

ISRAEL KIRZNER ON DYNAMIC EFFICIENCY AND ECONOMIC DEVELOPMENT

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“Those fighting for free enterprise and free competition do not defend the interests of those rich today. They want a free hand left to unknown men who will be the entrepreneurs of tomorrow and whose ingenuity will make the life of coming generations more agreeable. They want the way left open to further economic improvements. They are the spokesmen of progress.”

—Ludwig von Mises (1966, 83).

I INTRODUCTION

Israel Kirzner lays the foundations of entrepreneurship as the driving force of the market process by referring to alertness, uncertainty, and plan coordination. His approach, following the footsteps of Mises and Hayek, legitimizes entrepreneurial creativity

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and profit-making as the heart of the dynamic market process. He argues that an accurate insight into the economic system requires exploring how entrepreneurial dynamics work in society. This statement contrasts with the theories and models that govern modern development economics, such as randomized controlled trials (RCTs), in which the zero-intelligence agents replace the flesh-and-blood entrepreneur.

Randomized controlled trials are considered the gold standard in modern development economics to assess treatment intervention efficacy in underdeveloped countries (Rodrik 2009). As a causal inference method, RCTs seek to determine whether a program had the outcome for which it was designed. Experts often utilize purely quantitative and experimental strategies for their guiding insights through trial and error of different interventions. In the ethics domain, experts seek to maximize the cost-benefit of specific interventions subject to a given set of data to rectify the inequalities generated by the market economy in underdeveloped economies. The economist becomes a kind of plumber who designs the creation and distribution of the “social pie,” assigning the respective slices to the specific individuals who participate in the experiments. Consequently, RCTs have justified active government intervention in the market process on behalf of policy advisers.

However, Kirzner’s theory of entrepreneurship indicates that modern development economics’s core problem is epistemological and related to using the criterion of static efficiency in applied economics. Although RCTs are considered one of the most rigorous methods to inquire into the effectiveness of development policies, their design lacks interpretative capacity on the essence of economic phenomena. Experts on RCTs do not recognize that economic development is the byproduct of achieving social cooperation and coordination driven by purposeful human action under the division of labor. If the essence of economic phenomena is disregarded, it is impossible to address poverty causes adequately. Accordingly, RCTs are limited to testing cosmetic problems of economic underdevelopment.

This article does not seek to offer specific proposals to remedy RCTs’ shortcomings, but it provides a theoretical foundation to guide further theoretical and empirical work. It argues that

development economists have overlooked Kirzner's theory of efficiency, which cannot be omitted without impairing the premise that development theory involves studying the dynamic process of plan coordination. Its relevance lies in the fact that Kirzner's research can reshape modern development economics, which implies a theoretical advancement in several areas:

- Kirzner's analysis of static efficiency reveals the epistemological and ethical problems of modern development economics.
- The framework of Kirzner's dynamic efficiency clarifies the role of entrepreneurship in understanding how the market works.
- Dynamic efficiency recognizes the creative and coordinating potential of entrepreneurship and capital accumulation in economic development.
- Kirzner's economic development theory responds to ethical dilemmas about (in)equality and pure profit within a market economy.
- Contemporary research on dynamic efficiency explores new branches, such as the role of psychology, culture, and morality in economic development.

Most research on efficiency and underdevelopment is still packaged in mathematical models that reduce the market's complexity to comparative statics. Fortunately, a growing number of theories have begun to challenge this state of affairs by examining the following: First, psychology's impact on productivity or the unproductiveness of entrepreneurial profit opportunities. Second, the role of culture in the dynamic process of institutional change and the adaptation of the entrepreneurial performance that ensures or deters economic development. Third, the relationship between personal morality and dynamic efficiency concerns private property and contractual ties. Hence, there are several strands of new literature on dynamic efficiency and development economics. This article focuses on one aspect that concerns both economists and governments in terms of modern thinking and practice: the role of efficiency (static and dynamic) in economic development.

II

STATIC EFFICIENCY AND DEVELOPMENT ECONOMICS

In general, efficiency is a concept related to the effectiveness with which the available means are deployed to reach ends – no matter the character of these plans. It follows that the word “dynamics” is derived from the Greek *δυναμικός*, meaning “causing to move,” and the word “static” is from *στατικός*, which means “causing to stand.” Accordingly, Kirzner argues that dynamic efficiency involves expanding “the domain of what is known, continually shifting the location of profitable opportunities and thus continually inspiring yet further discoveries expanding the domain of what is known” (2000, 92). These distinctions include the findings of new goods and production methods and discovering new needs and desires to be satisfied. Alternatively, the static perspective entails “efficiently allocate social resources among the multiples competing for relevant social goals” (2000, 92). It refers to a given configuration of human preferences and constraints, ends and means, making a mechanical or automatic choice. Paradoxically, there is no real choice at all in such a scenario. There is no room for creativity and uncertainty in the word’s real sense in this last case.

