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WHO OWNS HUMAN CAPITAL?

LILY KAHNG*

ABSTRACT

This Article analyzes the tax law's capital income preference through the lens of intellectual capital, an increasingly important driver of economic productivity whose value derives primarily from workers' knowledge, experience and skills. The Article discusses how business owners increasingly are able to "propertize" labor into intellectual capital—to capture the returns on their workers' labor by embedding it in intellectual property and to restrict workers' ability to employ their skills and knowledge elsewhere. The Article then shows how the tax law provides significant subsidies to the process of propertization and thereby contributes to the inequitable distribution of returns between business owners and workers. The Article's analysis further reveals the tax law's fundamental capital-labor distinction to be questionable, perhaps even illusory, an insight which has profound implications for the tax law.

INTRODUCTION

The U.S. income tax makes a fundamental distinction between income from labor and income from capital, upon which substantially different tax treatment depends. Originally, the income tax targeted wealthy capital owners, and most wage earners were exempt from it.¹ However, the advent

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1. See JOHN WITTE, *THE POLITICS AND DEVELOPMENT OF THE FEDERAL INCOME TAX* 77 (1985). Income from labor was thought to be morally superior to income from capital because it embodied the Protestant work ethic and the democratic ideal of meritocracy. See Marjorie E. Kornhauser, *The Morality of Money: American Attitudes Toward Wealth and the Income Tax*, 70 *IND. L.J.* 119, 128–29 (1994). Moreover, as John Stuart Mill argued, those who work for a living have less ability to pay taxes than those who live off accumulated capital because they have only a finite period of time in which they can work and must save for retirement and illness. See 2 JOHN STUART MILL, *PRINCIPLES OF POLITICAL ECONOMY* 315 (1899).

of World War II shifted its impact to labor income, transforming it from a tax on the rich to a tax on working people, from “class tax to mass tax.”² Today, we tax capital income preferentially in a variety of ways, most prominently through a reduced rate of tax on capital gains and dividends.³

The preference for capital income has been the subject of intense study and debate for many years.⁴ For the past couple of decades, efficiency-based arguments in favor of a capital income preference have dominated

2. Carolyn C. Jones, *Class Tax to Mass Tax: The Role of Propaganda in the Expansion of the Income Tax During World War II*, 37 BUFF. L. REV. 685 (1989); see also Lily Kahng, *Investment Income Withholding in the United States and Germany*, 10 FLA. TAX REV. 315, 316–20 (2010) (describing the expansion of the income tax). See generally Ajay K. Mehrotra & Julia C. Ott, *The Curious Beginnings of the Capital Gains Tax Preference*, 84 FORDHAM L. REV. 2517 (2016) (describing the development of the capital gains preference).

3. The maximum capital gains rate is twenty percent; the maximum rate on ordinary income is 39.6 percent. I.R.C. § 1 (2012). These maximum rates do not include Affordable Care Act surtaxes. The capital gains rate is applicable to long-term capital gains and dividends. Other forms of income from capital, such as interest, rents and royalties, are subject to tax at ordinary income rates.

Income from capital is treated favorably in a variety of other ways. Notably, only labor income, and not capital income, is subject to additional social security and retirement taxes, collectively known as payroll taxes. During the last thirty years, payroll taxes have accounted for one-third or more of annual total tax revenues. OFFICE OF MGMT. & BUDGET, HISTORICAL TABLES: TABLE 2.2 – PERCENTAGE COMPOSITION OF RECEIPTS BY SOURCE: 1934–2001 (last visited Mar. 20, 2016), <https://www.whitehouse.gov/omb/budget/Historicals>. See generally Patricia E. Dille, *Breaking the Glass Slipper—Reflections on the Self-Employment Tax*, 54 TAX LAW. 65 (2000) (analyzing self-employment taxes); Deborah A. Geier, *Integrating the Tax Burdens of the Federal Income and Payroll Taxes on Labor Income*, 22 VA. TAX REV. 1 (2002) (arguing for the integration of income and payroll taxes); Linda Sugin, *Payroll Taxes, Mythology, and Fairness*, 51 HARV. J. ON LEGIS. 113 (2014) (arguing that payroll taxes unfairly burden labor income relative to investment income).

Furthermore, capital owners can defer gains until realization or avoid taxation entirely through basis step up at death. I.R.C. § 1014. Edward McCaffery formulated a memorable summary of all a taxpayer needs to do to avoid income and estate tax on financial capital: “Buy, Borrow, Die.” Edward J. McCaffery, *A New Understanding of Tax*, 103 MICH. L. REV. 807, 890 (2005). See generally William J. Turnier, *Theory Meets Reality: The Case of the Double Tax on Material Capital*, 27 VA. TAX REV. 83 (2007) (detailing comprehensively ways in which income from capital and income from labor are treated differently).

Capital income is not always treated more favorably than labor income. It is easy to come up with examples to the contrary. Thus, for example, dividend income is nominally taxed twice under our classical system of corporate taxation, first at the corporate level when earned, and then at the shareholder level when distributed. See generally Jennifer Arlen & Deborah M. Weiss, *A Political Theory of Corporate Taxation*, 105 YALE L.J. 325 (1995); Terrence R. Chorvat, *Apologia for the Double Taxation of Corporate Income*, 38 WAKE FOREST L. REV. 239 (2003). An example of a labor income preference is the earned income tax credit, which results in a negative tax rate for low income taxpayers. See generally Anne L. Alstott, *The Earned Income Tax Credit and the Limitations of Tax-Based Welfare Reform*, 108 HARV. L. REV. 533 (1995). On balance, however, the tax law treats capital income more favorably than labor income. See John Buckley, *Tax Changes Since Woodworth’s Time: Implications for Future Tax Reform*, 34 OHIO N.U. L. REV. 1, 7–8 (2008); Turnier, *supra*, at 125.

