimension of the firm can only be achieved in a perfectly competitive environment. However, it cannot be reached unless society enacts a full-employment reality.

The regular functioning of a free market in which full

employment is secured in society is, at first glance, a situation that frightens both laborers and producers. The fears raised concern both the possibility of losing gains and the room that will be given to negative opportunistic behavior to thrive, such as social loafing. However, by eradicating profits from economic activity, it will undoubtedly raise the financial system's fear of losing income, as well.

How money works

Money is a crucial tool to build economic development. However, despite the consensus that money is vital to society's welfare, producing nothing but money is entirely useless. Furthermore, pretending that some money has more value is quite odd when the disparate currencies are to be kept working simultaneously. The role of money in boosting economic development is not wholly understood by society.

Money is essential to everyone because it enables individuals to fulfill their needs. In this instance, money is exchanged for goods and services that will allow each human being to enjoy life. Money is used to make economic transactions.

The primary function of money in facilitating trade is its role in an economy. Each person can exchange what he or she produces for the exact quantity of the goods and services produced by others. The value of a person's production is measured in monetary terms, referred to as salary. Afterward, this value is used to satisfy each

person's needs. It is therefore clear that money is intended to facilitate transactions in the economy, whether the exchange occurs immediately or at some point in the future.

Money can serve as a store of value. Savings is the portion of a person's present salary that they choose to set aside for future use. Savings have value because they represent the amount of goods and services already produced by the person, which, by the action of a present sale, confer the right to future spending.

Lastly, money can be used to start a new business if a person believes they can outperform the market by producing goods and services. This decision can be made either directly, by using one's savings to invest in a new venture, or indirectly, by utilizing someone else's savings to provide a firm with the purchasing power it needs to expand its business. This speculative function of money enables future investments to be carried out.

Knowing what money is for brings a little awareness of the effects of its manipulation on overall welfare. Money is nothing but a tool. Tools can be used to perform either a beneficial or detrimental action. The manipulation of the quantity of money available can be highly harmful to overall welfare.

The role of money as a facilitator of economic transactions begins when it is used to pay a salary. By paying wages to both himself and his employees, the owner of the means of production empowers these persons to fulfill their needs by acquiring the goods and services produced by other firms.

Given the total amount of money circulating in the economy, this liquidity will be used to exchange all goods and services produced

within it. Accordingly, the price is merely the result of the comparative value of all available goods and services. If society no longer produces new money, then all available products will be exchanged using the current liquidity, and the average price of all goods and services remains unchanged.

Price increases of a given product do not cause inflation. As the economic literature shows, inflation is caused by the addition of new money into the economy.²⁵⁰ If the price of a single product is arbitrarily increased while the available money does not change, then the average price of other goods must decrease to enable the transactions of every good produced in the economy using the available liquidity. On the other hand, if the quantities of goods and services increase while the available money remains the same, then prices will decrease in the economy to enable the complete transaction of every product and service. Conversely, if the quantities of the goods and services produced in the economy are standing still, then the production of new money leads to nothing but an average price increase. When new money is created without being backed up with additional production, the prices of current goods and services increase, and the ordinary citizen cannot acquire the same quantities of the goods and services they need as before. Increasing the amount of money in circulation worsens overall living conditions for everyone except the person who can enjoy the newly created money. It remains clear that understanding what destiny is assigned to newly created money is of crucial importance to society's overall welfare.

Apart from inflation, another negative consequence of money

misuse is the devaluation of the ordinary citizen's savings. Interest is the intertemporal price of money. An ordinary citizen sets aside a portion of their current wage to spend at a later date. This citizen might choose to exchange his or her present purchasing power for the power to consume more in the future. The lender requests compensation from the borrower to facilitate the intertemporal exchange of purchasing power. Suppose the money market is working as seriously as it needs to. In that case, the interest rate at which firms can fund their investments is the outcome of the encounter between the ordinary citizen's savings supply and the entrepreneurs' demand for liquidity. When new money is created out of thin air, the ordinary citizen is precluded from lending the savings he or she is holding in the present. Instead, the borrower will obtain the purchasing power he or she needs at a lower interest rate than would have been available at the market price simply by borrowing it from the producer of this new money. Hence, the creation of new money always carries a substantial devaluation of the ordinary citizen's savings.

Finally, when it comes to money misuse, the worst consequence is the withdrawal of money from the economy. Decreasing liquidity in the economy always hinders prior transactions from happening at current market prices. Hence, because market prices do not fall when money is withdrawn, a portion of the previously traded production is no longer sold. This part of the production is being wasted. Some firms, unable to sell all their production, become bankrupt. Unemployment increases as firms that face a decline in demand for their goods and services further reduce output. This effect propels

additional unemployment. Then, the race into the abyss speeds up...

The economic crisis is unavoidable when money is withdrawn from the economy.

The danger of money misuse by those who control its production needs to be carefully supervised by society, yet it is not. This lack of supervision spread the seeds of economic crises. This is why economic crises have always been a reality. So far, society has not prevented the manipulation of the quantity of money available, nor does the ordinary citizen know how it can be done.

Money manipulation has several negative consequences for the overall welfare. The person who has the power to create new money at pleasure leads people's welfare on a whim. Despite the danger it purports to pose, the European Union imposes the people's submission to the European Central Bank's decisions (ECB).

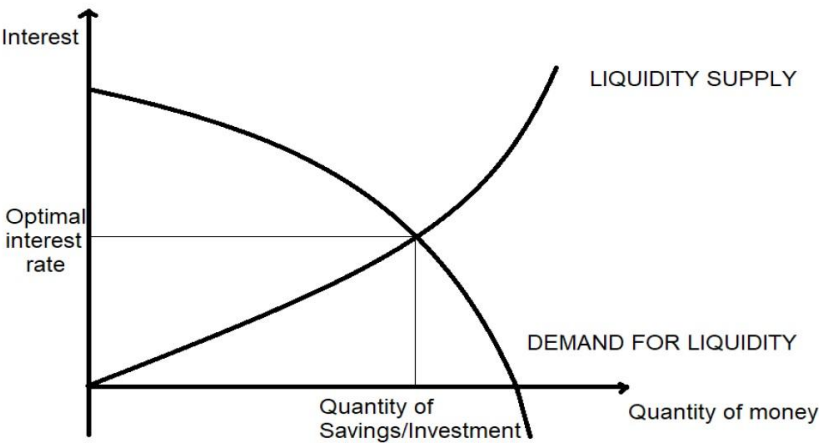
Moreover, notwithstanding the pretense of control of both the European Parliament and the European Council, the fact is that the ECB's president has an eight-year mandate, the presidency of the European Council lasts for six months, and the European Commission's presidency holds for five years. It is worth noting that the president of the ECB has far more power than the politicians elected by the European people.

In the United States, the Federal Reserve is a private bank owned by a few families. Worldwide, the power held by those who control the money in circulation is far from being adequately balanced with public supervision. And, this reality spans a wide range of opportunities for negative behavior to develop.

Just like the market for goods and services, the money market

also needs to be correctly balanced. Figure 18 exhibits both the demand curve for liquidity in any economy and the supply curve. The vertical axis represents the interest rate (or the price of money), and the horizontal axis represents the total amount of money in circulation. The demand for liquidity is downward-sloping because firms are willing to pursue more profitable opportunities as the price of their investment decreases. The concavity of this curve is downward-facing because a decrease in the interest rate leads to a proportionally lower quantity of demanded money due to the limiting effect on market size. Therefore, there is a limit on the amount of funding firms can seek for new investments.

Figure 18: The proper money market-based economy



Source: Author’s creation

Conversely, the supply curve is upward-sloping because the higher the interest rate the ordinary citizen can earn on their savings, the larger the portion of their salary they are willing to dedicate to a speculative opportunity, given the risk involved. Hence, when the market is well-balanced and the economy is functioning correctly, the interest rate is expected to be positive.

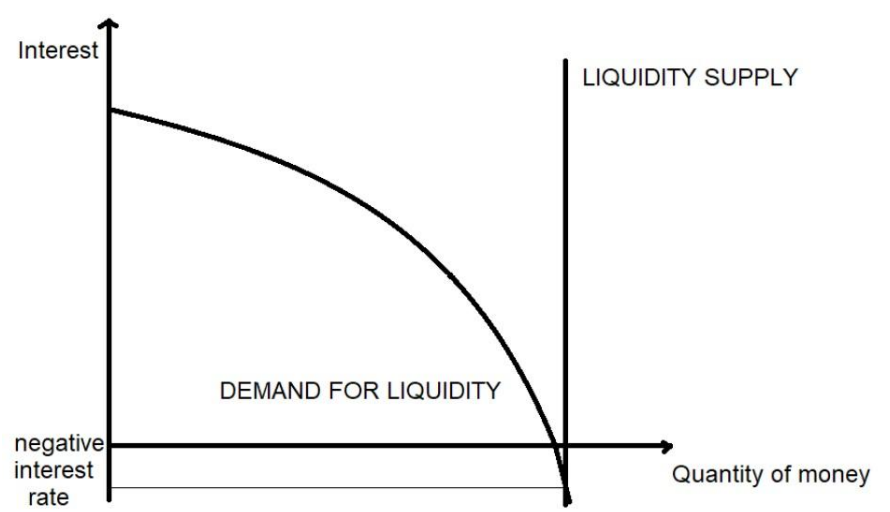
Nonetheless, ordinary people's savings have no value worldwide. The supply of money is completely controlled through direct single-person intervention. This leads to an enormous amount of money being available, far beyond the proper functioning of the money market. Figure 18 illustrates why interest rates can even become negative. The supply curve becomes a horizontal line, positioned wherever the decision-maker chooses. The creation of new money in greater amounts than the economy needs allows banks to set the interest rate on any credit line. Paying interest on ordinary people's savings becomes unnecessary. There is no money market at all.