The pioneers of static efficiency in economics include Walras (1874), Edgeworth (1881), Jevons (1888), Marshall (1890), Fisher (1906), and Pareto (1906), among many others. These economists copied the physical mathematics term for term and dubbed the emergence of mathematical economics to consolidate economic science as a kind of social mechanics (see, for example, Mirowski 1989, 1991). If the information on market conditions is provided in a specific or probabilistic manner, the economist could model and predict market outcomes quantitatively. The flesh-and-blood human being was replaced by fictions such as zero-intelligence agents, analyzed in *partial or general* equilibrium situations. As a result, this budding mathematical economics did not raise suspicion about its epistemological validity to recognize economic phenomena’s essence.

However, the consolidation of modern neoclassical economics is generally attributed to Lionel Robbins, who presented the most accepted definition in literature. Robbins, who was strongly

influenced by Pareto and the other pioneers, stated that “economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses” (1935, 16). Robbinsian economization supposes that the data (*i.e.*, tastes, resource provision, technological potentialities) is given, making it clear that economizing arises after the extra-Robbinsian process has been completed during which human means and ends have been identified. That is why Kirzner (1973) argued that Robbins’ allocative efficiency is mostly static because it assumes that the economist can quantify and manage human knowledge about the most efficient way to achieve the given purposes. If this were the case, the market process is a trivial exercise in which economic underdevelopment problems can be solved merely through social engineering.

Keynes’ *The End of Laissez-Faire* is one of the few works in early neoclassical economics that conducts a fierce ethical analysis of the free market economy, and yet Keynes was a strong supporter of the allocative efficiency criteria.¹ Keynes upheld that *laissez-faire* should be abandoned because the conditions for its success have disappeared. He suggested that the economy should be managed wisely by governments to make the scope of economic ends more efficient. For Keynes, the government is like “*a deus ex machina* to be invoked whenever his human actors, behaving according to the rules of the capitalist game, get themselves into a dilemma from which there is apparently no escape” (Sweezy 1947, 108). The government should consider macroeconomic planning, weighing private enterprises’ performance, distributing national income, and reaching social outcomes that could not have been secured by uncoordinated individual effort. While Keynes’s ideas caused controversy, “the ambition of producing a general theory of employment, interest, and money was fulfilled and gradually won

¹ According to Keynes (1926), the cure of unemployment involves some appropriate governing body “over many of the private business’s inner intricacies, yet it would leave private initiative and enterprise unhindered” (p. 318). Even though Keynes perceived economic activity in an environment of fundamental uncertainty, which affects the behavior and expectations of entrepreneurs, ten years later, he said that his *General Theory* “take the subjective factors as given; we shall assume that the propensity to consume depends only on changes in the objective factors” (1936, 91).

over policymakers, even if it did not convince all economists” (Toye 2018, 271).

In the 1940s, Development Economics emerged as an independent area within economic science strongly influenced by the principles of static efficiency advocated by the pioneers of neoclassical economics and Robbins and Keynes’ notion of economic management (Espinosa 2020). As Hirschman stated, development economics studies “the process of change of one type of economy into some other more advanced type... [That is] how the underdevelopment equilibrium can be broken into at any point” (1958, 51). From this point of view, poverty was often seen as a technological problem that can be solved with foreign aid programs and government interventions in market processes. More specifically, most development literature reduces poverty to a set of ethical clichés that take for granted progressive government interventions to achieve a better equilibrium point.

Consider, for instance, the case of Jeffrey Sachs, director of the United Nations Millennium Project and renowned economist at Columbia University, who conceives of poverty as a technological problem. Sachs suggests that a set of income redistribution policies are required to extricate humanity from the poverty trap (*i.e.*, the idea that poverty is an insurmountable obstacle to economic development). This fact explains why foreign aid is critical: “If the foreign assistance is substantial enough, and lasts long enough, the capital stock rises sufficiently to lift households above subsistence... Growth becomes self-sustaining through household savings, and public investments supported by taxation of households” (2005, 246). Monetary and fiscal authorities can strengthen economic prosperity by providing a Big Push of effective demand. Sachs concludes that “success in ending the poverty trap will be much easier than it appears” (2005, 289). These interventions need to be applied in an orderly manner and combined so that they reinforce each other.

Nevertheless, other economists believe that Sachs’ position is wrong. William Easterly, Professor of Economics at New York University and Co-director of the NYU Development Research Institute, is one of the most influential anti-poverty trap, anti-aid, and pro-free market figures in the field. In his books *The White*

Man's Burden and *The Tyranny of Experts*, he argues that both foreign aid and harsh government interventions are harmful tools: 1) it drives a vicious circle of corruption in local institutions; 2) strengthens the subordination of individuals to government assistance; and 3) it creates self-perpetuating lobbies of aid agencies. Instead, the best institutional approach to assisting developing countries is to promote incentives for people to find ways to solve their problems. However, Easterly uses the neoclassical framework and does not offer *a priori* theory about the dynamic market process's essence.

Whom should we believe? Abhijit Banerjee and Esther Duflo, Professors of Economics at MIT, co-founders and directors of the Poverty Action Lab (J-PAL), and Nobel Laureates, indicated that the Sachs-Easterly debate is sterile without evidence on how poor people make choices or any relevant conclusions about the economic lives of the poor. In their book *Poor Economics*, they suggest that economists like Sachs and Easterly are still thinking about economics as if it were a machine, whose goal is to find the right button to press. According to Banerjee and Duflo, the Sachs-Easterly controversy represents the core of old-fashioned development economics, which builds mathematical or quasi-mathematical models from arbitrarily chosen variables and data. So there are many answers for all tastes on the same topic.