4. See, e.g., Noël B. Cunningham & Deborah H. Schenk, *The Case for a Capital Gains Preference*, 48 TAX L. REV. 319 (1993); Daniel Halperin, Commentary, *A Capital Gains Preference is not EVEN a Second-Best Solution*, 48 TAX L. REV. 381 (1993); Daniel N. Shaviro, Commentary, *Uneasiness and Capital Gains*, 48 TAX L. REV. 393 (1993).

the debate.⁵ In recent years, however, concerns about rapidly growing economic inequality have refocused attention on equity considerations and raised serious questions about the validity of efficiency-based arguments in favor of the capital income preference. Thomas Piketty's book, *Capital in the Twenty-First Century*,⁶ is perhaps the most well-known work to analyze the widening economic gulf between capital owners and workers, and it has galvanized other scholars to address this urgent problem.⁷ Piketty's central thesis is that the return on capital tends to exceed significantly the growth rate of the economy, which leads to increasing concentrations of wealth in the hands of the few and extreme inequality.⁸

This Article undertakes an equity-based analysis of the tax law's capital-labor distinction from a new perspective. It looks beyond explicit tax preferences for income from capital such as the capital gains rate and examines less transparent but equally significant ways in which the law undertaxes capital owners and overtaxes workers, thereby contributing to the growing inequality between capital owners and workers.⁹

5. For example, Edward Kleinbard's proposal for a dual income tax system is based on the premise that capital is more mobile than labor, and that it is therefore efficient to tax capital at lower rates than labor. See Edward D. Kleinbard, *An American Dual Income Tax: Nordic Precedents*, 5 NW. J. L. & SOC. POL'Y. 41, 45–47 (2010); see also Reuven S. Avi-Yonah, *And Yet It Moves: Taxation and Labor Mobility in the Twenty-First Century*, 67 TAX L. REV. 169 (2014).

More recently, much of the debate about capital income preferences has focused on whether a consumption tax, which completely exempts capital from tax, would be superior to an income tax, a question which is beyond the scope of this Article. See, e.g., Joseph Bankman & Thomas Griffith, *Is the Debate Between an Income Tax and a Consumption Tax a Debate About Risk? Does it Matter?*, 47 TAX L. REV. 377 (1992); Joseph Bankman & David A. Weisbach, *The Superiority of an Ideal Consumption Tax over an Ideal Income Tax*, 58 STAN. L. REV. 1413 (2006); Daniel Shaviro, *Beyond the Pro-Consumption Tax Consensus*, 60 STAN. L. REV. 745 (2007); Chris William Sanchirico, *A Critical Look at the Economic Argument for Taxing Only Labor Income*, 63 TAX L. REV. 867 (2010).

6. THOMAS PIKETTY, *CAPITAL IN THE TWENTY-FIRST CENTURY* (2014).

7. See, e.g., Joseph Bankman & Daniel Shaviro, *Piketty in America: A Tale of Two Literatures*, 68 TAX L. REV. 453 (2015); Paul L. Caron, *Thomas Piketty and Inequality: Legal Causes and Tax Solutions*, 64 EMORY L.J. ONLINE 2073 (2015); James M. Puckett, *Wealth Inequality and Progressive Taxation* (Mar. 20, 2016) (unpublished manuscript) (on file with author); Nelson D. Schwartz, *Economists Take Aim at Inequality*, N.Y. TIMES (Jan. 3, 2016), <http://www.nytimes.com/2016/01/04/business/economy/economists-take-aim-atwealthinequality.html>.

8. See PIKETTY, *supra* note 6, at 26–27, 77.

9. The Article takes as its starting point the growing inequality between capital owners and workers, but acknowledges that neither workers nor capital owners are a monolithic group. There are wide variations within each as to their socioeconomic standing. Capital owners range from a person with \$200 in a savings account to Warren Buffett. Workers range from the low-wage and unskilled to highly compensated executives. The Article focuses on inequality between capital owners and workers, which Piketty estimates to account for about one-third of the increase in total income inequality since 1980. See PIKETTY, *supra* note 6, at 300. The Article does not specifically address the growing inequality among workers that is particularly pronounced in the United States. See *id.*, at 298–300, 315–21 (describing how the increase in inequality in the U.S. since the 1970 is due in large part to wage inequality). However, the Article does have some bearing on wage inequality as well, to the

The Article begins with an exploration of intellectual capital, a growing form of capital that includes not only legally protected intangible assets, such as patents and copyrights, but also other sources of value such as goodwill and organizational processes and know-how. The creation of intellectual capital enables capital owners to “propertize” labor: through the use of intellectual property laws, contract and employment laws, and other legal and organizational mechanisms, capital owners are able to capture the returns from their workers’ economic productivity. The Article discusses how the legal landscape is rapidly evolving to facilitate and expand the propertization of labor.

The Article then turns to the ways in which the tax law subsidizes the process of propertization. Specifically, the tax law allows capital owners to immediately deduct most costs of creating intellectual capital, which has the effect of exempting from tax their income from intellectual capital. Furthermore, the tax law is overly generous to capital owners with respect to their investments in human capital, while, at the same time, it denies workers recognition of similar investments.¹⁰ In these ways, the tax exacerbates the widening wealth and income gap between capital owners and workers.