Rather than being driven by market needs, these outcomes are dictated by a centralized moneymaker who functions like a dictator in an entirely planned economy. In this instance, there is no free-market interaction between those who save money and those who may use it for new investments. Ordinary people's savings are run over by the amount of new money created out of thin air. Moreover, this new money will be channeled to the economic sectors centrally chosen by a single person or a decision-making center, which is quite similar. Instead of being a means to safeguard the proper creation of new firms and employment in the business sectors society needs most, this approach is likely to hinder the creation of

new firms and jobs in those sectors.

It is claimed that the scheme allows inflation to be kept under control; however, inflation rarely occurs when the money market is functioning correctly. It is argued that the markets are functioning, yet people’s freedom is being cut out. Allowing for money manipulation is simply another form of living under a centralized economy.

Figure 19: The current money market of the world economies



Source: Author’s creation

Notwithstanding, the arbitrary creation of new money can spur economic development when the money market provides new entrepreneurs with the purchasing power they need to undertake new

investment endeavors. These new investments allow for the production of more products at lower prices. In this instance, the creation of new money stimulates economic development when savings are insufficient. Even so, the creation of money out of thin air always fosters inflationary pressures in the economy, which require proper management and oversight. Nowadays, these pressures are managed through a single-person decision-making process, which prevents new money from being channeled to specific economic sectors. This is coupled with stressful actions on the government's public debt, aimed at increasing tax rates to control overall aggregate demand in the market for goods and services. The economies around the world are full of remarkable examples of centralized decision-making processes that persist.

Understanding how opportunistic behavior is at the core of a thriving economy is essential to establishing guidelines that enable people's freedom and allow the market economy to function properly, free from arbitrary interference. It requires everybody's fears to be adequately addressed. It also demands that Ethics will lead the way.

The equations of “how it must be”

The mathematical expression of the bond between individual freedom, purchasing power, and opportunistic behavior enables us to gain a deeper understanding of what a proper regulatory system, universally accepted across society, looks like.

In light of the above exposition, it is clear that the buyer and the seller interact within the scope provided by the regulatory system, which sustains the government and the financial system as sources of either disturbance or reinforcement of individual behavior. This strong bond between the rules society demands its members abide by and the personal decision-making process inevitably leads to a stream of effects on how opportunities to use available resources are taken. Hence, the beginning of the entire economic process starts with the institutional environment shape, even before we can consider resource capabilities. Deducing the equations that show us the appropriate legal framework is therefore fundamental.

We begin with the Timothy Besley and Maitreesh Ghatak framework, first proposed in 2010.²⁵¹ We consider a single producer in the economy, where there is no form of exchange. The authors mention that we may consider the example of a “*farmer who is endowed with a quantity of land.*”²⁵² The authors use this model to analyze the role of property rights in limiting expropriation. I will extend the analysis to verify the employer's role in taking a portion of the total output generated by the employee's work effort. The procedure makes sense because the economy's outcome depends on the performance of both employers and employees.

The authors use the variable e to represent effort (or human work). In what follows, this notation was retained to respect the authors' original notation. Therefore, in the following equations, the notation e must not be confused with the number of Nepper (or Euler's number).

Consider a straightforward model where the farmer commits effort (time), where effort $e \in [0, 1]$, of which the farmer has an endowment of total possible working time of \bar{e} , where $\bar{e} \leq 1$, and yielding an output A . The resulting output A has a probability of occurrence of $e^{1/2}$ and may be zero with a probability of $1 - e^{1/2}$.

Therefore, under this simple model, the expected output is:

$$Q_e = Ae^{1/2} \quad (3)$$

The production function assumes that there is an effect of exhaustion along with the increase in work efforts – i.e., decreasing returns to scale, as illustrated in Figure 20.

In this framework, the farmer's expected consumption is given by Q_e , and his or her leisure time is given by $\bar{e} - e$.

The economic agent is assumed to be maximizing his or her utility function, U , which is linear in consumption, c , and leisure, l .

Thus, we assume the farmer is subject to the condition $e \leq \bar{e}$ and wants to maximize his or her utility by setting work efforts e .

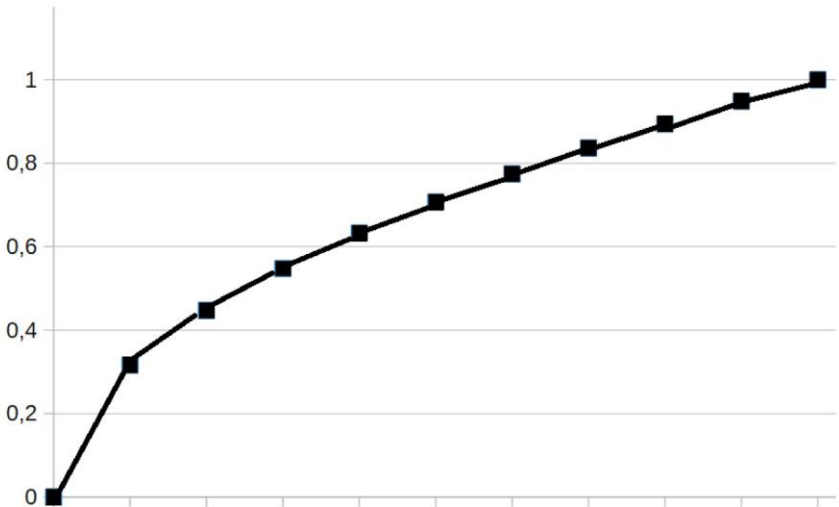
Therefore, the entrepreneur's problem is as follows:

$$\begin{aligned} \max U(c, l) &= c + l = Ae^{1/2} + \bar{e} - e \\ \text{subject to } (\bar{e} - e) &\geq 0 \end{aligned} \quad (4)$$

Moreover, to simplify the analysis and without loss of generality, it is assumed that there are neither income effects nor risk aversion considerations.

Figure 20.

Work efforts decreasing returns to scale,
 $f(x) = x^{1/2}, x \in [0,1]$



Source: Author's creation

The authors, Timothy Besley and Maitreesh Ghatak, consider a given probability of expropriation, τ , which always represents a failure of the farmer to fully enjoy the fruits of their work efforts. Thus, in this instance, τ represents insecure property rights, which may take the form of a tax or stealing, but always means the loss of a portion of the entrepreneur's production. Under given expected taxation (or expropriation) in the economy, represented by τ , since part of the producer's output is not going to be available for his or her consumption, the entrepreneur's problem is now represented as follows:

$$\begin{aligned} \max U(c, l) = c + l &= (1 - \tau) A e^{1/2} + \bar{e} - e \\ \text{subject to } (\bar{e} - e) &\geq 0 \end{aligned} \quad (5)$$

Solving the maximization problem while considering the constraint $e \leq \bar{e}$, we obtain the optimal choice of the entrepreneur's work efforts:

$$\begin{aligned} \delta U / \delta e &= 0 \\ e^* &= [(1 - \tau) A / 2]^2 \end{aligned} \quad (6)$$

Since, according to the model, total output, Q_e , in equation (3), is strictly dependent upon the entrepreneur's work efforts, e , then it is easily seen by equation (6) that the higher the expected value of τ , the lower the stimulus of the farmer to work the land. In simple terms, it is understandable that people will reduce their propensity to work hard if they expect that a significant portion of their productive efforts will not benefit them. Hence, in this instance, the entrepreneur maximizes their utility by engaging in leisure activities.

The model outlines how the use of property rights channels human behavior to secure optimal productive efforts. These can only be achieved when an economic agent feels secure about the outcome of his or her productive efforts.

Note that if the weight of stealing or taxation is too high, the producer is stimulated to both avoid productive efforts and engage himself in further activities of negative economic nature – the kind of deeds the individual employs to improve his or her well-being immediately. Still, the person's self-welfare decreases if every other

member of society acts the same way. The way property rights are secured and enforced surely deserves the continuous attention of both micro and macroeconomic theory.

Nonetheless, the scope of property rights to secure optimal productive efforts extends far beyond the welfare of entrepreneurs. We still need to inquire if the economy has the best possible institutional environment to foster overall welfare. Hence, it is relevant to analyze how expropriation concerns affect every productive unit of the economy. In particular, it is worth identifying the optimal time for a citizen to choose between entrepreneurship and working for an employer.

The problem of an individual who has the capital to start a business but chooses to find a job instead can be conceptualized using the same reasoning. We begin by considering a laborer who can choose between several employers and will yield a portion of his total production. After finding his or her job, he or she commits effort (time), where effort $e \in [0,1]$, of which the laborer has an endowment of working time of \bar{e} , where $\bar{e} \leq 1$, and yielding an output B .

Analogously, the resulting output B has a probability of occurrence of $e^{1/2}$ and may be zero with a probability of $1-e^{1/2}$. Therefore, the expected output produced by the employee is:

$$Q_w = Be^{1/2} \tag{7}$$

The employee is also assumed to be free from income effects or risk considerations.