Alternatively, Banerjee and Duflo recommend randomized controlled trials (RCTs) to observe the behavior of comparable groups of people facing different interventions, forcing the economist to venture inside the machine. This research program is called modern development economics and involves comparing the treatment group's outcomes with the control group's outcomes, see if they are different, and, if so, by how much (Banerjee 2005; Rodrik 2009). The expert would recommend the cheapest strategy among thousands of economic prescriptions as if it were a doctor who prescribes an aspirin to a patient for a headache. RCTs would be the most direct way to know which intervention works. Even Though a single experiment does not provide a final answer on any intervention's universal validity, a sequence of experiments could reinforce more government interventions at the margin (Banerjee et al. 2017).

However, these economists reject the economic theory because it would not help design government policies and regulations. They argue that the economist is more like a plumber who must build experiments with a combination of intuition and experience through a continuous process of trial and error (Duflo 2017; Bouguen et al. 2019). Then again, if the economic theory is neglected, it would be impossible to recognize the essence of economic phenomena and poverty causes. RCTs are reduced to the simple trial and error strategy, which implies arbitrarily testing some cosmetic issues in underdeveloped countries.² Hence, RCTs can neither provide external validity nor prove causality. At best, what works in an RCT, even when it produces an unbiased estimate, is unlikely to be useful for politics or goes beyond a purely static nature, and also a partial vision with a practical value restricted to a time, place, and people specific. In a nutshell, RCTs' main obstacle is that it only focuses on poverty symptoms and disregards its causes.

All these cases illustrate the failure of the static efficiency criterion to pay attention to the role of creativity and learning in a context of radical uncertainty. If knowledge is assumed to be a given set of data, then any possibility of learning how dynamic market processes works is expunged. The static efficiency approach holds that individuals have cognitive biases that generate coordination failures, and, following this, experts cheerfully assume that the government must get involved in the economy. If this theory were correct, the planners would also have cognitive biases, and their actions would be doomed to fail (because they are individuals too!). Beyond these paradoxes, the notion of static efficiency helps experts in RCTs justify economic affairs command, forcing specific value judgments on society.

² Deaton and Cartwright (2018) argue that RCTs require minimal assumptions and can operate with little prior knowledge. This method has the advantage of being attractive to persuade lay people in economics, but it has the disadvantage of inhibiting scientific progress. The experts on RCTs indeed do not build theoretical knowledge but dismiss it. Attempts to justify claims based on sensory evidence need to make inductive generalizations from observed historical facts, resulting in subjective criteria. Accordingly, sensory experiences' interpretation requires giving meaning to social reality from its ultimate causes through a prior theory of a logical and deductive nature.

This article argues that RCTs would have greater scientific relevance if they had the economic theory to guide their designs. Accordingly, the following sections explore the significance of analyzing Kirzner's contributions to the dynamic efficiency and economic development arises from the fact that he is one of the champions in entrepreneurship theory as the driving force of the dynamic market process. This analysis provides a theoretical framework to fill the theoretical gap in modern development economics, especially in randomized controlled trials. Indeed, the cause of wealth or poverty and its ethical implications can be better identified by exploring the essence of the elements that cause them: human actions' purposefulness.

III DYNAMIC EFFICIENCY AS CREATIVITY AND COORDINATION

For Kirzner, efficiency is foremost an economic criterion regarding how individuals interact and cooperate through the dynamic market process. His notion of dynamic efficiency is rooted primarily in the works of Mises and Hayek (separated, but complementary), who represented a consistent development of the modern Austrian Economics (which prompted the school's significant revival in the last five decades).

In his *Human Action* (1966), Ludwig von Mises recognized that economics is a science that seeks to make the world intelligible in terms of purposeful human actions, not maximization or allocative efficiency. As Kirzner (1960) argued, this claim has three crucial implications for the economic analysis's universal validity. First, human action is the driving force behind the entire market system, making it impossible to dismiss it without impairing economic theories' explanatory capacity. Instead, modern development economics describes a world in which there is no room for human activity, and, as a result, economic analysis often is reduced to a mere analysis of given data that conceals the core of changing aspects in the real-life economy.

Second, Mises argued that "in any real and living economy, every actor is always an entrepreneur" (1966, 253). Entrepreneurship

is not a specific attribute of any group or class of people; it is inherent in all human actions.³ The term “entrepreneur” is a function meaning “acting man exclusively seen from the aspect of the uncertainty inherent in every action. In using this term, one must never forget that every action is embedded in the flux of time and therefore involves a speculation” (1966, 254). Thus, the subjectivism approach of Mises’ study of entrepreneurship includes individual perceptiveness to continually choose an ends-means framework, guided by the actor’s imagination, aspirations, expectations, and knowledge.