The Article concludes with reflections about the porous and changeable boundary between labor and capital. It questions whether the tax law distinction between labor income and capital income is useful or even meaningful. The Article posits that the tax law should not treat labor income and capital income as distinct categories, but rather, should recognize that workers and capital owners contribute to and share in the returns from their collaborative efforts. The Article concludes with an overview of specific reform proposals that would implement this reconceptualization of workers and capital owners.

extent that very highly compensated workers tend to receive a substantial portion of their pay in forms that they are able to treat as capital gains. *See infra* Part III.

10. Human capital is closely related to intellectual capital but not coterminous. Intellectual capital focuses on businesses’ investment in and production of intangible sources of future value, which often require a high proportion of labor inputs. Human capital focuses on an individual’s capabilities to produce future value. Capital owners make human capital investments in their workers, and workers also make human capital investments in themselves. *See infra* notes 136–139 and accompanying text.

I. INTELLECTUAL CAPITAL AND THE PROPERTIZATION OF LABOR

A. *The Rise of Intellectual Capital*

Capital encompasses forms of wealth including “land, buildings, machinery, firms, stocks, bonds, patents, livestock, gold, natural resources, etc.”¹¹ The definition includes physical capital, such as land, buildings, and other material goods.¹² It also includes intangible assets such as patents or copyrights and financial assets such as bank accounts, corporate stock, and pension funds.¹³

The composition of capital has changed significantly over the last several centuries. Agricultural land, which three centuries ago, accounted for more than one-half of total capital, comprises only a minimal fraction of total capital today, and has been supplanted by industrial and financial capital.¹⁴

Of these new types of capital, financial capital, and in particular corporate stock, is comprised of the underlying assets owned by corporations. As Piketty observes, much of the value of corporate stock is attributable to what he calls immaterial capital:

[M]any forms of immaterial capital are taken into account by way of the stock market capitalization of corporations. For instance, the stock market value of a company often depends on its reputation and trademarks, its information systems and modes of organization, its investments, whether material or immaterial, for the purpose of making its products and services more visible and attractive¹⁵

11. PIKETTY, *supra* note 6, at 113. Some commentators have criticized Piketty’s definition of capital and his measurement of it. *See, e.g.*, Matthew Rognlie, *Deciphering the Fall and Rise in the Net Capital Share* (Brookings Papers on Econ. Activity, 2015), http://www.brookings.edu/~media/projects/bpea/spring-2015/2015a_roglnie.pdf (observing that most of the increasing returns to capital are attributable to the housing sector and that, outside of that sector, the return to capital relative to labor is not increasing, contrary to Piketty’s assertion). Other commentators seem to think Piketty’s definition of capital is not particularly problematic. *See, e.g.*, Robert M. Solow, *Thomas Piketty Is Right*, *NEW REPUBLIC* (Apr. 22, 2014), <https://newrepublic.com/article/117429/capital-twenty-first-century-thomas-piketty-reviewed>.

12. PIKETTY, *supra* note 6, at 49.

13. *Id.* at 48–49.

14. *Id.* at 42, 116 fig. 3.1, 117 fig. 3.2, 151. Housing continues to be substantial component of today’s capital. *See id.* at 116 fig 3.1, 117 fig 3.2, 151; ROBERT B. REICH, *SAVING CAPITALISM* 16–22 (2015) (describing the change in capital from agricultural land to industrial capital and intellectual property).

15. PIKETTY, *supra* note 6, at 49.

This Article uses the term “intellectual capital” to refer to these forms of immaterial capital. Intellectual capital has been likened to dark matter—the essential substance that binds together the universe but is not directly observable.¹⁶ It is broadly defined to be “nonphysical sources of value (claims to future benefits) generated by innovation (discovery), unique organizational designs, or human resource practices.”¹⁷ Intellectual capital includes not only separable, identifiable, and legally protected assets such as patents, trademarks, and copyrights, but also less distinct assets such as information systems, administrative structures and processes, market and technical knowledge, brands, trade secrets, organizational know-how, culture, strategic capabilities, and customer satisfaction.¹⁸ Examples of this broader definition of intellectual capital include Wal-Mart’s computerized supply chain, Amazon’s customer service reputation, and Google’s unique business model.¹⁹

16. See Ricardo Hausmann & Federico Sturzenegger, U.S. and Global Imbalances: Can Dark Matter Prevent a Big Bang? (Nov. 13, 2005) (unpublished manuscript), www.cid.harvard.edu/cidpublications/darkmatter_051130.pdf (theorizing that the omission of valuable assets such as know-how, brand recognition, expertise, and research and development skews estimates of trade imbalances). Despite the difficulty of precisely defining intellectual capital, the concept is easy to grasp intuitively, and its many definitions share core similarities. In their survey of numerous definitions of intellectual capital, Leandro Cañibano, Manuel García-Ayuso Covarsi, and M. Paloma Sánchez find most definitions agree that intellectual capital refers to “sources of probable *future economic profits, lacking physical substance, which are controlled by a firm as a result of previous events or transactions* (self-production, purchase or any other means of acquisition).” LEANDRO CAÑIBANO, MANUEL GARCÍA-AYUSO COVARSI & M. PALOMA SÁNCHEZ, THE VALUE RELEVANCE AND MANAGERIAL IMPLICATIONS OF INTANGIBLES: A LITERATURE REVIEW 14 (1999), <http://www.oecd.org/sti/ind/1947974.pdf>.

