Treatise on Economic Enzymatics

Josef Grey

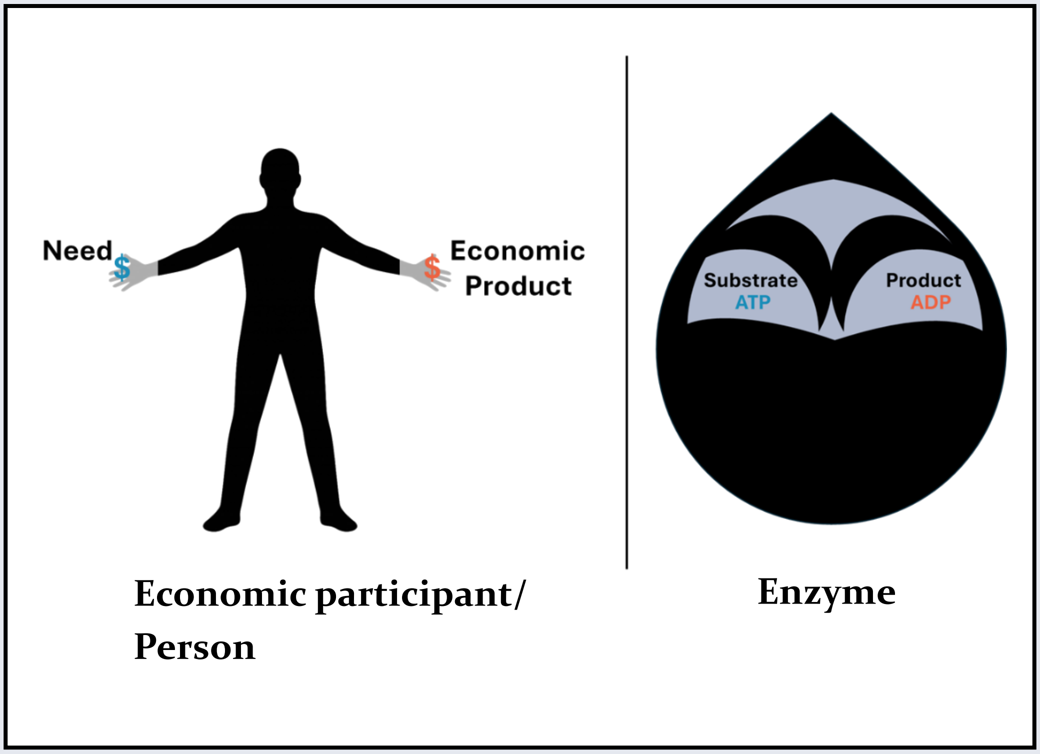
Grey Theorem

Treatise on Economic Enzymatics

Theorem on Enzymatic Logic and Mathematics Modeling in Understanding, Measuring, and Forecasting Economic Product

Abstract

Herein lies a novel foundational theorem of economics as a product of individuals in a mechanistic multi-variable manner, logically and mathematically comparative to economic enzymes. The different forms of money aptly fit biologically-driven systems utilizing multiple molecules of energy for cellular function. It is logical for systems of organisms to organize economic, and otherwise, systems under the same laws and mechanics dictating their own biological life. Utilization of this model allows higher fidelity prediction of economic activity by participants, including proclivity to periods of alternative rates of production.



Relevancy

Economics, Economic Theory, Forecasting, Finance, Financial Architecture

Economics lacks a unifying model connecting participants to amalgamated complexes, i.e. individual consumers to national and aggregate systems. Enzymatic biochemistry serves as a framework for a unified economic theory connecting participants to the system's output in a mechanistic, multivariate manner. This model can be utilized to describe aggregated individual economic output through defined and non-defined environments to provide a probabilistic matrix for long-term mathematical forecasts of collective product, e.g. financial value. This logical model enables the analysis and forecast of output across the native dynamic-rate and state population within the continuity of the system's mechanical action. This white paper serves as a high-level representation of the logical and mathematical methods utilized by Grey Theorem and labeled as The Economic Enzyme Model, and proposes a novel recharacterization of mathematical and logical representation of systems economics.