The employee is assumed to be maximizing his or her utility function, U' , which is also linear in consumption, c , and leisure, l . Thus, we assume the employee is subject to the condition $e \leq \bar{e}$ and wants to maximize his or her working efforts, e . Consequently, when the employee can grab all his or her production, the employee's problem is as follows:

$$\begin{aligned} \max U'(c, l) &= c + l = Be^{1/2} + \bar{e} - e \\ \text{subject to } (\bar{e} - e) &\geq 0 \end{aligned} \quad (8)$$

However, it is expected that any employer considering hiring a new employee aims to capture a portion of the employee's production, β , otherwise, the employer would not bother to assume such a responsibility. In simple terms, it is expected that an employer will hire a new employee only if they can benefit from the additional effort. Therefore, a portion of the employee's production is expected to be taken away by the employer. Hence, the employee's problem is represented as follows:

$$\begin{aligned} \max U'(c, l) &= c + l = (1 - \beta) Be^{1/2} + \bar{e} - e \\ \text{subject to } (\bar{e} - e) &\geq 0 \end{aligned} \quad (9)$$

Solving the maximization problem while considering the constraint $e \leq \bar{e}$, we obtain the optimal choice of the employee's work efforts:

$$\delta U' / \delta e = 0$$

$$e'^* = [(1 - \beta) B / 2]^2 \quad (10)$$

An employee's optimal productive effort also depends on the portion of his or her production that the employer takes away. It is, therefore, clear that under an economic regime of communal property, it is difficult to reach the optimal production level given the existence of worker heterogeneity. Likewise, the medieval socioeconomic structure fell short of best practices for improving overall welfare. At those times, people could not choose between entrepreneurship and working for someone else, while the owners of their lands arbitrarily took production away from them. And, it is fair to state that neither of them, servant or landlord, had several other options.

To evaluate if an individual chooses to be either an employer or an employee, we need to compare the resulting optimal choice of the individual when acting as an entrepreneur, e^* , with the resulting optimal choice of the individual when acting as an employee, e'^* .

Hence, under the model assumptions, the individual will be indifferent between each of the options when $e^* = e'^*$. Consequently, the individual will be indifferent between engaging in entrepreneurship and accepting a job as a regular employee when:

$$(1 - \tau) A = (1 - \beta) B \quad (11)$$

Which is the same as:

$$\frac{A}{B} = \frac{(1 - \beta)}{(1 - \tau)} \quad (12)$$

Equation (12) provides an exciting result. If we consider that the individual can produce the same output either working as an employee or as an entrepreneur then the individual opts for being an employee only if the amount of total production that is expected to be withdrawn from him by the potential employer, β , is lower than the amount of expropriation, τ , which he expects to be facing when engaging in entrepreneurship. Moreover, suppose the individual understands he is more productive as an entrepreneur than as an employee. In that case, he will be seeking an employer only if the amount of his or her total production withdrawn by the employer, β , is smaller enough to offset the amount of expropriation of the total output, τ , which he or she expects to be facing when engaging in entrepreneurship (in equation (12) if $A > B$ then $\beta < \tau$ for the indifference condition to hold). In common words, for an equal total expected output, working either as an entrepreneur or as an employee, the individual prefers to seek a job instead of creating his or her enterprise if, and only if, he or she expects the new employer to take from him or her less than the government does by taxation upon entrepreneurship.

In this instance, it is possible to set up an economy that maximizes overall welfare, taking into account the interests of every member of society. We can model an economy with four types of people: 1) the government, who maximizes taxation, τ ; 2) the farmer, who maximizes his or her utility, U_e ; 3) the employee, who

maximizes his or her utility, U_w ; and 4) the unemployed person, who lives at the expenses of both the farmer and the employee by getting an even portion of their production, γ . By labeling the farmer's work effort as e_e and the worker's work effort as e_w , we have

$$U_e = Q_e + \bar{e} - e_e,$$

$$U_w = Q_w + \bar{e} - e_w,$$

and the total welfare of both employer and employee is given by

$$U_t = U_e + U_w.$$

Employer and employee's welfare is thus

$$U_t = (1-\tau-\gamma)[Ae_e^{1/2} + \beta Be_w^{1/2}] + \bar{e} - e_e + (1-\beta-\gamma)Be_w^{1/2} + \bar{e} - e_w \quad (13)$$

The society will be maximizing overall work efforts' utility, U_t :

$$\max U_t = (1-\tau-\gamma)[Ae_e^{1/2} + \beta Be_w^{1/2}] + \bar{e} - e_e + (1-\beta-\gamma)Be_w^{1/2} + \bar{e} - e_w \quad (14)$$

subject to $(\bar{e} - e_e) \geq 0$

$$(\bar{e} - e_w) \geq 0$$

Looking at U_t , since it is always decreasing with γ , it is interesting to note that the overall utility of work effort is always decreasing with increasing unemployment, and maximizing overall welfare requires a full-employment economy. Furthermore, the marginal utility of both the employer and the employee decreases to the right of the point of optimal work effort. Specifically, we have

$$\delta U_t / \delta e_e = (1/2) (1-\tau-\gamma) A e_e^{-1/2} - 1 \quad (15)$$

$$\delta U_t / \delta e_w = (1/2) [(1-\tau-\gamma)\beta + (1-\beta-\gamma)]B e_w^{-1/2} - 1 \quad (16)$$

and

$$\delta U_t / \delta e_e > 0 \Rightarrow e_e < [(1-\tau-\gamma)A]^2 / 4 \quad (17)$$

$$\delta U_t / \delta e_w > 0 \Rightarrow e_w < [((1-\tau-\gamma)\beta + (1-\beta-\gamma))B]^2 / 4 \quad (18)$$

Maximizing overall work efforts' utility in an economy exhibiting unemployment, as in equation (14), leads us to find the optimal work efforts of both the farmer and the employee, e_e^* and e_w^* :

$$e_e^* = [(1-\tau-\gamma)A / 2]^2 \quad (19)$$

$$e_w^* = [(1-\tau\beta-\gamma(1+\beta))B / 2]^2 \quad (20)$$

In equations (19) and (20), it is easy to realize that the optimal work efforts, e_e^* and e_w^* , of both the farmer and his or her employee decrease in an economy with unemployment. Figure 21 illustrates the shape of the evolution of overall welfare with productive work efforts.

Figure 21. Overall welfare and work efforts



Source: Author’s creation

In this static analysis, the four citizens cannot change their condition. The farmer is maximizing his or her utility while considering several variables: the taxation amount, τ , he or she is facing; attending to his or her contribution to unemployment, γ ; considering the potential output, A ; and accounting for the parcel of the employee’s work effort, β , he or she is entitled to. The employee, in turn, maximizes his or her utility according to the following: the given condition of wage, $(1-\beta)$; the unemployment contribution, γ ; and the potential output B . Therefore, the result that is provided by equations (19) and (20), either with or without a full-employment economy, further outlines the result of equation (12) because it is

now plain that economic agents' work efforts are magnified if they are all given the opportunity of holding executive power.

Adding dynamics to this model highlights that the overall utility of work efforts can be boosted in an institutional environment that simultaneously enacts a full-employment economy, while allowing all members of society to hold executive power, acting either as entrepreneurs or employees. Furthermore, it is even clearer that the potential outputs A and B are essential variables in the economic agent's decision-making process, leading to the conclusion that people's qualifications and talents are crucial to their choices aimed at maximizing payoffs. The way the economy enables its members to transfer property among them becomes paramount.

The results provided by equations (12) to (20) have significant economic implications and lead to several important conclusions.

First, equation (12) shows that economic agents' committed work effort increases with both decreases in government expropriation and increases in wages paid by employers to their employees. This result is consistent with prior research, which finds a positive and statistically significant relationship between the real wage and laborers' predicted effort.²⁵³

Second, in equation (12), for the indifference condition to hold, it is required that employees' total production capacity approach their capacity as entrepreneurs; otherwise, they will be prone to accept higher tax rates when acting as entrepreneurs. This situation leads to reduced work effort and commitment, and accordingly, economic inefficiency. Therefore, increasing individuals' professional qualifications is paramount for enhancing economic efficiency.

Third, when we create conditions that allow economic agents to choose between entrepreneurship and seeking a job as regular employees, greed will drive their behavior. Every person will commit work efforts according to his or her evaluation of the maximum output he or she can produce, given his or her utility function. This leads each person to reason in terms of his or her best efforts, rather than just considering the maximum wage he or she might earn by working a nine-to-five regular job. The individual will reason in terms of his or her productive ability rather than in terms of his or her expropriation of a parcel of the employer's potential output, as it may currently happen, which constitutes negative opportunistic behavior. However, this optimal productivity result can only be achieved if everyone is free of risk considerations when choosing between being a regular employee and engaging in entrepreneurship.

Fourth, the combined results of equations (6), (10), (12), (19), and (20) further outline the importance of having a flexible labor market for increasing productivity, where 'flexible labor market' means the ability of employers and employees to set both work time and wage freely. Every human being is unique, meaning that each person has their own optimal level of work effort, resulting in the highest individual productivity. Regardless of individual idiosyncrasies in preferences and risk, the individual engages in entrepreneurship whenever an employer offers a salary that is too low relative to what the individual expects to earn as an entrepreneur.