Third, the market is a dynamic process that is receptive to all the creative possibilities of entrepreneurship. Nevertheless, mathematical economics has no means to incorporate market dynamics. As Mises stated, “the main deficiency of mathematical economics is not the fact that it ignores the temporal sequence, but that it ignores the operation of the market process” (1966, 353). The insertion of time parameters into the equations supposes that the market outcomes are already contained in the formula, therefore, there is no entrepreneurship. Instead, Mises stated in plain terms that time is a subjective judgment of the individual who is acting and culminating stages to reach their ends.

Friedrich Hayek added in his *Counter-Revolution of Science* (1952) that economics’s foremost task is to explain the unintended consequences of purposeful human actions in society. In this manner, one of Hayek’s most outstanding works concerns the role of knowledge in the dynamic market process. For Kirzner, this approach entails two explicit extensions of Misesian subjectivism for modern economics. In his famous 1937 paper “Economics and Knowledge,” Hayek reveals that individuals’ choices have an innate indeterminacy and unpredictability in their preferences, expectations, and knowledge. Then again, the equilibrium constructs’ nature suggests

³ In broad terms, the concept of human action is linked to entrepreneurial behavior. Entrepreneurship etymologically comes from the Latin verb in *prehendo-endi-ensum*, which means discovering, perceiving, creating, identifying, and carrying out. The Royal Spanish Academy (2020) defines enterprise as an “*action* that involves difficulties and whose execution requires decision and effort.” It is also the “*intent or design to do something*,” that is, an *action*. An entrepreneur is one who “*commits to resolution actions*” as something “*proper to people*.” Italics are mine.

that knowledge is given data to the economists, in which human action is a metaphor generated by measured techniques.

In his equally famous 1945 paper, "The Use of Knowledge in Society," Hayek explores the scattered nature of human knowledge and the role of market prices in coordinating individual plans. Fundamentally, "in a system where the knowledge of the relevant facts is dispersed among many people, prices can act to coordinate the separate actions of different people in the same way as subjective values help the individual to coordinate the parts of his plan" (1945, 526). The price system lends a hand in guiding the market provisions towards the satisfaction, as far as humanly possible, and the needs most required by consumers. This fact involves estimating monetary units of the potential outcomes of different actions supported by the profit and loss account to make a rational economic calculation.⁴ In a market economy, consumers' subjective valuations spontaneously determine the prices of consumer goods. Meanwhile, entrepreneurs estimate the prices at which they will sell their products and are available to incur costs today (they demand factors of production), which, finally, sets the price of production factors.

From these Mises-Hayek theories, Kirzner worked out that economic phenomena are governed by a logical chain of cause and effect, which constitutes and generates the dynamic market processes that are systematically driven by "(not the pattern of mutual constraints which reflect the maximizing decisions of market participants, but) the outside-the-box, daring, hunches of entrepreneurs" (2017, 855). This process is free of value judgments because it does not impose a unitary scale of specific society's purposes.

⁴ The prices are the historical relations of exchanges with money used to carry out the economic calculation. Prices convey entrepreneurial knowledge about the relative scarcity of goods and services that people subjectively value, as a supplier or a demander, participating in the market or refraining from doing so. Similarly, market prices tend to generate incentives for action and constitute themselves as a distribution criterion. The market price is not a reflection of the economy of the moment. They are assumptions of what the actors think about tomorrow's economy, that is, they are not given. Costs do not determine prices, since no one is guaranteed to be able to sell a price higher than the costs that have been incurred. This argumentation is known as *Menger's imputation law*. For more details, see Böhm-Bawerk (1959, 2, 248-256); Mayer (1994).

The set of ends and means chosen by the individuals are not in dispute, so the economists should limit themselves to exploring spontaneous courses of human action and their theoretical and empirical consequences for economic activity.

Kirzner's pivotal contribution is the establishment of entrepreneurship at the heart of the economic theory.⁵ Indeed, he pioneered the dynamic entrepreneurial competitive process theory that recognizes the leading role of the entrepreneur's alertness toward discovering new profit opportunities that their current or potential competitors may have missed.⁶ Alertness allows individuals to perceive, with different degrees of complexity and success, unexploited opportunities noticeable in existing circumstances and uncover those opportunities that would help face future conditions. According to Kirzner, entrepreneurial alertness "refers not to the ability to see what exists, but to the necessarily speculative ability to see into the future. Such metaphorical alertness may consist in the vision to create something in the future" (1985, 7). Alertness implies a spontaneous manifestation of human creativity to changes the entire map of ends and means expressed in perceived opportunities.⁷ Consequently, as an inherently creative capacity,

⁵ The role of entrepreneurship as the essence of economic phenomena is long-standing in literature. For example, the Scholastics, the Physiocrats, and Cantillon conceived the entrepreneur as the creative potential of human beings in a context of uncertainty. From Adam Smith, however, economic thinking, in general, began to be gradually influenced by the natural sciences, in which the process of production and commerce began to be understood as a static and automatic situation. This phenomenon deepened with the mathematization of economics in the 20th century. Hence, the entrepreneur's creative and coordinating role was virtually excluded from the *neoclassical–Keynesian* synthesis. For more details on entrepreneurship in the economic literature, see Schumpeter (1965); Shane y Venkataraman (2000); Parker (2018).