Enzymes convert substrate to product at a variable rate in response to multiple factors, such as quantity of substrate, product, energy, competing and partner enzymes, catalysts, generalized system activity, energy level, and energy stores. Likewise, a participant will change their purchasing behaviour based on level of financial energy/worth, internal and external inventory of goods, recommendations and active consumption by peers, as well as general atmosphere of consumption. The affinity to economically produce, or the internal energy required to perform an economic activity, is similarly affected by the relative values and impact of a matrix of variables, internal and external – potentiation in enzymes is a well-characterized concept.

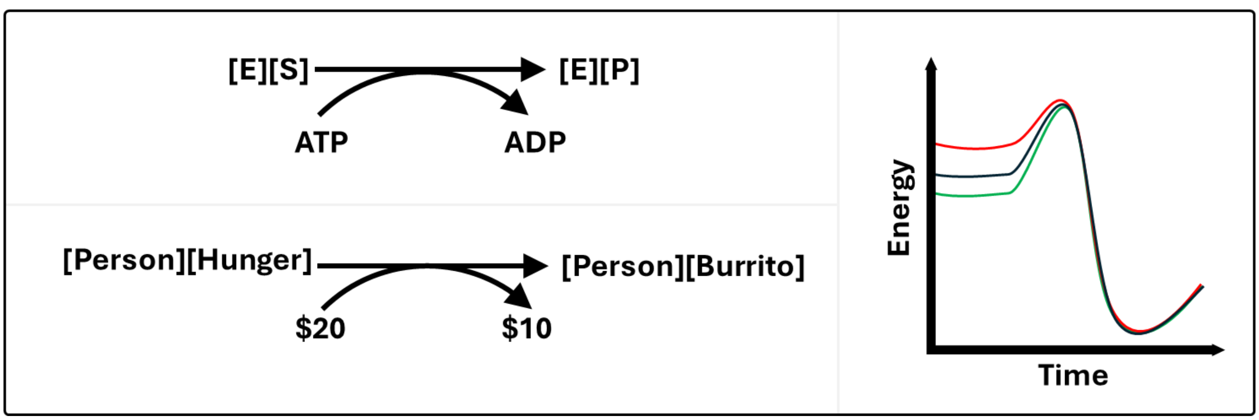


Fig. 1 Hunger is an intrinsic cycle akin to enzymatic recycling; a physical obligation caused by obligated physical action. Economics requires the denotation of Hunger as an economic need, for which a suppressing good or service qualifies as economic product. *I eat therefore I am*.

Enzymatic biochemistry dictates controlled modification of each variable in dependent and independent ratios across a relevant scale with quantifiable and repeatable outputs for experimental deduction of multivariate interactions. Social sciences are limited by the operational and ethical dilemmas in replicating this design, forcing limited scale and quantity of variables, and lack of repetition. This increases the ratio of unknowns and semi-knowns (knowing some of but not completely, either in scale, interdependencies, mechanism of function, or degree-of-relevancy; defined in Grey Systems Theory as blacks and greys, respectively. Application of enzymatics appropriately translates pools of inactive participants or reconstruction of novel product synthesis/market introduction. Finally, this framework appropriately separates individual participants, businesses, banks, and greater regulatory/controlling institutions for mechanical manipulation.

