What's New About Capitalism?: A Review Article on *Capitalism without Capital: The Rise of the Intangible Economy*

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Abstract

I review Jonathan Haskel and Stian Westlake's recent book on intangible capital. It is an excellent introduction to and overview of the economics of intangibles. Using a combination of colorful examples and rigorous economic logic, it builds an interesting and useful reference for readers of many types, including academics, policymakers, and business people. While there is much left to be learned about the nature and role of intangible capital, this book will serve as a summary of what we know now as well as a roadmap for future explorations of the subject.

In their new book *Capitalism without Capital: The Rise of the Intangible Economy* (Princeton University Press, 2017), Jonathan Haskel from the Imperial College Business School and Stian Westlake from NESTA have written an excellent introduction to and overview of the extant economic thinking on intangible capital. Using numerous well-chosen, colorful examples that both appeal to a broad audience and explain by analogy, Haskel and Westlake demonstrate how intangible capital is becoming a highly important factor (in both the economically literal and figurative senses of that word) on the economy's supply side. The book draws out in notable detail how the growth of intangibles interacts with an impressive array of economic phenomena. While not purely a work of formal scholarship, Haskel and Westlake's exposition remains true to rigorous economic logic and brings empirical evidence to bear whenever possible. As a result, the book is simultaneously able to inform academic economists, business people, policymakers, and curious non-experts.

The book begins with a vivid story about accounting. (Yes, that's right.) It compares the asset valuation process conducted prior to the 2013 sale of Stansted Airport to a valuation of Stansted village ordered almost a millennium earlier by William the Conqueror. While the valuations arrived at in the two surveys came to different final numbers (£1.5 billion vs. £11 —

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you can guess which one corresponds to which), Haskel and Westlake remark on the striking similarities between the processes: the assessors inventory assets, apply unit valuations to those assets, and sum the results to find what the place is worth. Haskel and Westlake's main point is that the biggest substantive difference in the two valuations processes is that the 11th Century valuation counted only tangible capital (a mill, livestock, slaves), while the modern valuation also included intangible capital (software, relationships with airlines and retailers, organizational know-how). The airport valuation was more than an academic exercise; it became associated with an actual transaction when the airport eventually sold — for £1.5 billion, it turns out. The eventual buyer appeared quite willing to pay for the airport's intangibles.

This comparison and contrast between the valuations is the starting point for the book's exposition of its argument about the growing importance of intangible capital in the modern economy. It bolsters and broadens its case by pointing to the high market-to-book valuations of modern companies and the fast-growing attention the academic literature is paying to intangibles. The bottom line of this accounting exercise: intangibles are here in force, still growing fast, and worthy of study.

How Intangible Capital Is Different

Having documented the rise of intangibles, the authors assert a core thesis of the book: intangible capital is not just physical capital that is harder to see. It is fundamentally different. Haskel and Westlake sum up the differences as "The Four S's of Intangibles": sunk, spillovers, scalable, synergies. What do these mean in detail? Investments in intangibles are by-and-large sunk costs. Resale markets for intangibles are not as nearly developed as they are for tangible capital, and many intangibles are inherently harder to transfer for other reasons.

Intangibles create more spillovers than tangible capital because they tend to be much less excludable. It is easy to lock up a factory, but hard to lock up an idea (especially when intellectual property rights are weak).

Intangible capital tends to be more scalable; its marginal product declines very slowly in the breadth of its application. For example, a brand can be simultaneously extended over many products without necessarily losing its efficacy, while a machine can only make one thing at a time. (One might characterize this property along the dimension of rivalrousness, with intangibles being considerably less rivalrous than tangible capital, even within an organization.)

Intangible investments tend to exhibit synergies (complementarities) among themselves. The iPod wasn't the first MP3 player, but it was the first to combine that technology with Apple's design know-how and relationships with content producers, the key to making it a highly successful product. These four properties summarize the basic economic properties tied to intangibles.

The Rise of Intangible Capital

After this introduction, Haskel and Westlake split their discussion and analysis of intangibles into two major parts. The first, accounting for about one third of the book, documents and analyzes multiple facets of the rise of intangible capital in the economy. The second offers analyses of how intangibles' rise has shaped various economic phenomena from productivity to inequality to finance and beyond.