17. BARUCH LEV, INTANGIBLES: MANAGEMENT, MEASUREMENT, AND REPORTING 7 (2001). Lev cites Merck’s pharmaceutical advances as an example of discovery, Cisco’s internet-based product installation and maintenance system as an example of unique organizational design, and Xerox’s information-sharing system for employees as an example of human resources. *Id.* at 6. Lev notes that a combination of these sources can produce intellectual capital: the valuable brand Coke combines innovation (the secret Coke formula) and organizational structure (exceptional marketing savvy). See *id.*

The concept of intellectual capital is not new. As early as the mid-nineteenth century, economists recognized that value inheres in more than just tangible assets and that knowledge and innovation are essential components of economic activity. See Mie Augier & David J. Teece, *An Economics Perspective on Intellectual Capital*, in PERSPECTIVES ON INTELLECTUAL CAPITAL 3–4 (Bernard Marr ed., 2005); Bernard Marr, *The Evolution and Convergence of Intellectual Capital as a Theme*, in PERSPECTIVES ON INTELLECTUAL CAPITAL, *supra*, at 213–14; see also Peter Hill, *Tangibles, Intangibles and Services: A New Taxonomy for the Classification of Output*, 32 CANADIAN J. ECON. 426, 428–37 (1999).

18. See Farok J. Contractor, *Intangible Assets and Principles for Their Valuation*, in VALUATION OF INTANGIBLE ASSETS IN GLOBAL OPERATIONS 3, 7 fig. 1.1, 8 (Farok J. Contractor ed., 2001); Juergen H. Daum, INTANGIBLE ASSETS AND VALUE CREATION 17 (2003); LEV, *supra* note 17, at 5–7.

19. See ORG. FOR ECON. CO-OPERATION & DEV., NEW SOURCES OF GROWTH: KNOWLEDGE-BASED CAPITAL—KEY ANALYSES AND POLICY CONSIDERATIONS—SYNTHESIS REPORT 8, 17 (2013) [hereinafter OECD REPORT], <https://www.oecd.org/sti/inno/knowledge-based-capital-synthesis.pdf>.

The growing importance of intellectual capital is indisputable.²⁰ Companies such as Google, Amazon, and Apple exemplify the new business model. Their most valuable assets are not property, plant, and equipment, but rather operating systems, product designs, organizational structures, and their reputation among customers.²¹ Intellectual capital is also dominant in more traditional companies. For example, the physical assets of Nestlé, the world's largest food company, comprise only thirteen percent of its total value.²²

The value of intellectual capital relative to total capital is difficult to estimate, in part because its value can be inferred only indirectly from the value of the corporations who own much of it, combined with the fact that financial and national accounting systems have historically undervalued or excluded intellectual capital from measures of economic productivity and wealth.²³ Economists estimate that official measures of gross domestic product in recent years omitted as much as one trillion dollars per year of investments in intellectual capital.²⁴ As Calvin Johnson points out, Google and Microsoft's self-created intangible assets are worth hundreds of billions of dollars, as evidenced by their market capitalization, but their balance sheets show none of these assets.²⁵ Other scholars have observed a similar anomaly with respect to pharmaceutical companies: their investments in research and development are not recorded as assets on their balance sheets, but their market capitalizations clearly demonstrate the value of these assets.²⁶

20. *See generally id.* (documenting the global increase in business investment in intellectual capital and the resulting increasing productivity gains).

21. *See id.* at 8, 17. Intellectual capital is also dominant in more traditional companies. For example, the physical assets of Nestlé, the world's largest food company, comprise only 13% of its total value. *See id.* at 9.

22. *See id.* at 9.

23. *See Hill, supra* note 17, at 436–37, 445; Leonard Nakamura, *Intangibles: What Put the New in the New Economy?*, *BUS. REV.*, July–Aug. 1999, at 3, 4, 6–10.

24. *See* Leonard Nakamura, *Investing in Intangibles: Is a Trillion Dollars Missing from GDP?*, *BUS. REV.*, Q4 2001, at 35–36; Carol Corrado, Charles Hulten, & Daniel Sichel, *Measuring Capital and Technology: An Expanded Framework*, in *MEASURING CAPITAL IN THE NEW ECONOMY* 11, 12, 30 (Carol Corrado et al. eds., 2005) [hereinafter Corrado et al., *Measuring Capital and Technology*].

25. *See* Calvin H. Johnson, *Organizational Capital: The Most Important Unsettling Issue in Tax*, 148 *TAX NOTES* 667, 676 (2015).

26. These scholars cite the expensing of self-created R&D to explain why the earnings and assets of companies, such as pharmaceutical manufacturers, seem very low relative to their stock prices. They argue that the expensing of self-created R&D depresses the earnings of these companies and that the failure to capitalize self-created R&D undervalues the assets of these companies. *See* Nakamura, *supra* note 24, at 30–31; Charles Hulten, *Accounting for the Knowledge Economy* 7–10 (The Conference Bd. Econ. Program Working Paper No. 08-13, 2008), http://www.conference-board.org/pdf_free/workingpapers/E-0040-08-WP.pdf; *see also* William Hubbard, *The Debilitating Effect of Exclusive*

To remedy the failure of most accounting systems to measure adequately intellectual capital, Carol Corrado, Charles Hulten, and Daniel Sichel developed a framework for quantifying intellectual capital and its impact on the national economy.²⁷ Their model is the most theoretically advanced and comprehensive to date, and according to the Organisation for Economic Co-operation and Development (OECD), is widely accepted.²⁸ Based on this model, Corrado, Hulten, and Sichel found that, in recent years, intellectual capital accounted for 27 percent of economic growth, putting it on par with tangible capital in importance as a source of growth.²⁹