Fifth, the institutional environment that removes risk considerations from the minds of economic agents and enables every

person to focus on their best productive efforts fosters a full-employment economy. When it comes to labor relationships, the literature on microeconomics and macroeconomics acknowledges the existence of contracting frictions imposed by economic agents' behavioral responses, such as adverse selection and moral hazard, as well as emotional choices induced by either market incentives or intrinsic motivation. These results suggest that efficient adjustments in the effort of economic agents necessitate employers' freedom to fire employees. In contrast, employees need to be confident in their ability to pursue another professional occupation. Furthermore, the contract between the employer and employee should be freely negotiated, given the heterogeneity of the entire workforce. A full-employment economy induces positive opportunistic behavior when combined with people's freedom to act.

Finally, ensuring a full-employment economy cannot be a government's liability. Note that the higher the expropriation amount, τ , the lower the employer's work efforts. Cumulatively, the higher the expropriation amount, τ , the lower the wage employers have to pay to an employee to make him indifferent between choosing to accept the employer's job or establishing himself as an entrepreneur. Hence, if the expropriation amount, τ , increases, both the employer and the employee reduce their work effort; consequently, the economy cannot supply as many goods and services as it can. A government cannot ensure a full employment economy unless it collects taxes for financing that expense – in equation (13), the existence of involuntary unemployment ($\gamma > 0$) always leads to a decrease in overall welfare for both the farmer and

the employee. Accordingly, only the private sector can efficiently ensure a full-employment economy.

In summary, we have reached several important conclusions: 1) granting private property rights is necessary for maximizing overall welfare; 2) granting executive power to every society member is necessary for reaching the optimal productive level; 3) granting a full-employment economy is mandatory to maximize productivity; 4) full-employment needs to be secured by the economy's private sector; and 5) maximizing productivity requires a zero-tax economy. This surprising result suggests that, rather than assuming the institutional environment is given, it is crucial to continue monitoring it to determine whether it is truly the best way to ensure overall welfare, or whether it can be improved.

An exercise that economists must undertake is to explore the possibilities associated with both positive and negative opportunistic behavior, combined with various alternative institutional rules. We have just concluded that the use of property rights positively complements people's ability to choose between entrepreneurship and working for someone else. Moreover, we recognize that this is both an individual and heterogeneous choice, and that its heterogeneity needs to be taken into account. Hence, despite its novelty, understanding how heterogeneous citizens detect market opportunities is paramount.

Until now, the equations of 'how it must be' have left the role of money apart. But money is paramount to safeguarding overall welfare. Therefore, the equations of the rules that enhance the financial system's impact on economic development and overall

welfare must be incorporated into the analysis.

As outlined above in equation (1), the tautological identity $M=PQ$ emphasizes when there is economic development in society.

Adding someone to take care of monetary subjects in the economy, and following prior methodology, we can model an economy with five types of people: 1) the government, who depends on taxation, τ ; 2) the farmer, who maximizes his or her utility, U_e ; 3) the employee, who maximizes his or her utility, U_w ; 4) the unemployed person, who lives at the expenses of both the farmer and the employee by getting an even portion of their production, γ ; and 5) the monetary authority who survives by producing new money. As done previously, we label the farmer's work efforts as e_e and the laborer's work effort as e_w . Hence, we consider that the government, the unemployed person, and the monetary authority aim to maximize their expropriation ability of the goods produced by the farmer and their employees. Moreover, we consider that society finds a way to enjoy scale economies, α , and that the portion of the economy's total production taken by the monetary authority is given by Φ , where $\Phi \in [0, 1]$. Society must maximize its overall welfare by deciding how many work efforts to allocate. Thus, we consider the effect of the monetary authority on equation (21). Overall welfare is hence given by

$$U_t = (1 - \tau - \gamma + \alpha - \Phi)[Ae_e^{1/2} + \beta Be_w^{1/2}] + \bar{e} - e_e + (1 - \beta - \gamma + \alpha - \Phi)Be_w^{1/2} + \bar{e} - e_w \quad (21)$$

Note that the monetary authority controls the money in circulation in the economy, but does not produce any goods to be consumed.

Accordingly, a portion of the goods that are made in the economy must be consumed by this entity. Moreover, as illustrated by equation (1), if new money is created exclusively for consumption purposes, then, according to equation (1), society only gets a direct and proportional price increase. Ideally, the creation of new money can be used to finance new business endeavors, which may enable the achievement of scale economies. When this is a fruitful action, the economy gets $(\alpha - \Phi) > 0$, and registers an overall welfare improvement.

The society will be maximizing overall welfare, U_t :

Max

$$U_t = (1 - \tau - \gamma + \alpha - \Phi)[Ae_e^{1/2} + \beta Be_w^{1/2}] + \bar{e} - e_e + (1 - \beta - \gamma + \alpha - \Phi)Be_w^{1/2} + \bar{e} - e_w \quad (22)$$

subject to $(\bar{e} - e_e) \geq 0$

$$(\bar{e} - e_w) \geq 0$$

The optimal work efforts of both the farmer and the employee are given by e_e^* and e_w^* :

$$e_e^* = [(1 - \tau - \gamma + \alpha - \Phi)A / 2]^2 \quad (23)$$

$$e_w^* = [(1 - \tau - \beta - \gamma + \alpha - \Phi)(1 + \beta)B / 2]^2 \quad (24)$$

It is worth noting that society should maximize equation (21) to maximize overall welfare. At first glance, it may seem that we are only maximizing workers' utility, whether for entrepreneurs or their employees. However, we are assuming that every society member maximizes his or her utility, which depends on both consumption, c ,

and leisure, l , such as $U(c, l)$. Hence, the members of the government, the unemployed person, and the monetary authority cannot consume unless employers and employees produce at their best. Moreover, suppose their work is helpful to society as a whole. In that case, their work effort is entirely captured by the production function, i.e., by $Ae_e^{1/2}$ and $Be_w^{1/2}$, and the outcome of their work effort is exchanged with the outcome produced by the remaining society members, as is the case with everyone else. Particularly in this instance, this framework captures the services of a guardian of values and a payment facilitator that banks deliver to society, as well as the work of those who manage public infrastructure.

The results (23) and (24), obtained from maximizing equation (22), are fundamental for Economics. They stand out in that, to maximize overall welfare, several variables in the economy need to be as close to zero as possible. These are τ (taxation, expropriation, or stealing), γ (unemployment), and Φ (the portion of the production taken by the monetary authority). Furthermore, equations (23) and (24) highlight that the existence and interference of the monetary authority can be beneficial for overall welfare, provided they positively contribute to economies of scale. This contribution must be in such a way that the gain provided by the increase in production offsets the cost of the monetary authority. Otherwise, there is no need to create new money at all. This result is aligned with Joseph A. Schumpeter's guideline, which posits that only the entrepreneur needs credit.²⁵⁴ And, today, Normative Economics is still in its infancy.

The effectiveness of the chosen rules in fostering overall welfare

depends on how they channel opportunistic behavior into a positive direction. Concerning monetary affairs, it is therefore clear that the monetary framework must be adjusted to ensure that the creation of new money is a faculty reserved for granting producer credit only. Moreover, it is essential to note that having a zero-tax economy is not equivalent to relinquishing access to public services. Note that a public service can be provided by a public enterprise, working in precisely the same manner as a private company. For instance, similarly to the monthly fee that communication firms charge their customers, a public company might collect a monthly fee for street cleaning or maintaining a public transportation service. However, the public service shall remain operational as long as it is beneficial to society. Otherwise, it will be shut down without further losses. Hence, a public company can operate in precisely the same manner as a private one. And that sets up a crucial evolution in any society.

I consider equations (23) to (24) as “the equations of how it must be.” The last sentence is devoid of any arrogance or imposition on anyone. However, I think of them as “the equations of how it must be,” for they do not fit the category of “should be.” The equations result from rigorous economic analysis and do not involve any subjective interpretation. These are unbiased, free equations whose results do not favor particular interests and are instead meant to safeguard overall welfare. And, once understood, they will be unanimously accepted.

This theoretical framework explains why overall welfare depends significantly on the institutional environment that society chooses to abide by. It highlights the need to pursue a full-employment

economy, one that is safe from expropriation risks, and where money is wisely used to foster continuous productivity growth. Moreover, these equations extend the economist's analysis far beyond the limitations of the price-quantity framework, enabling the identification of the core reasons why economic development disparities between countries persist over time. Most of all, these equations explain how and why a society's greatness does not lie in what each person can take from others, but rather in what each person can give to others. And, to mankind, widespread understanding is a significant step forward in civilization.

Consecrating individual freedom to take advantage of available opportunities is therefore mandatory. Despite our universal fear of other humans' negative opportunistic behavior, there is no doubt that negative opportunistic behavior can be inhibited. This occurs when the regulatory system enables the individual to perceive a potential decrease in available gain when negative behavior occurs. Since improving overall welfare requires people to engage in every economic activity that yields abnormal profits simultaneously, it is not possible to achieve economic efficiency without a focus on "enabling rules."

This means that governments need to foster cooperation among every economic agent, that the financial system must be a very proactive actor in supplying purchasing power to every producer that needs it, and that the private society needs to be engaged in disclosing every information that can contribute to either reducing production costs or increasing selling prices. This means that every individual's interests are taken care of by society as a whole.