⁶ The dynamic conception of competition has nothing in common with the neoclassical theories of perfect or imperfect competition (a situation in which all profit opportunities are given; therefore, there is no human action). Hence, perfect competition means that both sellers and buyers are price takers. If this were the case, paradoxically, there can be no competition. Alternatively, imperfect competition emerges when sellers can impose prices on their products to the detriment of consumers. However, this theory does not explain that there are no acquired rights in the free market. In praxeological terms, the essence of monopoly is a grant by the government of an exclusive privilege to produce or sell a product (see Rothbard 1962, chap. 10).

⁷ Kirzner's concept of alertness has been the subject of several misunderstandings within the Austrian school. For some critics, Kirzner's entrepreneur is reduced to the

entrepreneurship makes the relevance of a neoclassical full-equilibrium box obscure.

As Kirzner stated, market participants, act in an environment of uncertainty, or to some extent, “in a fog of ignorance” (2017, 856). The economic analysis of the market process would be systematic only if economists understand how ignorance (and uncertainty) generates market opportunities that inspire and drive human action. Although entrepreneurs do not entirely overlook the circumstances in which they must act, they are almost certainly not aware of all the relevant circumstances that govern the possibilities available to them. Pure ignorance prevails when one is entirely unaware that they overlook a desirable opportunity staring them in the face. Thus, entrepreneurial alertness involves several market steps through which such ignorance, suboptimal irrationality, can be dissipated. Such ignorance implies that the market contains an element of inefficiency, which can never be entirely dismissed.

Dynamic efficiency refers to the tendency of purposeful human actions to transcend the given framework of ends and means to perceive new opportunities worthy of pursuit.⁸ This efficiency concept does not entail any social ranking of priorities, nor does it presume that awareness concerning all available resources and opportunities is entrusted to only one mind. Instead, it refers to the free entrepreneurial process that continually creates new profit opportunities, then transmits such information in successive waves in the market

quality of alertness of profit opportunities that already exist, in which risk and uncertainty have little to do with this matter. Other critics argue that, according to Kirzner, individuals would not need to own any means to exercise entrepreneurship. However, the example of Robinson Crusoe on his island is enough to dismantle these claims. Crusoe’s alertness allows him to notice new profit opportunities to improve his subsistence condition, that is, human creativity does not need prior material means (ideas could become immaterial means). Alertness generates an idea in Crusoe’s mind, but human action guided by that idea requires assets to achieve ends. He can only speculate *ex-ante* about his action’s effectiveness, but the outcome of his alertness can only be verified *ex-post*. For more on this debate, Rothbard (1985); Foss and Klein (2010); Salerno (2011).

⁸ North (1990) proposes “adaptive efficiency” to explain a society’s will to acquire knowledge and learning, which involves creative activity and risk-taking in all sorts to solve society’s problems through the ages. However, this explanation is insufficient since North neglects entrepreneurship as the essence behind the dynamic market process.

through the price system. In a market economy, individuals can only thrive if they continually direct their intellect to meet consumers' requirements. Accordingly, the market economy's efficiency is realized through the entrepreneurial discovery process that drives individual actions' coordinated trend. As Kirzner asserted, "casual empirical observation reveals that markets do work spontaneously to coordinate millions of independently make decisions" (2017, 861). If profit opportunities tend to push the plan coordination prospects forward, "all this competitive, entrepreneurial activity is certainly constantly at work tending to improve the overall [dynamic] efficiency of the economic system" (2017, 863).

IV

DYNAMIC EFFICIENCY AND ECONOMIC DEVELOPMENT

Perhaps the most critical implication of Kirzner's notion of dynamic efficiency is that entrepreneurial success is the driving force behind economic development.⁹ The entrepreneurial discovery process does not entail achieving efficiency according to a static situation but instead involves susceptibility to new technological possibilities or future patterns of prices and demand that have gone unnoticed. Kirzner explained that "the process of dynamic competition is the process through which the possibilities of offering consumers better products, at lower prices, are explored and tested" (2017, 865). Consequently, economic development indicates a progressive increase in the quantity and quality of alternatives open to people, which implies the accumulation of available solutions to human problems.¹⁰ From Kirzner's approach, social advancement is seen as

⁹ It is often considered that Kirzner did not write much about development economics. However, in his essay "Entrepreneurship and the market approach to development," he states that entrepreneurship theory is indispensable to realize how economic progress works. In other words, the essence of countries' progress can be better recognized if the macroeconomic analysis is turned back to entrepreneurial actions at the microeconomic level (see Kirzner 1979).

¹⁰ Kirzner's notion of entrepreneurship and economic development can be traced back to Bauer and Yamey (1957) contributions, who placed the entrepreneur as crucial for widening the range of alternatives open to people. In this sense, Beinhocker and

open-ended, judged in terms of their ability to exhaust these possibilities created due to sheer unawareness successfully.

The market system's coordinating function comprises two analysis levels that stimulate mutually beneficial exchanges between its participants. The first level refers to the role of arbitration in the intratemporal plan coordination trend. It describes a situation in which a market economy is less than wholly coordinated concerning the currently available knowledge. This discoordination is caused by entrepreneurs who do not successfully perceive the arbitration opportunities created by price divergences. As stated by Kirzner, entrepreneurship "may be exercised in harnessing this existing knowledge and in this way modifying the patterns of market activities" (1985, 158). Successful entrepreneurship may tend to direct present choices towards the most critical consumers' needs.