In response to the work of economists such as Corrado, Hulten and Sichel, government agencies and non-governmental organizations are beginning to recognize more fully the role of intellectual capital in economic activity. For example, in 2013, the U.S. Bureau of Economic Analysis (BEA) for the first time included research and development (R&D), as well as artistic creations such as films, music, and books, in its measures of national economic productivity and wealth, which added \$560 billion to the size of the U.S. economy.³⁰ A 2013 report of the OECD documented intellectual capital's ascendance to a global phenomenon and urged policy reforms in taxation, innovation, entrepreneurship, education, competition, corporate reporting, and intellectual property laws in order to realize fully the potential gains of this key economic driver.³¹ The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IAS) have acknowledged the need to require additional qualitative and quantitative disclosure about self-created intangible assets.³² In sum, intellectual capital is indubitably a major and

Rights: Patents and Productive Inefficiency, 66 FLA. L. REV. 2045, 2046–47 (2014) (discussing other oddities in the pharmaceutical industry).

27. See Carol Corrado, Charles Hulten, & Daniel Sichel, *Intangible Capital and U.S. Economic Growth*, 55 REV. INC. & WEALTH 661, 662, 682 (2009) [hereinafter Corrado et al., *Intangible Capital*]; Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 11, 12, 30.

28. See OECD REPORT, *supra* note 19, at 12.

29. See Corrado et al., *Intangible Capital*, *supra* note 27, at 680.

30. See Peter Coy, *The Rise of the Intangible Economy: U.S. GDP Counts R&D, Artistic Creation*, BLOOMBERG BUSINESSWEEK (July 18, 2013), <http://www.businessweek.com/articles/20130718/the-rise-of-the-intangible-economy-u-dot-s-dot-gdp-counts-r-and-d-artistic-creation>. The BEA restated GDP for each year retroactive to 1929, the first year of measurement. *Id.* These additions increased the size of the U.S. economy in 2013 by \$560 billion, or 3.6 percent. See Jared Bernstein & Dean Baker, Op-Ed., *What is 'Seinfeld' Worth?*, N.Y. TIMES (July 31, 2013), <http://www.nytimes.com/2013/08/01/opinion/what-is-seinfeld-worth.html>.

31. See OECD REPORT, *supra* note 19, at 6–11.

32. The FASB and IAS considered a joint project to expand disclosure guidelines for intangibles, as part of a broader and ongoing convergence project in 2002. See AM. INST. CERTIFIED PUB. ACCOUNTANTS, INTERNATIONAL FINANCIAL REPORTING STANDARDS 5–6 (2011),

increasing driver of economic productivity, and its ascendance marks a substantial change in the nature and composition of capital.

B. The Centrality of Labor in Intellectual Capital

Capital almost always requires labor to be created or enhanced.³³ This is true of traditional forms of capital, such as agriculture and other real estate.³⁴ Owners of farmland, for example, require workers to cultivate and harvest crops and raise livestock in order for the farmland to be productive.³⁵ Owners of other real estate need workers to build and maintain the structures from which owners derive income and gain.³⁶ Capital in the form of natural resources, such as gold or oil, requires workers to extract and process them into marketable forms.³⁷ Industrial capital, such as, for example, a widget factory, needs workers to run, operate, and maintain the machinery that produces the widgets.³⁸ The widget producer also needs workers to develop advertising and marketing plans for the widgets.³⁹

Although labor is always integral to the productive use of capital, intellectual capital is particularly labor-intensive and often requires workers' knowledge, experience, and skills.⁴⁰ For example, strategic planning requires primarily the time and effort of managers.⁴¹ Likewise, the creation of a consumer products brand results primarily from the work effort of design and marketing personnel.⁴² Similarly, scientific R&D

http://www.ifrs.com/pdf/IFRSUpdate_V8.pdf. Due to resource constraints, they decided not to move forward with it. See Action Alert No. 07-52, FIN. ACCOUNTING STANDARDS BD. (Dec. 28, 2007), <http://www.fasb.org/action/aa122807.shtml>. However, more recently, the financial accounting community has shown a renewed interest in reforming financial reporting for intangibles. See Emily Chasan, *FASB's Future Priorities Start to Take Shape*, WALL ST. J.: CFO J. (Sept. 17, 2013, 1:00 PM), <http://blogs.wsj.com/cfo/2013/09/17/fasbs-future-priorities-start-to-take-shape/> (noting that accounting for intangible assets is among the top reform priorities).

33. See generally PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, *ECONOMICS* (19th ed.) 233–34 (stating that production is a team effort and that the factors of production, land, labor and capital, are interdependent).

34. See *id.* at 267–68.

35. See *id.* at 268.

36. See *id.* at 283.

37. See *id.* at 268.

38. See *id.* at 283.

39. See *id.*

40. For this reason, some scholars refer to it as knowledge-based capital. See, e.g., OECD REPORT, *supra* note 19; KARL ERIK SVEIBY, *THE NEW ORGANIZATIONAL WEALTH: MANAGING AND MEASURING KNOWLEDGE-BASED ASSETS* (1997).

41. See Corrado et al., *Intangible Capital*, *supra* note 27, at 670; Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 29.