Every person is the product of a genetic background and an aggregate of cumulative memories and sensations experienced throughout life. Those are where beliefs consolidate, and multiple skills develop. Accordingly, every human being is unique. As exclusive as every person is, and although the environmental circumstances might be the same, no one can detect an opportunity simultaneously or take advantage of it in the same way. Often, the optimal solution is found by combining multiple perspectives on the best way to seize an opportunity. Learning from one another is thus required of all members of society who aim to thrive together.

This need for knowledge sharing does not fit with some current practices of our regulatory system. A very illustrative remark was made by Timothy F. Bresnahan, who posited that “*the theory predicts that there will be alternative periods of price war and of successful collusion.*”²⁵⁵ Meanwhile, Peter C. Reiss and Frank A. Wolak noted that most researchers studying competition are uncertain about whether firms are competing or colluding.²⁵⁶ The value of cooperation is yet to be entirely understood, and the way wars evolve on our planet is symptomatic of our bounded rationality. That is why it is so important to inquire about some practical rules and procedures that consecrate the virtuous regulatory system that we have seen above in “the equations of how it must be,” for those are the steps that might enable society to perceive the value that is there to be gained while sensing the opportunity cost of not doing it.

Ultimately, that is what Normative Economics is all about: Answering how to raise the unanimously accepted regulatory system that enables society to reach a healthy, perfectly competitive,

economic environment.

Protecting everybody's interests

In society, individuals seek value to improve their well-being, regardless of whether a regulatory system exists. Because it identifies individual human behavior that compromises the well-being of the remaining members of society, Normative Economics is of tremendous importance for securing overall welfare. Usually, a society empowers some person or entity to govern a uniform individual behavior that best serves the overall interests. Hence, before identifying the best institutional environment to foster overall welfare, the economist needs to understand why and how individual behavior endangers overall welfare.

As put by Martin J. Osborne and Ariel Rubinstein, in 1994, in their work “A Course in Game Theory,” game theory is “*the bag of analytical tools designed to help us understand the phenomena that we observe when decision-makers interact.*” Economics recognizes that every decision-maker's interaction depends on the circumstances faced when an opportunity arises. Moreover, economics realizes that the nature of the game has several different characteristics. The game can be cooperative (where joint actions are allowed), non-cooperative (where only individual actions are allowed), strategic (where each player chooses their plan of action only once), extensive (where the decision-making process extends across multiple interactions), and played with either perfect or imperfect

information.²⁵⁷ Ultimately, every game people play aims to secure individual gains.

It is widely accepted that we live in a competitive society in which strategies are deployed to gain an advantage over other members. However, the strategic game occurs when each player chooses their action plan only once, and thus it is framed in a very narrow, short-term reasoning. It is just as plain that value creation depends on a society's ability to increase productivity, which usually demands a higher level of task specialization of its members and their afterward capacity to exchange surpluses among themselves. But when joint actions are allowed, the game is necessarily cooperative. Consequently, the dominance of adopting a competitive attitude over a cooperative one becomes an intriguing aspect of human behavior that warrants further inquiry.

We know people assign a positive value to the utility of leisure time, and everyone acts on that desire. Therefore, we can attach this individual utility to a given payoff. Furthermore, due to the observance of strategic behavior when humans interact in society, we know that the perception relative to the available payoffs is not widely spread over society members, and it instead acquires significant relevance when the same opportunity is identified by several persons at once, or, at least, the decision-maker expects this concurrency. The idea of engaging in strategic behavior to maximize the payoff from an opportunity only makes sense under such a scenario.

The perception of the payoffs presented by an opportunity may vary between an exact certainty and a slightly possible outcome.

Nonetheless, uncertainty can be modeled by assigning a probability of occurrence, α , to each possible payoff, p , for each scenario of an opportunity, k , and calculating the expected payoff as the sum of the products of α and p , denoted by $\sum \alpha_k p_k$. This allows us to incorporate uncertainty even when using a single payoff value. Therefore, without loss of generality, it is possible to rank the utility associated with an opportunity by using singleton values.

Let us consider the payoffs generated by an economic game played under the rules outlined in Figure 22.

Figure 22. The economic game

		Player_2	
		Compete	Cooperate
Player_1	Compete	(5,5)	(7,3)
	Cooperate	(3,7)	(6,6)

Source: Author’s creation

In this game, society consists of two individuals who distribute the outcome of their labor for one year among themselves. The two persons are free to choose between cooperating in the production of goods and services or competing to see who can take the larger share of the total output. Furthermore, the product of their labor efforts is higher when they opt to cooperate: 12 when they join forces and 10 when someone engages in competitive behavior. What is their

choice: to compete or to cooperate?

Analyzing each player's best choice provides a clue to what the most likely option is for them. Each cell displays the players' payoffs according to the format (Player_1, Player_2). Let us consider that, primarily, Player_1 aims to maximize their utility. When both players choose to compete, they end up with 50 percent of society's total production, reaching a utility level of 5. However, if Player_1 chooses to compete while Player_2 decides to cooperate, Player_1 will be grabbing 70 percent of society's total production for himself. So, to maximize his or her utility, Player_1's natural option is to compete.

However, let us consider that Player_1 is, chiefly, a loss-averse person, and wants to minimize losses. In this new scenario, Player_1 realizes that the most dangerous option occurs when they choose to cooperate, and Player_2 decides to compete. In this case, Player_1 prefers to compete because he or she is granting a lower loss than the alternative of cooperating in a situation where Player_2 might choose to compete. Since both players face the same problem and possible payoffs, regardless of their personal proclivities toward engaging in riskier activities to capture gains or toward focusing their decision-making on avoiding losses, their likely choice is to compete rather than cooperate.

Now, if both players realize that they are going to interact for several periods in the future, will they keep their choices? Consider the possibility of an agreement among the players to foster cooperation. In this instance, both players expect to reach a utility level of 6 and are tempted to compete, as it immediately yields a

higher payoff of 7. Let us assume that Player_1 unilaterally chooses to break the agreement. After Player_1's betrayal, Player_2 will never again engage in an agreement. Considering four periods, we will have Player_1's total payoff of 22 ($=7+5+5+5$) while Player_2's total payoff is 18 ($=3+5+5+5$). Since, in this game, each period is set to one year, had the players rejected the choice for deception, they both would have ended up better in only four years, yielding a total payoff of 24 each ($=6+6+6+6$). Just as long as the assumption regarding society's ability to reach higher levels of productivity when engaging in cooperative efforts is confirmed, what seems to be the optimal strategy for a one-time decision cannot be a long-term winner. When the game is extensive, a competitive society employs an emotionally based decision-making process, and individuals adopting a competitive attitude are those who do not know how to win.

Understanding the economic game highlights the challenges a society faces in consistently maximizing overall welfare while maintaining high levels of individual well-being for each of its members. It is worth noting that, in the real world, the decision-making process is severely conditioned by players' expectations regarding the likely payoffs available from competing or cooperating. Nonetheless, the above economic game illustrates the positive interdependence between the two players in reaching higher levels of utility (or welfare).

In the game illustrated in Figure 22 and in a four-year scenario, after Player_1's betrayal, the person ends up with an accumulated payoff of 22, while Player_2 finishes the four years holding 18.

Furthermore, Player_1 will score a higher payoff as soon as possible and will live significantly better than Player_2 during the first year only. However, if both players choose to cooperate, then they both end up better off after four years. By cooperating, both players will receive a payoff of 12 after two years, the same payoff that Player_1 would receive in year two by choosing to betray. In the presented economic game, betrayal constitutes negative opportunistic behavior because it leads the decisionmaker to end up worse off if the remaining members of society act alike. Nonetheless, after someone's first betrayal, the other player has no other choice but to compete. The emergence of negative opportunistic behavior might trigger similar behavior from the remaining members of society. The existence of negative opportunistic behavior prevents society from realizing the full value of available resources.

If we change the game's rules presented above to a different payoff matrix, as shown in Figure 23, what would be each player's choice?

Under this kind of rule, since each player is going to strategically make a one-time decision to grab the highest possible gain, each player will easily choose to cooperate. In this instance, under an extensive game continuously played over time, people will consistently exhibit their cooperative propensity as long as they perceive it as the best way to safeguard their self-interest. However, it requires that every society member immediately improve their potential gain. And this helps explain why the crime index is significantly lower in developed economies than in developing ones.

Figure 23. Changing the economic game

		Player_2	
		Compete	Cooperate
Player_1	Compete	(5,5)	(7,3)
	Cooperate	(3,7)	(8,8)

Source: Author's creation

These two games put into perspective that humanity is in a state of permanent competition with itself. We strive to achieve higher levels of individual payoffs, but to optimize our long-term success, we must do so collectively. Globally, under our current regulatory systems, the severely uneven distribution of wealth produced leads some members of society to dominate others. As shown by the Value Function and past research, individuals tend to assign a higher value to goods they already possess than to the potential benefits of acquiring those goods. Hence, having to give up some gains in the short run to get a higher return in the long run is something that humans have no propensity to do. These two games offer a first glimpse into why humanity is on the verge of collapse.

How much value are we losing by living in a society that confuses dominating with competing? Because individual behavior occurs within a given regulatory framework that establishes the boundaries for personal actions, the awareness of the regulatory system that best serves collective interests becomes paramount for humanity. When the economist can quantify this loss, society

reaches a stage of unanimous understanding of the importance of securing positive opportunistic behavior while disabling and inhibiting negative opportunistic behavior. The opportunity cost inherent in a society that chooses to operate in a competitive mode must therefore be measured.