The second level explains the role of speculation in the intertemporal trend of plan coordination. It refers to the creative and entrepreneurial potential of human action to exploit available knowledge and create new knowledge to face future market conditions. Kirzner focuses on "current market activities may be fully coordinated with each other yet be very imperfectly coordinated with future activities as these will eventually turn out to be informed by as yet undiscovered truths" (1985, 159). Hence, entrepreneurial success is achieved by adjusting present and future decisions about expected changes in prices to offer new solutions that serve consumers' requests.

Kirzner (1996) argues that a society's material development is greatly enhanced when entrepreneurship's qualities, such as a long-term vision to adopt ideas and take risks, are realized to a high degree. Individuals' entrepreneurship seeks to minimize the time barriers that separate them from the achievement of their

Hanaeur (2014) suggest that "these solutions run from the prosaic (crunchier potato chips) to the profound (cures for deadly diseases). Ultimately, the measure of a society's wealth is the range of human problems it has solved and how available it has made those solutions to its people. Every item in a modern retail store can be thought of as a solution to a different kind of problem — how to eat, dress, entertain, make homes more comfortable, and so on. The more and better the solutions available to us, the more prosperity we have" (p. 4). Alternatives are never given but are continually being created through human action.

goals. The actor tends to pursue long-term profit opportunities when he considers that the goals to be achieved are higher than those he could obtain in the short term. If the individual perceives a more valuable goal in the future and can exercise his entrepreneurship, he will shift part of his present consumption towards a higher expected level of future consumption. That is, he will incur higher levels of savings to accumulate capital.

Capital is essential for an efficient economic improvement, a tool for economic calculation that only makes sense if there are market prices to make the monetary calculation possible. Thus, capital is "properly defined as the subjectively perceived monetary value of the owner's equity in the assets of a particular business unit" (1996, 124). Accordingly, capital allows entrepreneurs to combine and transform capital goods into final consumer goods. This process takes place within the production structure, which is formed by stages that require time (from the inputs' acquisition at a date and the subsequent sale of the products later). Since production takes time, individual savings or consumption choices (time preference) indirectly determine the price of time or better known as the interest rate (which is the excess value of produced goods over the discounted values of the factor of production). According to Kirzner, the interest rate adjusts the entrepreneurs' choices to borrow capital, buy resources and make the production at a market value that will more than compensate the investment along with the interests necessary to induce them to increase the capital funds.

A voluntary increase in the level of savings (less time preference) has two mutually reinforcing effects. First, a more significant savings level improves the supply of loanable funds and the low-interest rate, indicating to entrepreneurs that longer-term investments are relatively more profitable than those closest to final consumption. The prices of capital goods increase and new opportunities for profits emerge to be discovered and exploited by entrepreneurs. Second, the increase in savings allows the execution of capital-intensive projects, with greater complexity and time duration, which otherwise could not have been undertaken and completed. When these projects mature, the stock of capital goods expands along with productivity and national production. A more significant number of better solutions to solve human problems

are brought to the market at lower prices. Consequently, economic development depends on the amount of capital available and how adequately assembled the existing capital structure.

For Kirzner, efficiency and productivity are two sides of the same coin. Entrepreneurial dynamic efficiency denotes the booming trend of human creativity and coordination to ensure higher living standards, while legal or institutional barriers to entrepreneurship inexorably give rise to dynamically inefficient economic performance.¹¹ Although entrepreneurs' estimations may be incorrect, the price system and profit and loss accounts create new opportunities to be perceived and exploited by entrepreneurship's driving force. Understanding how the market works entails analyzing the economy in strictly dynamic terms and setting aside the ideal equilibrium model represented by Demsetz (1969) as the *nirvana approach*. In short, recognizing the human propensity for discovery and innovation to address others' potential desires and needs serves to visualize the social function of an entrepreneurial market economy.

V

SOME ETHICAL DILEMMAS UNRAVELED

Kirzner's dynamic efficiency hypothesis offers new insights into some ethical dilemmas that modern development economics literature often overlooks. First, the empirical evidence from some emerging markets, which suggests the premise that the poor are natural-born entrepreneurs is misleading. As Banerjee and Duflo stated, "the poor are less able to make the investments needed to

¹¹ The institutional environment often influences the type of profit opportunities available to entrepreneurs. Non-productive or destructive entrepreneurship arises in an intervened or socialist economy. As the market activities become more regulated, actors perceive that it is more profitable to seek government privileges than serving consumers. Acemoglu and Johnson (2005) suggest that "private property institutions," in contrast to "contracting institutions," improve society because they protect citizens from the expropriation and corruption of powerful governments and elites. Concerning non-productive entrepreneurship, see Baumol (1990); Coyne, Sobel, and Dove (2010).

run a proper business and are more vulnerable to any additional risk that comes from business itself" (2011, 210). Therefore, better efficiency and productivity levels depend on political initiatives and efforts, such as microcredit programs adopted by governments and societies. For instance, Banerjee *et al.* (2015) analyze some RCTs for group microcredit programs in Hyderabad, India. They observed that greater access to credit increased both small businesses' investment and pre-existing businesses' benefits. Nevertheless, two years after the experiment, no discernible effect on any human development outcomes between the treatment and control groups has been observed. Lacking an *a priori* theoretical framework on entrepreneurship, these authors do not entirely explain their findings and conclude that "microcredit therefore may not be the "miracle" that it is sometimes claimed to be, although it does allow some households to invest in their small businesses" (p. 51).