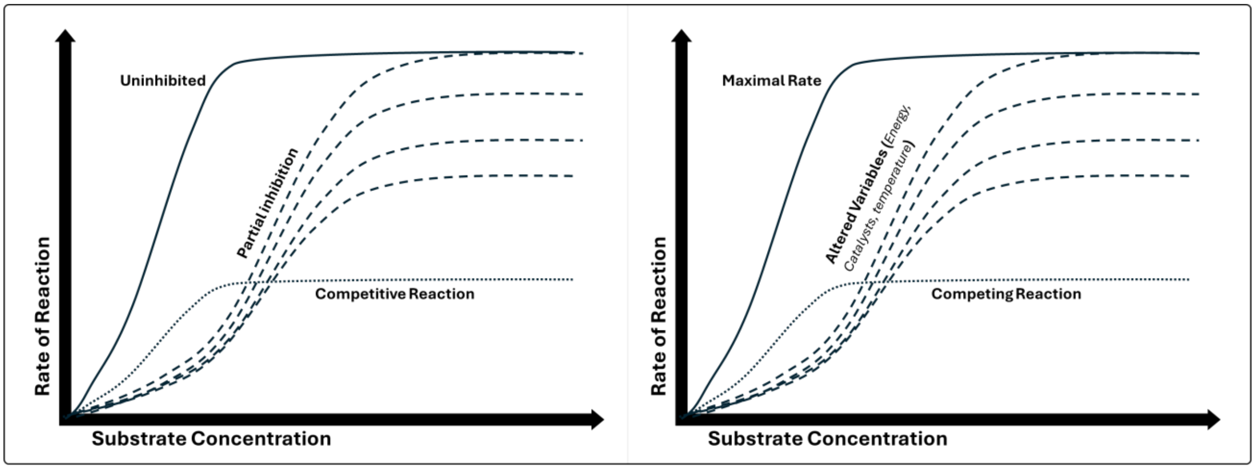


Fig. 2 Enzymatically, given an operational environment, substrate concentration drives the rate of reaction until a maximal rate. Economically, the greater the need the more likely to create economic product, i.e. the greater the hunger level, the higher likelihood of buying burritos. Biochemistry allows quantifiably-tested environments, economists get surveys.

Defining participants as enzymes translates money as energy, biologically-translated to ATP, GTP, NADH, etc. The same individual unit of currency exhibits different scaling outputs in different directions dependent on the class of participant or institution, and continuously exists in a two-body paradigm of asset and debt. Where enzymes may favour one form of energy, others may only create product in the presence of their preferred or most common form (generally as a safety mechanism to preserve energy for the macro-organism's health in times of starvation). Tying energy pools to tiers and biological functions of product synthesis follows the generalized schema for product forecasting used in cellular enzymatics, equating to the shifts between goods and services in consumption makeup. Building in the facilitators and distributors of energy pools, as well as mechanistic recycling of energy for differential analysis of money velocity reconciliation in monetary policy response. Likewise, in differential analysis of and in pursuit of healing consumption behaviours and "cyclical-elastic snapback" trauma, drug discovery methods in enzymatic biochemistry provide mathematical guides on identifying highest return-on-investment for fiscal policy.

Distribution of system resources into dynamic layered equilibria characterizes a critical mechanistic action in the economic activity processing substrate to product, forcing the use of higher order equations in mathematical descriptions. Enzymatic mechanistic activity is plotted across individual amino acids, e.g. the coordinated transfer of protons, until the final destination or molecular event. Currently this is an ignored concept, and there exists a profound need for the internalization of this multivariate affecter, the enzymatic translation provides. There exists an energy potential to economic activity affected by the access to energy, i.e. significant barriers to economic energy slow the overall system, even if there is economic energy within the organism. This consideration is simplified in biochemistry to establish enzymatic activity rate forecasts across system variables, partially by accounting for the variable rate of mechanistic action and counter-action, or reset, as well as reconstitution of enzymatic pools; i.e. enzymes suffer mechanical stress and are repaired or recycled, thus significant activity can result in periods of lower or suppressed activity.