It is of the utmost importance to recognize that it is not easily foreseen, nor is it well understood, why, how, and when an individual becomes fully aware of the benefits that can be secured by engaging in cooperative behavior with another person. In 1989, P. Christopher Earley posed that “*collectivists anticipate that other group members will contribute to the group's performance, and they will do so, in return,*” and “*the self-interest motive governing an individualist's actions emphasizes personal gain and the acquisition of rewards based on individual accomplishments.*”²⁵⁸ Consequently, psychological propensities contribute to individual choices.

It is also important to note that competitive behavior observed in society is not merely confined to the business environment, controlled by large corporations. Still, it also extends to the individual level. For instance, social loafing is a form of negative opportunistic behavior. This behavior manifests when people reduce their performance when acting as part of a group. For the individual, it is a means of being entitled to a higher level of utility by maintaining the same consumption ability (income) while enjoying additional leisure time and/or committing less effort at work. Nonetheless, the person engaging in social loafing practices will live worse if the remaining members of society act similarly. Hence, the economic game applies to every member of society.

When human interactions occur, the option for strategic behavior that defines a win-lose final result for the parties requires two conditions: 1) the mind of the decision-maker is set up to a one-time frame only; and 2) there is a very well-perceived and valuable outcome that is considered to be known by the parties. The first requirement is necessary because the person does not consider the opportunity for gain lost due to the absence of a continuous interaction that extends beyond the initial time frame. Otherwise, cooperative efforts would be sought. The second requirement becomes evident once we note that the development of efforts to acquire an advantage over an opponent only makes sense when the decision-maker judges, whether correctly or incorrectly, that the other party is aiming at capturing the same value.

The seeking-value strategic behavior is an individual effort to achieve personal goals. At the microeconomic level, identifying the best plan of action to achieve a given goal requires a thorough and prior analysis of the available circumstances. Examining their inner circumstances, the economic agent considers their self-attributes to identify strengths and weaknesses and recognize their capabilities. Considering external circumstances, the individual seeks threats and opportunities to protect against potential losses and act to seize available gains. The human deployment of strategies to capture value is at the core of economic analysis.

As outlined by the economic game illustrated in Figure 21, the interactions among several microeconomic behaviors give rise to a given level of overall welfare. Since strategic behavior is developed under a win-lose mindset, in which individuals seek advantages over

the remaining members of society to capture value, plans of action are deployed to set up a playfield that enables the legislating entity to achieve its own goal. Accordingly, the legislator might be acting to safeguard either society's overall general gains or individual, concrete ones. The regulatory system is crucial for defining the arena in which human interactions occur and is a strong determinant of overall welfare. Understanding the channels of power that either provide or withdraw room to act is something that cannot be ignored in economic analysis.

When a form of rule or regulation is established, it aims to achieve a specific result by channeling human behavior in a particular direction. Nonetheless, the legislator's effort might be directed toward an individual goal or spurred by a desire to safeguard overall welfare instead. Hence, if the law is enacted with a biased focus on preserving the competitive advantages of a fraction of society, thereby detrimentally affecting the remaining members, it can be effective for the entire society only if the legislator has coercive resources to compel the society's rebel fraction to adopt a given behavior. In this instance, human behavior is not voluntarily emerging, nor are all society members enabled to act upon every identified opportunity to capture a gain. And society often incurs considerable opportunity costs when positive opportunistic behavior is hindered.

We live in a politically organized world where people are consistently afraid of losing their privileges. We have not yet evolved into an economic organization that safeguards overall welfare. The game herein illustrated clarifies why no one's interests

are left behind when society consciously chooses to engage in a cooperative mode. In a not-so-far-away future, everyone, with no exception at all, will end up better.

Chapter summary

Understanding what we are doing to ourselves is essential to choosing the best course of action. The value function explains why humans do not always find the optimal solution. Being aware of marginal thinking enables us to realize why a profit-driven economy cannot be efficient. Firms' free-market dynamics under imperfect information provide an additional explanation for why a competitive world cannot maximize overall welfare. The principles and assumptions of a sound regulatory system, designed to safeguard overall welfare, enable a clear understanding of what needs to be done to consolidate economic power. Finally, understanding why such a regulatory system is the best for everyone is the only possible way to trigger a call to action.

Opinions and solutions are two different things. Opinions... Everybody has one. However, they are often the result of random experiences mistakenly put together. Solutions, in turn, are always the result of reasoning correctly. And mankind only needs to find solutions.

Marilyn vos Savant did not expect her idea on the Monty Hall Dilemma to be discussed. Conversely, I expect the concepts presented herein regarding economic power to be refuted. If that happens, I hope it will be grounded in sound reasoning rather than mere opinion. I hope it will be done by outlining any inconsistent assumptions that are pointed out as misleading the results and conclusions. What truly matters is that actions are taken to seek the truth. And, as it was put forth by Mahatma Gandhi: “Even if you are a minority of one, the truth is the truth.”

EPILOGUE

Power is the capacity to do something or influence the course of events in a given direction. In society, three distinct types of powers trigger large-scale cooperation, and their implementation has a significant impact on overall welfare. These are: military, political, and economic power. This book details what economic power is all about.

History has shown that mankind has mainly lived under the use and abuse of military power. Military power essentially involves compelling others to comply with the will of the person in charge. This is a very poorly organized society in which one person holds authority, and the other members obey out of fear. Large-scale cooperation is often achieved by instilling fear through blackmail. Usually, performance is secured through a steep hierarchical structure and is dependent on the leader's creativity, talents, and capacity to perform. Accordingly, war is a primary consequence of choosing leaders who do not know how to wield their power benevolently. This was the constant reality of medieval times. In the 13th century, through his atrocities, Genghis Khan demonstrated to the world what to expect from such leadership.

Conversely, almost 3,000 years ago in ancient Greece, Pisistratus seized power by force but managed to build a thriving society by focusing on consolidating overall welfare. However, he has never given the remaining members of society extensive executive power, enabling the entire society to take care of its future. Accordingly, with his death, Greek society could no longer thrive and returned to

darkness.

Somewhere between the uses of military and economic power, there lies the capacity of some people to unite the support of a fraction of a society around his or her ideas. This is political power.

Political power is, indeed, the ability to channel human behavior along a specific path that serves common interests. It differs from economic power in that it does not stand for overall welfare. Hence, in a politically organized society, people often cheat, deceive, and manage to garner support following the immediate goals being targeted. At the same time, full-scale cooperation is usually an illusion, and cooperative efforts are severely limited to those who share a specific interest at a given moment.

In a politically organized society, factions compete for resources and income. People organized into groups of interest, such as political parties, unions, nations, alliances, sports clubs, employers, and professional associations, will attempt to establish a regulatory system that channels the largest share of available income to themselves.

The exercise of political power can be closely tied to military or economic power, depending on the competence of its leaders. But the exercise of political power always requires a capacity to communicate with others, which the holder of sheer military power completely dispenses. Hence, organizing a society in political terms constitutes a significant step forward for mankind compared to a military organization.

A further improvement is achieved through the effective use of economic power. The exercise of economic power rests on

understanding the realms of employing material and human resources, utilizing money, and deploying a regulatory system that fosters overall welfare. This book was organized into these three parts.

Mankind has never organized a society where economic power could be secured. The main reason behind such incapacity is our bounded rationality. We are much less capable of thinking in rational terms than we presume.

In 2010, Walter Herbranson and Julia Shroeder, through a series of experiments, investigated whether pigeons, like most humans, would fail to maximize their expected winnings in a version of the Monty Hall Dilemma. Surprisingly, birds adopted the optimal strategy within a few trials, whereas humans were less effective, even with training. For humans, suboptimal choices persist in varied situations. The authors proposed that humans engage in an *a priori* analysis of the situation at hand, without relying on actual data collection. That is, humans approach the concept of probability by relying on static information, “*as when one states the probability of tossing “tails” on a fair coin as one-half.*” Pigeons, in turn, observe and estimate the probability of an event “*as the relative frequency with which that event has occurred in the past.*” This approach allows them to evolve into adopting the optimal strategy and consistently find the optimal solution, for they do not stay tuned with prejudice. The authors stated these differences as classical probability, followed by humans, and empirical probability, followed by pigeons.²⁵⁹

We need to learn how to think and have tremendous difficulty in

escaping from prejudice. Additionally, we struggle to reason beyond a stream of cause-and-effect situations for a few steps into the future. That is why human chess players lose to machines, and the best ones outperform their competition by considering a few moves ahead before making each decision. Hence, it takes time for us to adapt to the circumstances we create for ourselves.

In the Prologue, I stated that I aimed to contribute to help mankind regain its balance, for organizations to fulfill their missions, and for individuals to find inner peace. I cannot accept a world of unbalanced powers, where we watch the proliferation of organizations that deceive, and where no one can ever find inner peace. The world is lacking a clear understanding of how to exercise economic power.

The relationship between the exercise of economic power and the realities of poverty, misery, productivity, and prosperity is direct. This linearity is consolidated under a concrete regulatory framework. These are the rules that make us free. They cannot rely solely on the effort and competence of a single person. Its success depends on the collective engagement of the entire society.