Another vivid example sets the stage for the book's first major part. Here, the comparison spans 40 years rather

than a millennium, contrasting a typical gym in 2017 to one in 1977. In terms of physical capital, gyms are basically unchanged since 1977. What differentiates the modern version from its predecessor is intangible capital. The modern gym's membership rolls and scheduling information are on software. Its brand is likely to be more widely recognized and more carefully cultivated than a generation ago. Organizational practices, both codified and uncodified, govern employee practices in structured ways that would have been quite unusual in the industry several decades ago. Even more to the point, the book's prototypical modern gym offers its members a class called Bodypump. Bodypump is branded and administrated by Les Mills International, a completely separate company from the one that owns the gym. Les Mills International designs Bodypump classes' choreography and certifies instructors, but owns little space of its own and does not employ the instructors. Yet Bodypump classes are offered in thousands of gyms around the world by tens of thousands of instructors. Les Mills is able to achieve this while remaining a firm whose capital is almost completely intangible.

Data on aggregate tangible and intangible capital stocks over time and countries follows the gym example. The trend toward intangibility is clear, though the rate of the shift varies across countries.[2] The book briefly explores explanations for this growth, offering verdicts on each: reductions in intangible capital's relative price (if anything, this effect probably goes the wrong way), the growth of IT (yes), the shift away from manufacturing and toward services (unclear), reductions in factor market regulations (yes — more flexible labour markets are associated with greater intangible investment), and openness to trade (yes, though the relationship is not particularly strong).

The first major part of the book concludes with an expanded discussion of the four S's of intangible capital. At this point in the exposition, all but the most skeptical of readers will be convinced that intangible capital has been increasingly taking a more important role in production at both the micro and macro levels. This conclusion sets the stage for book's second major set of analyses and the bulk of its pages: explanations of how the rise of intangibles has shaped a wide variety of economic realities.

Impacts of Intangible Capital

Slower Investment and Productivity Growth

The first such topic for discussion is one of the biggest, and likely of the most direct interest to readers of this journal, the slowdown in measured investment and productivity growth. The book summarizes these as "secular stagnation," which Haskel and Westlake define as a collection of four related facts: low investment despite low interest rates, weak productivity growth, high profits, and increasing variance of productivity and profits across producers. While this may not be the only definition of that oft-discussed phenomenon as of late, it is a reasonable one. The book examines intangibles' potential ties to each of these facts.

Low measured investment is seemingly

2 Of course, measuring intangible capital in the first place is inherently difficult, and in fact the book dedicates an entire chapter to that issue. In most of the empirical expositions, the book measures intangible capital similarly to the approach in the pioneering work of Corrado, Hulten and Sichel (2005). This uses a somewhat more expansive definition of intangibles than the U.S. Bureau of Economic Analysis more recently applied.

easy enough to explain given the shift in capital composition toward harder-to-measure intangibles. Measured investment would slow even if total investment (tangible plus intangible) grew at a constant rate. Interestingly, however, Haskel and Westlake show that while trying to correct for missing intangibles creates a level effect on measured investment, there is little in the way of a shift in trend. The composition change has been gradual enough to explain only a tiny fraction of the investment slowdown over the past decade or so. While clear enough ex post, this result did surprise me the first time through; Haskel and Westlake are offering an important result to what is known about the topic with this exposition.

The remaining discussion of intangible capital's possible effects on the secular stagnation facts is a tug-of-war between two of the S's: scalability and spillovers. Scalability tends to favor intangible investment. Its ability to create "right-tail" outcomes raises intangible investment's expected return. Spillovers, on the other hand, reflect the limited excludability of intangible investments and therefore reduce the returns from intangible investment.

One might conclude this leaves the issue utterly ambiguous, but the authors add one more element to their analysis: firm heterogeneity. Suppose firms are heterogeneous in their abilities to scale up intangible capital or their ability to benefit from the spillovers of other firms. This is plausible; decades of research have shown that firms exhibit remarkable heterogeneity along a number of dimensions even in narrowly defined markets. If such disparities exist, then even if the average effect on the incentive to do intangibles investment is zero, a segment of firms with some combination of high scalability and spillover appropriation would still stand to gain considerably from such investment. This would explain the increase in variance of productivity and profits and the increasing average profit level, driven by the right tail.

While this hypothesis might seem a bit "just-so" in isolation, the book helps its case by showing (albeit only in a small sample of two sectors in each of nine countries) a strong correlation between a country-sector's share of investment accounted for by (measured) intangibles and the average change over 2001-07 in the spread between the top and bottom quartiles of labour productivity in the country-sector.

The final secular stagnation fact to address is the productivity growth slowdown that most developed economies have experienced over the past decade or so. Here, the book notes — in somewhat of an incongruity, given the tone in much of the rest of the book about the oncoming intangible tide — that the intangible investment rate has been falling over the past decade. Hence a slowdown in the growth of intangible capital stocks may be at least partly behind the productivity slowdown. (An intangible investment slowdown is of course not inconsistent with an economy becoming more intangible intensive, if the tangible investment rate fell more.)