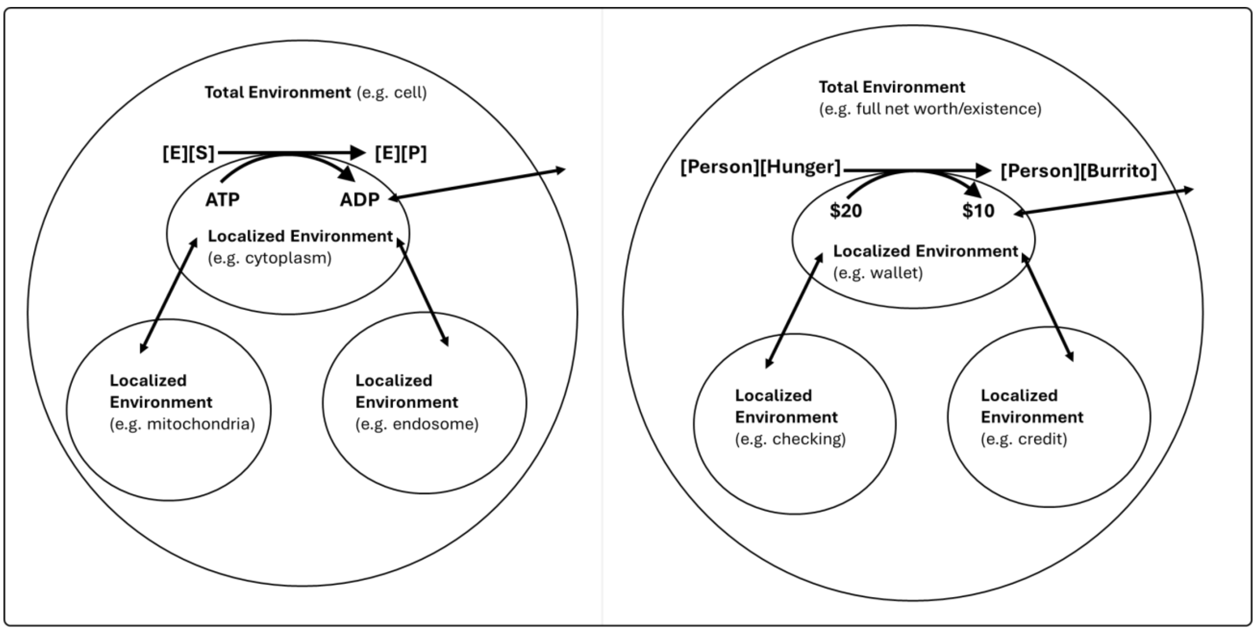


Fig. 3 The financial-economic system has come a long way from bartering sticks for stones, trading in salt, gold, or even paper currency. Evolutionarily, segregation of energy pools has been an orthologous and homologous process; biological constraints drive separation of active and stored resources. A barrier to energy stores allows for prioritization and integration of feedback mechanisms for the controlled rate of substrate to product. Consumer –translated, money in the wallet may be more freely spent than pulling from credit, checking, or savings accounts, each in individualized energy potentiated rates. Aberrant, unchecked higher order growth in biochemical pathways is typically synonymous with cancer.

Where modern economics strives to characterize, and forecast, economic activity directly by rate of synthesis, lack of stable environmental conditions across record, and forecast, falter. Mechanistic models allow for the characterization of rate within environmental conditions, as a mix of independent and dependent variables that alter the behaviour of "physical" interactions in consumption. Where biochemical pools of resources can be compartmentalized to organelles or vesicles, modern economic systems have tiered and compartmentalized pools of economic activity resources, which can be predominantly called money or capital. Banks reserve capital for operations and de novo investments and operations, with compartmentalization effectiveness scaling akin to biochemistry's evolution. The mechanical action of accessing each reserve increases the dimensional order of modeling economic activity, and where mechanical action to reserves approaches zero, the variable for affinity may decrease but never lower in order as an intrinsically dependent variable.

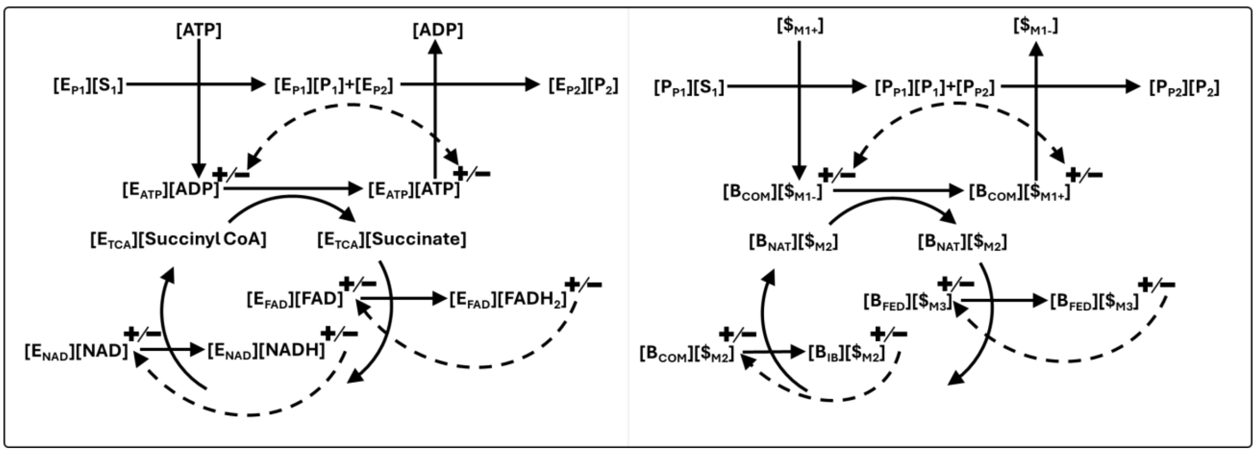


Fig. 4 Biochemical pathways are characterized by tracing of enzymes, substrates, and competing reactions or enzymes. While the total economic network can be visualized and mathematically defined within the biochemical pathway framework, this work emphasizes on the similarity, importance, and mathematical-potency of analyzing and forecasting complex economic rates of activity through multi-order and multivariate space. While the specific order and enzymatic list are unique to each biochemical system, the mirroring of processing of energy through economic and biochemical systems is visualized above. The TCA, or Krebs cycle, is a relatively ubiquitous pathway in life, creating energy from food digestion via the addition of donor-protons to biological units of energy. Meanwhile, various levels of financial administration are required in the simple processing of a financial transaction for something as simple as a burrito.

