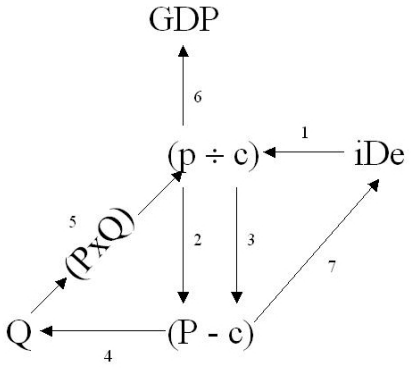
Innovation in Economics

Missing Pieces



Smart Growth

Chris Farrell Ph.D.

Innovation Measurement

Tracking the State of Innovation in the American Economy

A Report to the Secretary of Commerce by

The Advisory Committee on Measuring Innovation in the 21st Century Economy

January 2008

Transmittal Letter from the Committee

January 2008

The Honorable Carlos M. Gutierrez
Secretary of Commerce
U.S. Department of Commerce
Washington, DC 20230

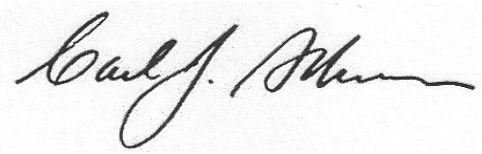
Dear Mr Secretary:

You charged this Committee with developing "new and improved measures of innovation" in three areas: how innovation occurs in different sectors of the economy, how it is diffused across the economy, and how it affects economic growth. As chair of the Advisory Committee on Measuring Innovation in the 21st Century Economy, I am pleased to present a report that is the culmination of nearly a year's worth of study and consideration by the members, and that we believe represents the most fundamental changes that can be made to advance our understanding of innovation.

While we recognize that the American economy is changing in fundamental ways – and that most of this change relates directly to innovation – our understanding remains incomplete. Indeed, data collection and measurement, while seemingly mundane, loom large in understanding these changes. Policymakers, investors, executives, managers, consumers and researchers require accurate and complete information in order to make informed decisions. The centrality of the need to advance innovation measurement cannot be understated.

The difficult work of improving our measurement systems is only just beginning. On behalf of the committee, I want to thank you for this opportunity, and I look forward to the improved information that will become available if the Committee's recommendations are implemented.

Sincerely yours,



Carl J. Schramm
Chair
Advisory Committee on Measuring Innovation in the 21st Century Economy

Transmittal Response – from inside Commercial Knowledge

Tracking the 'state of innovation' advantages any economy. The Chairman's second paragraph is as cogent today as it was in 2008.

But in order to track innovation it must first be measured and measured rigorously. This requires overcoming certain fundamental impediments within Economics.

The first is its 'quality change problem', which is the inability to determine the 'goodness' of a product or service delivered to a market by innovative technology[I].

The second is the 'measure of ignorance' that arises each time Economics tries to account for economic growth at the macro level. This is known as Factor Productivity[I]. Factor Productivity is often proffered as a proxy for innovation or technical change or something.

Economics seems to accept these limitations. The Committee didn't differ.

Nevertheless solutions **are** available and are presented in this book. They arise from a wealth of previously hidden commercial knowledge supported by otherwise neglected data.

The outcome is far-reaching. The impact of innovation on the economy is far more direct and profound than Factor Productivity – or any construct of current economics – is capable of delivering. The residual evaporates.

If – as the transmittal letter opines, and this book affirms - the centrality of innovation cannot be understated in relation to changes in the American economy, then innovation also merits tabulation within National Accounting.

To supplement and support progressive presentations made to the Bureau of Economic Analysis since 2014, Technology Matters provides this research monograph.

[I] Terms such as 'Quality' and 'Factor Productivity' receive further explanation in the Glossary on pages 89 and 90.

The Direct Economic Measurement of Innovation: Eight Steps in Commercial Knowledge[II]

Each **Step** uses otherwise neglected data, or interprets such data, to illustrate increasingly complex commercial activity that puts innovation into Economics. Its direct economic measurement becomes a talisman linking growth to original factors that are arranged with utmost simplicity to provide new possibilities for economic enhancement, including Going Beyond GDP.

[II] 'Over the longer term I would like to see economics researchers begin to incorporate more from the non-economics community', Griliches (1999).

You can download and print the full research,

http://www.techmatt.com/techmatt/Innovation-In-Economics-Missing-Pieces.pdf