Haskel and Westlake note there is indeed a strong positive correlation, at least for the small sample of countries with available data, between the growth of intangible capital services in an economy and its TFP growth. However, the book develops its argument on this point still further. Namely, it asserts that not only has intangible investment slowed, but the spillovers any average unit of intangibles confers may also be falling.

The primary reasoning behind this falling spillovers hypothesis is presented in an intriguing discussion about the contestability of intangible capital and how

this is related to firms' rent seeking and rent protection efforts. Rent seeking and preservation are topics of great speculation lately, both by themselves as well as through possible connections to the productivity slowdown. While the authors do not arrive at a definitive verdict on the issue, the discussion is a welcome addition to the conversation and well worth the pages dedicated to it.

While these arguments are not dispositive how large of an influence intangible capital might be having on the current investment and productivity growth slowdowns, the book makes an effective case that there is likely to be some connection. It certainly raises several potential connections for productivity researchers to probe and for policymakers to continue to monitor. This is one of its key contributions.

Other Impacts of Intangible Capital

The book's remaining chapters draw out connections between intangibles and inequality, infrastructure, corporate finance, and corporate management. Many of the topics therein are at least one step removed from productivity issues, but it is worth noting some of the closer connections.

One is a tie between inequality and the increase in firm-level performance dispersion discussed above. Song *et al.* (2015) demonstrated that firm effects account for a considerable share of the growth of employee earnings inequality. However, this firm-performance/worker-earnings correlation appears to be more about the sorting of workers of a particular earnings level than about rent-sharing by successful firms (although there is evidence that this occurs to some degree as well). A related, broader connection the book makes between intangibles and worker earnings is a variant on the classic skill-biased technology story. Here, it is tied to the complementarity between particular worker skills and intangibles. This can also interact with intangibles' scalability properties, creating superstar-type effects that can lead to skewed earnings distributions.

Interactions between intangibles and management practices are also related to productivity, as management practices are currently one of the more active areas of research into sources of productivity differences across firms, industries, and economies. The authors devote most of a chapter to exploring how management should respond to the expansion and deepening of intangibles in firms. Again, complementarities take center stage, with the chapter's bottom line being that good management is more valuable in an intangible-laden corporate world.

Interestingly, though, the book draws out a contrast in the prescribed organizational structure for companies, depending on whether a firm is primarily a maker or user of intangibles. It argues that makers of intangibles benefit from flat organizational structures that offer mid-level managers a lot of autonomy and only loosely monitor short-term performance metrics. Essentially, the idea is to keep the proverbial creative juices flowing by allowing people and ideas freedom to flow through the company. On the other hand, companies that are heavy users of intangible capital see greater benefits from having more rigid, control-from-the-top organizational structures, because the name of the game is coordinating the firm's efforts to apply its intangible assets to the uses that offer the greatest return at the moment.

The chapter also offers its take on one of the still unresolved questions in the productivity and management literature — namely, whether it is simply management practices, or also managers, that make a difference. The book comes down squarely on the side of the latter when it comes to intangibles. Haskel and Westlake argue

that people and personalities matter because taking advantage of intangibles' scalability and complementarities requires individuals who can effectively motivate loyalty and effort from their employees.

The book closes with a discussion of policy questions raised by the rise of intangibles. Perhaps the deepest and most novel involves whether significant modifications to property rights institutions are necessary to maximize the social return to intangible capital. By its nature this discussion is quite speculative, but it is very thought provoking.

Capitalism without Capital is a comprehensive look at the growing importance of intangible capital in the economy. It is a can't-miss volume for anyone interested in the topic. Readers of the *International Productivity Monitor* in particular will appreciate the many overlaps intangibles have with productivity-related issues, in both the cross section and over time, and at the micro and macro levels. As comprehensive in breadth as the book is, however, it can only mine the shallow deposits of intangible "ore." Digging into deeper veins will be the work of researchers guided by this book. This work will not be easy; by their nature, data on intangibles is still sparse. However, this only raises the expected return to collecting and analyzing such data. Let's get to work.

References

Corrado, Carol, Charles Hulten, and Daniel Sichel (2005) "Measuring Capital and Technology: An Expanded Framework" in *Measuring Capital in the New Economy*, Carol A. Corrado, John Haltiwanger, and Daniel Sichel, eds. (Chicago: University of Chicago Press).

Haskel, Jonathan and Stian Westlake (2017) *Capitalism Without Capital: The Rise of the Intangible Economy* (Princeton: Princeton University Press).

Song, Jae, David J. Price, Fatih Guvenen, Nicholas Bloom and Till von Wachter (2015) "Firming Up Inequality," NBER Working Paper 21199.