The full action of a system can be described within a field large enough for all probabilistic mechanical rates of activity, where a minimal, maximal, and optimal rate of activity can be derived from this field. Methods of forecasting rates of activity are smoothed representations of potential activity rates, not to be misconstrued with actual activity given any biochemical system exists to alter its rate in response to the environment around it, so too economic organisms and systems alter their own rates by inter- and intra-dependent feedback mechanisms. This method and model instead forecast the rate of economic activity established by system homeostasis, or the integral sum of forces required and employed by the system to maintain an equilibrium of resources with economic product. The change within the system driven by variables from both sides of this equilibrium, substrate and product, and by external variables, mix across any record. Establishing a record length for experimental digestion of cyclical activity, and repeated cycles thereof, is required for variable impact segregation. Transforming economic rate into the base matrix of variable weights utilizing enzymatic methods, each variable may be altered for the potentiated impact on effect, as a sum of all variables versus an independent aberration. Industrial uses are simulation-based forecasting across market, consumer, producer, and/or environmental variables.

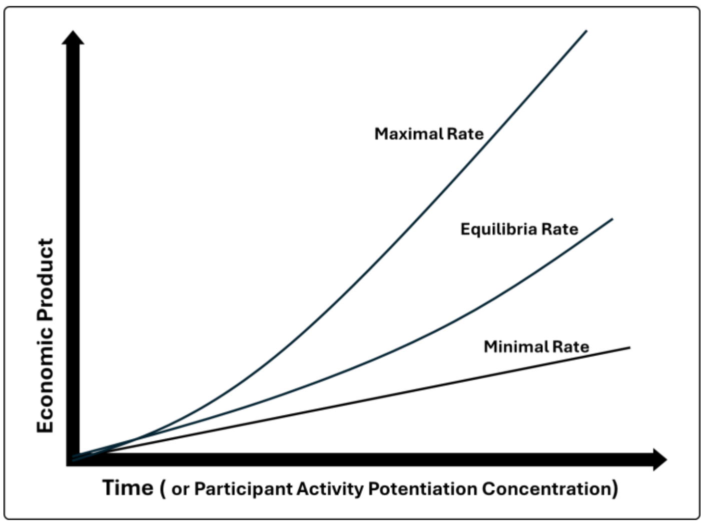


Fig. 5 The study of variation of rate of economic activity through a cycle of potential activity enables the isolation of variable impact via matricization in accumulation of effect of each. Digestion and computation for a multitude of rates in activity is possible, industrially allowing the variance in a singular or multitude of variable(s) for potential total product. Utilizing the enzymatic framework, three rates are established for forecasting the potential and probable rate of economic activity. These are nominally referred to as Maximal, Minimal, and Equilibria Rates. Where Maximal and Minimal didactically refer to the maximal and minimal rate of economic operation, Equilibria references an optimal rate for a constant product synthesis through biochemical or economic life. None of this is meant to represent the actual rate of economic activity for any system, but by which the bounds and medium for which it will continue to operate within through time.

This work embodies the logical and mathematical hierarchy of economic enzymatics, or the study of economic activity bodies/participants. Translation of universal concepts driving evolution in biochemical, living, enzymatic systems, to economic systems for the characterization and forecasting of rate of activity in processing substrate, or economic need, into product, is a logical step in evolution of analysis and forward manipulation of economic systems. The mathematics utilized in enzymatic production can be effectively translated for economic production, by appropriately accounting for the mechanical variance in rate through scale and cyclical count, or radial dimensional length, a probability matrix of economic rate can be derived. This is impactful in the maintenance of market performance, and financial system governance. Further translation of universal laws, as well as continual derivation of these laws into algorithmic hierarchy will further strengthen this model and study of economic productivity.

Treatise on Economic Enzymatics

Contact Advisory@Greytheorem.com

See more at Greytheorem.com

Grey Theorem