The adoption of the principles that ground a sound regulatory system to safeguard overall welfare is mandatory. These are: 1) eradicating deceptive deeds; 2) ensuring the free movement of people, commodities, and money; 3) eradicating taxes; 4) ensuring that production processes occur with the minimum possible cost; and 5) ensuring the full contribution of all society members to the production of income. These principles intertwine to be effective. And these principles cannot be extolled in a world that dismisses

Ethics.

This book aims to enable the reader to make a difference. First, it highlights how ethical behavior intertwines the characteristics of the business environment with those of human resources, thereby establishing a thriving society. Second, it empowers the reader with an understanding of why specific behaviors jeopardize overall welfare despite triggering an immediate short-term improvement that cannot be sustained in the long run. Hopefully, whether you are part of a political party, a union, an employers' association, or any other human organization that seems to target specific and likely conflictual interests with someone, you will be sensible to look for the best rules for preserving overall welfare, without forgetting anyone.

Being aware of the principles that ground the deployment of any regulatory system is crucial for its success. Those in power rarely hold this notion. If the legislator acts under a principle such as “either we deceive the client, or the client deceives us,” what kind of rules will you expect to be raised? Moreover, what type of product or service will the firm that operates under such leadership provide? What kind of freedom will be granted to society? Despite this principle seeming anecdotal, it is very effective in outlining its effect on overall safety. And, sadly, there is a great deal of empirical evidence that it is much more real than it should be. On what principle is Donald Trump's call for making “America great again” based?

Currently, mankind engages in practices of self-sabotage: Like pollution, disrespecting nature; deception and market imbalances,

disrespecting other persons; unemployment, corruption, and violence, disrespecting mankind itself. However, we also prioritize ethical behavior, encompassing concerns about general safety, justice, education, health, happiness, and the development of regulatory systems that help build a balanced and coherent global society. We are still struggling to find inner peace.

Usually, humans are prone to imposing the leader's rules without being widely aware of the full consequences, even when the rules become perverse regarding their initial intent. Consequently, disparate forms of stress are imposed on the remaining members of society, in the hope of a response that is seldom given. The wisest leaders learn to correct their initial mistakes and adapt accordingly.

Evolving into an economically organized society in which every person is a bastion of economic power is a significant challenge for mankind.

The world is not yet ready for the ideas disclosed herein. People often fail to understand how microeconomics connects with macroeconomics to determine an exact level of overall welfare, resorting to disparate explanations to justify the differences in economic development between nations. People often fail to understand that profit is merely a measure of potential need; its amount depends on how scarce the product or service is in society compared to its demand. People do not understand that savings are a measure of potential waste; efficient use of resources requires us to consume them immediately. People are often unaware that the freedom to set prices helps eliminate the externalities caused by monopolies. People do not understand that the private sector of the

economy must ensure full employment. People are unaware that the creation of new money to facilitate consumption perpetuates income inequality and, indirectly, generates persistent waste. People often fail to realize that the financial system can be a valuable full-time business partner. People do not understand how the financial system controls the pace of economic activity. And, often, people also have trouble recognizing that the organization that grants full-scale cooperation takes everybody's interests, talents, and skills into consideration, applies uniformly to everyone, and does not depend on a single person's whim. Hence, our global society is not prepared to hold economic power.

However, despite having trouble recognizing the material effect of ethical behavior on prosperity, people understand that Ethics makes a positive contribution to human well-being. And, every person clearly understands that their immediate well-being depends on the regulatory systems politicians set up. So, there is hope.

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GRATITUDE

In 1989, when I had just entered university, a professor in one of the first classes told the students that in the Economy, no one gives anything to anyone, and even when someone gives alms, they are just buying gratitude. I was immediately shocked, thinking, “How could someone possibly be so materialistic?” At the time, I was aware that human relationships encompass much more than an exchange of goods and services, but I could not explain why that mattered in economic terms. I had to learn.

Later, after graduation and with a few years of professional experience, I understood what excellence in the production of goods and services entails and learned to appreciate the value of gratitude. A person, a product, or a service is considered “excellent” when the performance exceeds the expectations of the other party. Recognizing excellence is always an emotional response to something that exceeds the interlocutor's initial expectations. And there lies the value of gratitude.

Gratitude cannot be bought. It is simply given. Gratitude develops as good memories consolidate. When gratitude is present, it leads to the creation of additional value unconditionally.

I want to express my gratitude to the many individuals who have contributed to making this project a reality.

I am grateful to my parents, who have instilled in me a sense of ethical behavior and a commitment to learning, and have contributed decisively to shaping who I am.

I am grateful to Mena, who has supported me for more than thirty years. Despite the ups and downs that life has brought us, we have always managed to respect each other and move forward together to the best of our hearts.

I am grateful to my sons for the great memories we share. Surfing with Bernardo and playing chess with Afonso will always be special moments, thanks to the laughs and joy felt each time.

I am grateful to my brother for always making me know that he will do his best for me. He has already helped so much with his many gadgets. I remember many memorable moments, and I know that I can always count on his assistance. And that is precious.

I am particularly grateful to my family and friends for making me feel like part of their community. Regardless of how long we have been apart, I always feel we were together just yesterday. And that is so special.

Regarding this book, I am deeply grateful to Chantal Gensse, who has always been a significant influence on my ideas, prompting crucial revisions to my exposition. She is a very good friend, with a huge determination to make a better world, and a great understanding of why each person can make a difference. We have not been together many times, but when we are, it is always challenging and fun.

Finally, I am grateful to the thousands of academic researchers, historians, mathematicians, and journalists who excelled in their analyses, disclosed their investigations, and made it possible to enlarge our knowledge about ourselves.

NOTES

1. (Page 7):

This idea was first disclosed and applied to the management world by Chantal Gensse. See Chantal Gensse (2006), *Ethical Management, Efficient Management, Time to Change Paradigm*; ISBN-13 9781430318903.

2. (Page 11):

Numerous informational sources are available online on this topic. We can get a glimpse at the top 10 largest economies at www.forbesindia.com/article/explainers/top-10-largest-economies-in-the-world/86159/1.

3. (Page 11):

See the data available at <https://ourworldindata.org/poverty> or <https://github.com/owid/poverty-data/tree/main/datasets>, and the work done by the United Nations on this topic at <https://www.un.org/en/global-issues/ending-poverty>.

4. (Page 11):

This definition of Economics is the one I have used in prior works, such as “*Fundamentals of Normative Economics*,” which separates the study of Economics from other subjects that impact individual and collective well-being, such as Management or Politics. See www.matein7.com.

5. (Page 12):

Data available at <https://ourworldindata.org/grapher/gdp-per-capita-maddison>.

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From *Grandes Vidas, Grandes Obras – Bibliografias famosas*, Reader’s Digest selections, 1974; and www.britannica.com/biography/Genghis-Khan/Rise-to-power.

7. (Page 15):

See *Genghis Khan – Emperor of All Men*, by Harold Lamb International Collections Library, Garden City, New York, 1927;

8. (Page 16):

See *Mongol Laws of War*, blog Other Traditions, at <https://blogs.icrc.org/religion-humanitarianprinciples/mongol-laws-of-war/>.

9. (Page 17):

See <https://www.history.com/topics/asian-history/genghis-khan>.

10. (Page 19):

See *World History Series*, Publicit Publisher, 1979; *Athenian Democracy*, Oxford University Press, J. Rhodes, 2004.

11. (Page 19):

Ancient Greek Poleis Systems of Government: Athens and Sparta, retrieved at https://www.classicsteachers.com/uploads/1/1/6/9/116945311/politics_in_athens_and_sparta.pdf.

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See Yuval Noah Arari (2024) *Nexus*, Penguin Random House Uk. ISBN 978-1-911717-09-6.

14. (Page 26):

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15. (Page 30):

See <https://www.un.org/en/global-issues/ending-poverty>; <https://ourworldindata.org/homelessness-and-poverty-in-rich-countries>; <https://ourworldindata.org/search?q=homelessness>; and <https://www.coalitionforthehomeless.org>; and <https://www.wsj.com/articles/new-york-city-plans-to-open-90-new-homeless-shelters-1488309670>.

16. (Page 30):

See <https://constitutioncenter.org/blog/a-national-tiktok-ban-and-the-first-amendment?>;

https://cs.stanford.edu/people/eroberts/cs181/projects/2010-11/FreeExpressionVsSocialCohesion/china_policy.html.

17. (Page 31):

There are many websites and literature available on this data. See

<https://fortune.com/ranking/global500/> and

https://databankfiles.worldbank.org/public/ddpext_download/GDP.pdf.

18. (Page 35):

See <https://education.nationalgeographic.org/resource/hunter-gatherer-culture/>; and

Frank Marlowe, Department of Anthropology, Harvard University, 2002. In *Ethnicity, Hunter-Gatherers, and the “Other”: Association or Assimilation in Africa*, Sue Kent (Ed.) Washington D.C.: Smithsonian Institution Press, pp 247-275, available at

<https://web.mnstate.edu/robertsb/307/ANTH%20307/hadzahuntergatherers.pdf>.

19. (Page 36):

Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Hertfordshire, England. Wordsworth Editions Limited.

20. (Page 40):

Check the NSC’s website at <https://www.nsc.org/company>;

<https://www.nsc.org/forms/real-costs-of-fatigue-calculator>;

<https://www.nsc.org/work-safety/safety-topics/fatigue>.