42. See Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 28.

requires primarily the time and effort of scientists, although it also requires expenditures for labs and equipment.⁴³ Not all labor expenditures produce intellectual capital.⁴⁴ For example, a fast food server or an office receptionist serves the current needs of his or her employer, but the services arguably do not provide significant long-term benefits to the employer. On the other hand, even these services arguably contribute to the creation of a business' customer service reputation and goodwill.⁴⁵

With respect to legally distinct assets such as patents or copyrights, the contribution of labor to the creation of intellectual capital becomes embedded in the asset, in what Rob Merges calls the "propertization of labor."⁴⁶ Legally enforceable patent or copyright protections enable the owner of the asset (that is, the capital owner) to appropriate and control the knowledge contributions of workers.⁴⁷

Other types of intellectual capital are not distinct, legally protected assets. However, businesses often rely upon mechanisms other than intellectual property laws to capture and control the labor of their workers. Many of these are legal in nature, such as covenants not to compete, nondisclosure agreements, and trade secrets laws.⁴⁸ Covenants not to compete prohibit workers from employing their training, skill and

43. See *id.* at 26–27.

44. Corrado, Hulten and Sichel estimate, for example, that about sixty percent of advertising expenditures produce ads with long-lasting value, as compared to "this week's sale"-type ads. See Corrado et al., *Intangible Capital*, *supra* note 27, at 670.

45. Chris William Sanchirico, *Taxing Carried Interest: The Problematic Analogy to 'Sweat Equity'*, 117 TAX NOTES 239, 242 (2007) [hereinafter Sanchirico, *Taxing Carried Interest*].

46. ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 197 (2011); Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570, 1575 (1995).

47. See Catherine L. Fisk, *Working Knowledge: Trade Secrets, Restrictive Covenants in Employment, and the Rise of Corporate Intellectual Property, 1800–1920*, 52 HASTINGS L.J. 441, 445–46 (2001); Érica Gorga & Michael Halberstam, *Knowledge Inputs, Legal Institutions and Firm Structure: Towards a Knowledge-Based Theory of the Firm*, 101 NW. U. L. REV. 1123, 1149 (2007); see also Oren Bar-Gill & Gideon Parchomovsky, *Law and the Boundaries of Technology-Intensive Firms*, 157 U. PA. L. REV. 1649, 1671–88 (2009) (discussing the organizational effects of patent, copyright, trade secret and other legal protections for innovation and information); see generally Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2007 U. ILL. L. REV. 575 (2007) (analyzing how the strength of intellectual property protections affects inter- and intra-firm transactions costs).

48. See ORLY LOBEL, TALENT WANTS TO BE FREE 49–75; 98–120 (2013); Orly Lobel, *The New Cognitive Property: Human Capital Law and the Reach of Intellectual Property*, 93 TEX. L. REV. 789, 790–91 (2015); Gorga & Halberstam, *supra* note 47, at 1159–63. In addition to legal mechanisms, businesses also use "organizational strategies," as Érica Gorga and Michael Halberstam call them, to control knowledge and information. *Id.* at 1127. For example, a business might restrict critical knowledge to a small number of insiders or isolate the business geographically. *Id.* at 1158–59.

experience elsewhere.⁴⁹ Nonsolicitation, nondealing, and nonpoaching prohibit an employee, after leaving a company, from soliciting or dealing with the company's clients or customers or from hiring former co-workers.⁵⁰ Nondisclosure agreements and trade secret laws enable business owners to protect valuable organizational capital—for example, information relating to suppliers and customers, organizational routines and business practices, decision-making processes, quality control procedures, coordination and division work.⁵¹

In recent decades, there has been a significant expansion of business owners' ability to capture and control workers' contributions to the creation and enhancement of intellectual capital.⁵² This is true for more traditional forms of intellectual property such as patents and copyrights. Oren Bar-Gill and Gideon Parchomovsky describe the trend with respect to patent law:

This trend manifested itself in various aspects of patent law, including the broadening of the definition of patentable subject matter to include, among others, business-method patents, the encouraging of government-subsidized bodies (such as universities) to claim patent protection, and the increasing tendency of the legal system to uphold patents. As part of this trend, patent law has expanded to tolerate even merely embryonic innovation. . . . Patent law provides an impressive array of remedies to successful plaintiffs, including injunctive relief, actual damages, treble

49. See Gorga & Halberstam, *supra* note 47, 1143 tbl. A, 1162 tbl. B; Katherine V.W. Stone, *Knowledge at Work: Disputes over the Ownership of Human Capital in the Changing Workplace*, 34 CONN. L. REV. 721, 738 (2002).

50. See Lobel, *supra* note 48, at 828–31.

51. See Gorga & Halberstam, *supra* note 47, 1143 tbl. A, 1162 tbl. B; Stone, *supra* note 49, at 738. Other legal controls based on breach of duty of loyalty and industrial espionage claims also restrain workers from using knowledge or information to benefit a competitor. See Stone, *supra* note 49, at 738.