RCTs focus on underdevelopment's superficial features from the dynamic efficiency perspective, such as microcredits' effect on entrepreneurship. However, this method neglects the socio-economic conditions that promote or prevent the emergence of successful entrepreneurs. As Kirzner argued, it seems "intuitively obvious that [entrepreneurial] alertness can be 'switched off' by the conviction that external intervention will confiscate (wholly or in part) whatever one might notice" (2009, 151). The focus should be that increased risks of confiscation (e.g., levels of tax, inflation, and risk of default or expropriation), trade barriers (e.g., market regulations), and corruption in the public sector may anticipate lower productive entrepreneurial alertness. This approach is manifested in the countries used to apply RCTs, which are often among the most corrupt and confiscatory. Thus, entrepreneurship can foster by ensuring private property rights and the rule of law. It involves entrepreneurial freedom of entry without arbitrary obstacles to make individual freedom carry out perceived opportunities, fostering bottom-up economic development.¹² Moreover, international

¹² The world was not created in two parts: one with infrastructure and capital stock already prepared, and the other without such facilities. All rich countries were poor, with low levels of income and capital. Capital and infrastructure are the

trade increases the technological, investment, and productive prospects of a developing country, initiating personal, cultural, and institutional change for domestic entrepreneurship.

Another controversial debate is about the ethics of income and wealth inequality generated by the market economy. Economists such as Thomas Piketty and Emmanuel Saez argued that high inequality is chiefly due to the extreme concentration of capital ownership and capital income (Jones, 2015). For these authors, 20th-century economic history indicates that inequality in some developed countries has probably decreased due to higher levels of progressive income tax and other government taxes and regulations. Concerning the allocative efficiency approach, Piketty (2020) launches his 'participatory socialism' program to overcome private property capitalism. The objective is to change the property into 'temporary' and organize a permanent circulation of goods and fortune with an 'optimal progressive tax' at a maximum rate of 90%. If the relevant data on people's income and wealth is a given a 'social pie,' government experts could do top-down development planning to distribute goods and income optimally in society.

Experts assume that this "social pie" is given, in the sense that its distributive justice should not be related to its origin. Again, these criteria often disregard how the market works because confiscation inhibits entrepreneurship. It posits that a "perfectly" progressive tax system would inexorably put a stop to any possibility of social mobility because it would confiscate all the surplus from someone who exceeds their tax bracket. The social pie will become smaller and smaller, and the population will be impoverished. Moreover, coercion distorts, corrupts, hinders, or makes the formation of market prices and economic calculation impossible. As Mises (1935) claimed, socialism is incapable of fulfilling its goals, since central planners cannot plan centrally.¹³ If the private

consequence of successful economic performance, not its precondition. Some individuals, groups, and societies emerged before poverty than others. However, the former's personal, cultural, and institutional factors serve as action patterns for the latter in a dynamic learning process by seeing and learning by doing.

¹³ Merriam-Webster defines socialism as: "1) any of the various economic and political theories that defend collective or governmental ownership and administration of the means of production and distribution of goods; 2) a system of society or

ownership of the means of production is eliminated, there can be no market. Where there is no market, there is no price system, and economic calculation becomes impossible. Therefore, the coercive mandates of the governing body will inevitably be arbitrary and dynamically inefficient.

Based on price signals in a market economy, entrepreneurship is a dynamic discovery process, in which the actor creates something entirely new in his mind, *ex nihilo*. An act of discovery does not need to harm others since that resource never existed for them. If an entrepreneur buys at a low price and sells at a higher price, he is justly entitled to the private property of his profit because he has created it. If the exchanges are voluntary, they are mutually profitable, so no charge of injustice can be imposed on the entrepreneurial outcome. While the market economy is neutrally consistent with all types of unethical behavior of its participants, the system's rules protect each one from unethical behaviors. If an individual does not continually direct his intellect to meet others' requests, he will incur losses or even be replaced by more insightful entrepreneurs. Therefore, the focus should be on income and wealth differences that arise from legal and institutional barriers to entrepreneurship; this is precisely the heart of corruption.¹⁴

group that lives in which there is no private property; and 3) a stage of society in Marxist theory between capitalism and communism." However, the arbitrary and coercive abolition of private property implies violating the principle of non-aggression, that is, respecting others' life projects (i.e., it leads to the rejection of theft, vandalism, murder, fraud, or the censorship). The nature of socialism is violence to impose specific goals and worldviews. In this sense, socialism is better understood as "any system of institutional aggression against the free exercise of human action" (Huerta de Soto 2010, 49).

