

Economic Growth
From
Neglected Numbers

Chris Farrell Ph.D.
Technology Matters
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The Situation

It's apparent to most thinkers that innovation should connect with economic growth. But Economics doesn't help them much. It defaults to a proxy called Factor Productivity, the principal manifestation of Neo-Classical Growth Theory, whose sufficiency remains conjectural; plus a contribution toward intellectual capital, or intangible stock, from which future technology and products may be developed without enumerating when or how.

Such shortfall invites an explanation, and an excuse. The excuse occupies the next two paragraphs, the explanation the next hundred pages.

The excuse is that Economics has completely missed an industry standard, the Innovation Funnel, which controls output to commercialization. The mechanism for successful passage through this funnel is an essential consideration on which Economics remains silent in consequence of what the perceptive economist Zvi Griliches once called its 'data constraint', which he exhorted economists to overcome, but which only outsiders could effect.

That's because business lore is systemically out of academic reach. It's hidden away from campuses; within factories, corporate offices and especially in technical centers. And most of it relates to successful funnel passage. Tacit knowledge, and access, allows Innovation Professionals to use these resources to serve various commercial purposes, into which the incorporation of Economics is a natural extension, contingent only on the de-fragmentation of data into DINTEC or Data on INnovation TEchnology and EConomics, from which explanation has arisen.

The resulting reformation fills the next hundred pages and addresses two well known, but essentially abandoned, knowledge gaps in Economics. These are the long sought, but never found, numerical link between current R&D and future GDP, and a host of issues that arise unless product performances can be cardinally determined by a single variable; a deficit that lies behind what economists have identified as Economics' 'Quality Change' problem.

When armed with these missing elements the dominating factor for economic growth clearly emerges. Innovation metrics control the funnel through which any technology must pass to become commercial, so that its products can overcome market incumbents by the process called creative destruction. The outcome, which is growth, can be calculated upwards from first principles, with profound consequences in many quarters, including for global economic advantage.

Contents

Each Part uses extensive data, or interprets such data, to illustrate increasingly complex commercial activity that segues into new economics.

- Part Ia** - Develops an otherwise unknown economic equation that enumerates absolute product advantage by an analogy between creative destruction for money in the economy and species competition for food in nature, 5-13
- Part Ib** - Validates its ability to quantify product performance[‡] in a dozen varied commercial instances, where performance is known or can be reliably judged, making it universal, and providing insight into limitations of the current hedonic method for correcting price indices, 15-33
‡ known as 'quality' in Economics
- Part II** – Enumerates the historical performance of light-bulbs to resolve the 'Price of Light' quandary that has stymied understanding of bias in price indices for decades, 35-37
- Part III** - Develops algebra from the equation that shows GDP is driven primarily by innovation, 39-40
- Part IV** – Provides a mathematical treatment of creative destruction through the Innovation Funnel that exactly defines innovation and its measurement, 41-44
- Part V** - Applies this direct economic measurement of innovation to enumerate the consequences for individual firms when creative destruction grows the economy, 45-53
- Part VI** - Sums manufacturing innovation to reveal the long sought quantitative link between current R&D and future GDP, including a global innovation explanation for the great productivity slowdown. Offers a new way to envisage economic growth using an Innovation Parallelogram across which simple mathematics between new variables controls creative destruction by the Innovation Funnel mechanism, 55-64
- Part VII** – Shows that Factor Productivity, derived from Neo-Classical Growth Theory, is insufficiently related to innovation and must be measuring something else. Recommends that the proposed direct economic measurement of innovation be included in National Accounting so that its currently missing mechanistic role for growth is properly tabulated therein; an essential for informed economic policy. 65-73
- Part VIII** – Appendices, References, and a Glossary. 75-98

Access to 'Economic Growth from Neglected Numbers' is available through opening a dialog with Chris Farrell at Technology Matters.