52. See Lobel, *supra* note 48, at 790–91. Intellectual property laws have experienced several periods of growth and expansion in the United States. Catherine Fisk, in her analysis of the development of the intellectual property laws and the laws governing restrictive covenants from 1800 to 1920, documents the “gradual shift to recognizing knowledge, especially inchoate knowledge, as a form of property, and then recognizing that property as belonging to someone other than the employee who possessed it.” See Fisk, *supra* note 47, at 446. Fisk describes the legal developments during this period as reflecting “the growing conflict between the free labor ideology and the demands of industrialization which increasingly called for the corporate control of every tangible and intangible product of work” which “witnessed in its last days unprecedented formalization of corporate power over all aspects of employment and production.” *Id.* at 535. See generally William W. Fischer, III, *The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States*, in EIGENTUM IM INTERNATIONALEN VERGLEICH 265–91 (1999), reprinted in 1 INTELLECTUAL PROPERTY RIGHTS 72–94 (David Vaver ed., 2006).

damages for willful infringement, and attorneys' fees in exceptional cases.⁵³

In the area of copyright law, Lawrence Lessig describes an even more dramatic expansion of business owners' ability to capture the returns from intellectual property:

So copyright's duration has increased dramatically—tripled in the past thirty years. And copyright's scope has increased as well—from regulating only publishers to now regulating just about everyone. And copyright's reach has changed, as every action becomes a copy and hence presumptively regulated. And as technologists find better ways to control the use of content, and as copyright is increasingly enforced through technology, copyright's force changes, too. Misuse is easier to find and easier to control.⁵⁴

Furthermore, under the work for hire doctrine, an employer is presumed to be the author and owner of works created by an employee unless the parties agree otherwise.⁵⁵

The trend toward expansion of business owners' intellectual property rights is equally pronounced with respect to employment law restrictions on workers.⁵⁶ The use of covenants not to compete and nondisclosure agreements has become widespread.⁵⁷ Courts have expanded the power and scope of these restrictive covenants by liberalizing what constitutes reasonable temporal and geographic constraints, more freely upholding

53. Bar-Gill & Parchomovsky, *supra* note 47, at 1672–73 (footnotes omitted). They note that the trend may be reversing somewhat in recent years on the basis of recent judicial decisions raising the bar of patentability and narrowing the scope of protection. *See id.* at 1673–75.

54. LAWRENCE LESSIG, *FREE CULTURE* 161–62 (2004).

55. *See* Rochelle Cooper Dreyfuss, *The Creative Employee and the Copyright Act of 1976*, 54 U. CHI. L. REV. 590, 598–99 (1987).

56. *See* Lobel, *supra* note 48, at 793–833 (describing the expansion of regulatory and contractual controls on human capital, including noncompetition contracts, pre-invention assignment agreements, nonsolicitation, nonpoaching, and antidealing agreements, nondisclosure agreements, and trade secret laws); Stone, *supra* note 49, at 737–62 (describing doctrinal expansions in the ability of employers to restrain former employees from using knowledge obtained at their firms).

57. *See* Stone, *supra* note 49, at 738–39; Sampsa Samila & Olav Sorenson, *Noncompete Covenants: Incentives to Innovate or Impediments to Growth*, 57 MGMT. SCI. 425, 425 (2011); Mark J. Garmaise, *Ties that Truly Bind: Noncompetition Agreements, Executive Compensation, and Firm Investment*, 27 J.L. ECON. & ORG. 376, 378, 396 (2011) (finding that in a randomly selected sample of 500 Execucomp firms, 70.2 percent report using noncompetition agreements with top executives, although the actual percentage is likely higher); Norman D. Bishara, Kenneth J. Martin, & Randall S. Thomas, *An Empirical Analysis of Noncompetition Clauses and Other Restrictive Postemployment Covenants*, 68 VAND. L. REV. 1, 24, 28 tbl. 2 (2015) (finding that in a randomly selected sample of 500 S&P 1500 public companies, 82.3 percent of CEO contracts contained restrictive covenants during the period 2001–2010).

them in the at-will context, and either revising or partially enforcing invalid covenants.⁵⁸ In addition, courts have expanded the type of interest that is considered protectable by a restrictive covenant to include customer lists and knowledge obtained by employer-provided training.⁵⁹

The law of trade secrets has also expanded significantly in recent years to empower business owners to control workers.⁶⁰ The definition of trade secret has expanded dramatically to extend trade secret protection beyond the technical realm to all commercially valuable information.⁶¹ It has become standard practice for employment contracts to include expansive lists of confidential information beyond the statutory definition of trade secret.⁶² In addition, even in the absence of a protectable trade secret or a restrictive covenant, business owners have the power to restrict workers' use of knowledge under the expanding doctrine of inevitable disclosure, which enables a business owner to enjoin a former employee from working for a competitor on the grounds that such work would inevitably require the disclosure of trade secrets.⁶³ Furthermore, trade secret law has become increasingly criminalized under the Economic Espionage Act and the National Stolen Property Act.⁶⁴

58. See Stone, *supra* note 49, at 744. See generally Norman D. Bishara, *Fifty Ways to Leave Your Employer: Relative Enforcement of Covenants Not to Compete, Trends, and Implications for Employee Mobility Policy*, 13 U. PA. J. BUS. L. 751, 780 (2011) (analyzing the changes in the strength of enforceability of covenants not to compete in all states and finding "a measurable drift of the aggregate policies in the United States toward greater enforcement"); Michael J. Garrison & John T. Wendt, *The Evolving Law of Employee Noncompete Agreements: Recent Trends and an Alternative Policy Approach*, 45 AM. BUS. L.J. 107, 122–48 (2008) (analyzing enforcement of covenants not to compete and finding a general trend in the common law and legislation toward greater restrictions on employees).