¹⁴ Comparisons between incomes should be discussed in terms of differences rather than inequalities, as the former term is neutral to value judgments, while the latter is not. The term inequality is misleading since equality, in some respects, can mean inequalities in others. Likewise, it is more appropriate to speak of income structure and not the distribution of income. The last expression is not neutral to value judgments because it assumes the existence of a given income, and that, furthermore, can and should be coercively distributed. In this sense, empirical evidence reveals that a smaller income difference exists in freer countries and the more repressed ones. The former achieved higher levels of "equality in wealth" through the institutional boost to entrepreneurship, while the latter have "equality in poverty and misery" through legal and institutional confiscation and socialism (UNDP 2019). According to *The*

VI THE CURRENT AGENDA

Human action prominence endowed with an innate creative and entrepreneurial capacity provides a more realistic theoretical framework to explain the relationship between dynamic efficiency and economic development. This fact implies a minimalist role of the government in some areas (e.g., barriers and regulations to trade, confiscation) and an activist role in others (e.g., ensuring respect for private property rights and freedom of contract). Chiefly, the government must create an environment that supports entrepreneurship in all aspects of society. The role of the government on economic development suggests important new research programs useful for further RCTs.

First, the impact of psychological self-belief in economic efficiency is a crucial element to recognize the productivity or the unproductiveness of entrepreneurial profit opportunities (Harper 2003, 2013). Expectations of personal effectiveness refer to the perceived ability to produce specific actions by oneself. Once the entrepreneurs are psychologically more confident, more significant creation and coordination can encourage economic progress. To thrive, people must possess the skills required to perform specific tasks and a cognitive appreciation in their abilities to exercise control over events to pursue their ends. Harper argued that “people’s beliefs about their efficacy can be influenced in several ways. The two most effective are direct mastery experience (learning by doing) and vicarious experience (learning by seeing)” (2003, 46). Hence, entrepreneurial self-belief is strengthened by an institutional and legal framework that restricts the government’s confiscation and coercive potential, especially in the economic sphere.

Second, culture is a significant variable to explain the dynamic of institutional change and the adaptation of the entrepreneurial performance to ensure economic progress. Boettke *et al.* (2008) propose a regressive theorem of institutional stickiness to analyze

Index of Economic Freedom (2020), those most repressed countries are precisely the most corrupt and the poorest in the world, from which people tend to escape, even risking their lives.

economic transition and development. They argue that both theoretically and empirically, successful institutional changes (SICs) (i.e., in post-war West Germany, post-war Japan, and post-Cold-War Poland, among others) always respect the indigenously introduced endogenous (IEN) institution. On the contrary, the lack of IEN institutions causes failed institutional change (i.e., in Haiti, Afghanistan, Kosovo, Russian Federation, Bosnia, among others). Furthermore, the respect of IEN institutions is defined as institutional stickiness. Thus, a SIC (that results in a thriving economic transition and development) is decided by its institutional stickiness, which is determined by the previous IEN institutions. Boettke *et al.* describe the connection between SIC and institutional stickiness, where SIC is previously IEN institutions in a regression theorem. In line with the findings of Boettke *et al.*, Harper (2003) refutes the traditional belief that collective culture cannot generate economic growth, demonstrating that both individual culture (i.e., in Western Europe and North America) and collective culture (i.e., in East Asian countries like Japan, Taiwan, South Korea, Hong Kong, Singapore) may all achieve economic efficiency. In other words, either individual or collective culture can promote economic development since it can enhance entrepreneurial psychological self-belief. As Boettke (2018) stated, the challenge is whether a culture is pro-entrepreneurship or not, rather than one that denies collective culture.

Third, the dynamic prospect of economic efficiency has a close relationship with ethics and personal morals. Huertas de Soto (2009, 2011) argues that private property ethics are necessary and sufficient for dynamic efficiency. Private property ethics is a necessary condition because if the ownership of the fruits of each action is not respected, the most important incentive to create and discover profit opportunities is removed. Furthermore, an environment of freedom, in which entrepreneurs are not coerced and respect their private property, is sufficient condition, for it unwraps the creative entrepreneurial process and the coordination that characterizes dynamic efficiency.

However, if the government impedes human action to any degree, undermining the property right of what human beings create when they act entrepreneurially, the result is dynamically

inefficient—it blocks human beings' capacity for creativity and coordination. Government coercion is also fundamentally immoral “since such coercion prevents human beings from developing that which is by nature most essential in them, i.e., their innate ability to create and conceive new ends and means and to act to attempt to achieve their own goals and objectives” (Huerta de Soto 2011, 29). Accordingly, socialism and, in general, a government's economic interventionism is dynamically inefficient and ethically reprehensible.

The economists' profession's challenge is to use the entrepreneurial theoretical constructions to guide RCTs' design and evaluate the results. More specifically, the Kirznerian approach to the dynamic efficiency and economic development will also be applied to a range of other problems, such as the economics of the education system, pro-entrepreneurship tax reform, and the challenges that developing countries now face in fostering entrepreneurship. While economic theory places human action at the center of analysis, there is hope that the gap of causal and external validity between the methodology of randomized controlled trials and reality will continue to narrow. Otherwise, modern development economics will continue to provide top-down development planning, disregarding that procedure's vulnerabilities.

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