21. (Page 41):

See [https://www.oecd.org/en/data/indicators/hours-worked](https://www.oecd.org/en/data/indicators/hours-worked.html)

[.html](https://www.oecd.org/en/data/indicators/hours-worked.html) and <https://www.oecd.org/en/data/indicators/gdp-per-hour-worked.html>.

22. (Page 43):

See Earley, P. C.(1989). Social Loafing and Collectivism: A Comparison of the United States and the People's Republic of China. *Administrative Science Quarterly*, 34 (4), 565-581; and Gabrenya, W. K., Latané, B., & Wang, Y.-e. (1983). Social Loafing in Cross-cultural Perspective: Chinese on Taiwan. *Journal of Cross-Cultural Psychology*, 14 (3), 368–384.

23. (Page 45):

Data on these topics can be easily found online. The specific data I am relying on was collected in the following sources:

https://www.numbeo.com/crime/rankings_by_country.jsp

<https://www.worldometers.info/gdp/gdp-per-capita>

<https://www.cia.gov/the-world-factbook/field/real-gdp-per-capita/country-comparison/>

<https://ourworldindata.org/working-hours>

<https://tradingeconomics.com/country-list/personal-income-tax-rate>

<https://www.visualcapitalist.com/ranked-average-working-hours-by-country/>

<https://www.imf.org/en/Publications/fandd/issues/2022/03/Global-inequalities-Stanley>

<https://wir2022.wid.world/download/>

<https://genderdata.worldbank.org/en/indicator/si-pov-gini>.

24. (Page 49):

Henisz (2000, p. 3) eloquently explains that “*institutional environments in which economic returns can easily be secured through political channels lead individuals to reallocate resources from economic to political activity.*”

See Henisz, W. J. (2000). The Institutional Environment for Economic Growth. *Economics and Politics*, 12 (1), 1-31.

25. (Page 49):

For instance, see Abotsi, A., & Iyavarakul, T. (2015). Tolerable Level of Corruption for Foreign Direct Investment in Africa. *Contemporary Economics*, 9 (3), 249-270.

26. (Page 50):

See Gottlieb, C., & Grobovšek, J. (2019). Communal Land and Agricultural Productivity. *Journal of Development Economics*, 138, 135-152.

27. (Page 50):

See Deininger, K., Jin, S. (2006). Tenure Security and Land-Related Investment: Evidence from Ethiopia. *European Economic Review*, 50 (5), 1245-1277.

28. (Page 52):

Ibidem. Citation on page 8.

29. (Page 52):

See O'Flaherty, R. M. (2003). The Tragedy of Property: Ecology and Land Tenure in Southeastern Zimbabwe. *Human Organization*, 62 (2), 178–190.

Citation on page 181.

30. (Page 53):

See Richardson, C. (2005). The Loss of Property Rights and the Collapse of Zimbabwe. *Cato Journal*, 25, 541-565.

31. (Page 53):

Ibidem. Citation on page 553.

32. (Page 55):

See Hardin, G (1968). The Tragedy of the Commons. *Science*, 162 (3859), 1243–1248.

33. (Page 56):

See O'Flaherty, R. M. (2003). The Tragedy of Property: Ecology and Land Tenure in Southeastern Zimbabwe. *Human Organization*, 62 (2), 178–190.

Citation is on page 186.

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Ibidem. Citation on page 183.

35. (Page 58):

Ibidem. Citation on page 185.

36. (Page 59):

Ibidem. Citation on page 182.

37. (Page 61):

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Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*, Hertfordshire, England, Wordsworth Editions Limited.

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Ibidem.

40. (Page 68):

Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*. London, England. John Murray, Albemarle-Street.

41. (Page 69):

For instance, considering the countries “A” and “B,” and the products “x” and “y,” suppose that country “A” produces “x” four times better than it produces “y” while country “B” produces “x” two times better than it produces “y.” In this situation, it is advantageous for the two countries to engage in trade with each other. Country “A” specializes in the production of “x,” which produces comparatively better than “y,” while country “B” specializes in the production of “y,” despite producing both products more inefficiently than country “A.” And they both end up better. This is not an intuitive concept.

See Sousa, A. (1988). *Análise Económica*. Lisboa, Portugal. Universidade Nova de Lisboa.

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Gorlich, D. (2010). *Complementary Tasks and the Limits to the Division of Labour*. Kiel Institute for the World Economy, Working Paper No 1670.

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See George, G., Corbishley, C., Khayesi, J., Haas, M., & Tihani, L. (2016). Bringing Africa in: Promising Directions for Management Research. *Academy of Management Journal*, 59 (2), 377-393.

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Data on these topics can be easily found online. The specific data I am relying on was collected in the following sources:
<https://www.focus-economics.com/country-indicator/>
<https://www.statista.com/statistics/>
<https://www.oecd.org/en/data/indicators/unemployment-rate.html>
<https://www.oecd.org/en/data/indicators/unemployment-rate-by-age-group.html>
<https://w3.unece.org/>

46. (Page 81):

See <https://fortune.com/ranking/global500/>.

47. (Page 100):

See https://en.wikipedia.org/wiki/Fortune_Global_500.

48. (Page 101):

See <https://www.nab.com.au/locations> or <https://www.rbcbluebay.com/en/wholesale/>.

49. (Page 103):

Real wages refer to wages adjusted for inflation, taking into account a specific basket of goods and services.

50. (Page 103):

See <https://usafacts.org/articles/how-many-people-work-for-the-federal-government/>.

51. (Page 104):

See <https://www.trafigura.com/>.

52. (Page 105):

See <https://www.oecd.org/en/data/indicators/enterprises-by-business-size.html>.

53. (Page 107):

See “OECD SME and Entrepreneurship Outlook 2019,” available at https://www.oecd.org/en/publications/oecd-sme-and-entrepreneurship-outlook-2019_34907e9c-en.html.
<https://doi.org/10.1787/34907e9c-en>.

54. (Page 107):

See, among many others, Shoar, A. (2010), “*The Divide Between Subsistence and Transformational Entrepreneurship*,” Gollin, D. (2008), “*Nobody’s Business But My Own: Self Employment and Small Enterprise in Economic Development*,” Viswanathan, M., Echambadi, R., Venugopal, S., & Sridharan, S. (2014), “*Subsistence Entrepreneurship, Value Creation, and Community Exchange Systems: A Social Capital Explanation*,” Sridhar, M., Coker, A., & Achi, C. (2018), “*Pollution From Small and Medium Size Enterprises: Less Understood and Neglected Sources in Nigerian Environment*.”

55. (Page 111):

See “OECD SME and Entrepreneurship Outlook 2019,” available at https://www.oecd.org/en/publications/oecd-sme-and-entrepreneurship-outlook-2019_34907e9c-en.html.
<https://doi.org/10.1787/34907e9c-en>.

56. (Page 116):

See “*Barriers to Entry*”, from OECD Competition Committee, available at https://www.oecd.org/en/publications/barriers-to-entry_8bb30107-en.html.

57. (Page 117):

See <https://intellizence.com/insights/layoff-downsizing/major-companies-that-announced-mass-layoffs/>.

58. (Page 118):

See Meredith, Martin (2002), *Our Votes, Our Guns: Robert Mugabe and the Tragedy of Zimbabwe*, New York: Public Affairs. ISBN 978-1-58648-186-5.

59. (Page 118):

See <https://www.epi.org/publication/major-strike-activity-in-2023/>.

60. (Page 119):

See Asogva, O. S. and Chukwunonso, J. O. N. (2024). The Impact of Strike Action on Productivity: An Analysis. *Nigerian Journal of Arts and Humanities (NJAHA)*, 4 (1).

61. (Page 119):

Ibidem.

62. (Page 120):

See <https://corporate.ford.com/about/leadership.html>.

63. (Page 120):

See <https://www.homelessworldcup.org/homelessness-statistics>.

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See <https://www.creditkarma.com/money/i/history-of-money>.

65. (Page 127):

See Grossman, Peter Z. and Horváth, János, "The Dynamics of the Hungarian Hyperinflation, 1945-6: A New Perspective" (2000). *Scholarship and Professional Work – Business*, 29.
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67. (Page 127):

See <https://tradingeconomics.com/united-states/inflation-cpi>.

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See Mundell, R. A. (1999). The Bird of Coinage. *Zagreb Journal of Economics*, 3 (4), p. 5-55.

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Ibidem.

70. (Page 130):

See Marx, K. (1867). *O Capital. Livro I. O Processo de Produção do Capital*. Boitempo Editorial.

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See Smith, A. (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, Hertfordshire, England, Wordsworth Editions Limited.

73. (Page 132):

Ibidem. Citation on page 61.

74. (Page 133):

See <https://sicnoticias.pt/programas/investigacao-sic/2025-04-02-video-corrida-ao-ozempic-loucura-pelo-medicamento-usado-para-emagrecer-chegou-ao-mercado-negro-89b2c810>.

75. (Page 134):

Ibidem.

76. (Page 134):

Ibidem.

77. (Page 135):

Ibidem.

78. (Page 135):

Ibidem.

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Citation on page 3.

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See <https://www.jdsupra.com/legalnews/trump-s-tariffs-on-canada-mexico-and-3781740/>.

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See Hansmann, H. (1999). Cooperative Firms in Theory and Practice. *LTA*, 387-403.
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96. (Page 157):

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<https://dictionary.cambridge.org/dictionary/english-portuguese/income>.

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