59. See Stone, *supra* note 49, at 746–56.

60. See Lobel, *supra* note 48, at 803–12.

61. See Stone, *supra* note 49, at 757; see also Bar-Gill & Parchomovsky, *supra* note 47, at 1675–78.

62. See Lobel, *supra* note 48, at 810.

63. See Stone, *supra* note 49, at 757–58. See generally David Lincicum, *Inevitable Conflict?: California's Policy of Worker Mobility and the Doctrine of "Inevitable Disclosure,"* 75 S. CAL. L. REV. 1257 (2002); Joseph F. Phillips, *Inevitable Disclosure Through an Internet Lens: Is the Doctrine's Demise Truly Inevitable?*, 45 WM. & MARY L. REV. 395 (2003); Jennifer L. Saulino, *Locating Inevitable Disclosure's Place in Trade Secret Analysis*, 100 MICH. L. REV. 1184 (2002); Brandy L. Treadway, *An Overview of Individual States' Application of Inevitable Disclosure: Concrete Doctrine or Equitable Tool?*, 55 SMU L. REV. 621 (2002).

64. See Lobel, *supra* note 48, at 804–12 (describing the prosecution and conviction of computer programmer Sergey Aleynikov for stealing source code and computer code from Goldman Sachs). In 2016, Congress further expanded federal trade secret laws with the enactment of the Defend Trade Secrets Act of 2016. Pub. L. No. 114-153, 130 Stat. 376 (2016).

To summarize, on numerous fronts, the law has expanded in scope and strength to increase the ability of capital owners to propertize labor into intellectual capital.⁶⁵

C. *Who Gains from Propertization?*

The enhanced ability of capital owners to propertize labor into intellectual capital through the legal mechanisms described above does not necessarily mean that they have also increased their share of the returns from that intellectual capital. It may be that workers are able to extract higher compensation in exchange for transferring their expertise for the exclusive benefit of their employer. Most intellectual property and corporate law scholars do not address the issue of how returns from intellectual capital are shared between capital owners and workers. Instead, they analyze intellectual property laws and employment restrictions through an efficiency lens that seeks to allocate rights so as to optimize overall productivity and maximize positive externalities, such as knowledge spillovers and information flows that fuel innovation and entrepreneurial growth.⁶⁶ Dan Burk and Brett McDonnell allude to the possibility that workers get the short end of the stick in their analysis of intellectual property rights: “[I]t is even possible that the law rather pervasively and systematically provides too little protection for employees vis-à-vis firms. . . . [T]his leaves employees open to exploitation.”⁶⁷ Unfortunately, they leave exploration of this possibility to future research.⁶⁸

The tenor of employment law scholars such as Kathy Stone and Catherine Fisk suggests they, too, believe workers are on the losing end of

65. There are exceptions to this expansionary trend. For example, in patent law, recent judicial decisions have raised the bar of patentability and narrowed the scope of protection. See Bar-Gill & Parchomovsky, *supra* note 47, at 1673–75.

66. See, e.g., Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not To Compete*, 74 N.Y.U. L. REV. 575 (1999) (hypothesizing that Silicon Valley companies benefit from knowledge spillovers that occur in the absence of covenants not to compete); Lobel, *supra* note 48, at 350 (“[E]xcessive controls over mobility and inventiveness are harmful to careers, regions, and innovation. . . . [I]t stymies the entry of new competitors into the market and suppresses the spirit of entrepreneurship, which is vital to any economy.”); Norman D. Bishara, *Covenants Not to Compete in a Knowledge Economy: Balancing Innovation from Employee Mobility Against Legal Protection for Human Capital Investment*, 27 BERKELEY J. EMP. & LAB. L. 287, 303–11 (2006) (describing the law and economics approach of many scholars in analyzing restrictive covenants).

67. Burk & McDonnell, *supra* note 47, at 634–35.

68. See *id.* at 634.

the bargain.⁶⁹ However, they tend to express their normative evaluations in terms of workers' right to be free of unfair employer constraints on their ability to work and do not address explicitly how these constraints affect the distribution of economic returns between workers and capital owners.⁷⁰ Norman Bishara notes the dearth of research "focused on the normative arguments about the propriety of noncompetes when it comes to workers' rights and issues such as bargaining power asymmetries."⁷¹

Whether workers receive higher pay in exchange for agreeing to employer restrictions is a question that needs much additional research. However, one scholar, Mark Garmaise, finds the opposite to be true—employees are actually paid *less* when they are subject to employer restrictions.⁷² Garmaise analyzes the effects of noncompete covenants on executive employment based on state-by-state variances in the strength of enforcement, and finds that stronger enforcement of noncompete covenants results in lower executive compensation.⁷³

69. Stone argues that courts should interpret restrictions on employees narrowly because the implicit psychological contract between business owners and workers has changed from a long-term relationship, in which a business owner "gave the worker an implicit promise of lifetime job security and opportunities for promotion along clearly-defined job ladders," to a temporary, contingent relationship "with no set path, no established expectations, and no tacit promises of job security. Employees are expected to chart their own path, face their own fortunes, and manage their own careers in a boundaryless workplace." Stone, *supra* note 49, at 725, 732.

Fisk argues that "[b]y transforming employee knowledge into corporate property, law has consecrated a power relationship and has justified rights to control employee mobility in significant ways." See Catherine L. Fisk, *Knowledge Work: New Metaphors for the New Economy*, 80 CHI.-KENT L. REV. 839, 856 (2005).

70. See, e.g., Fisk, *supra* note 47, at 535 (stating that the nineteenth century development of trade secrets and restrictive covenants "reflected the growing conflict between the free labor ideology and the demands of industrialization which increasingly called for the corporate control of every tangible and intangible product of work"); Stone, *supra* note 49, at 763 (arguing that courts should narrowly construe trade secrets law and restrictive covenants and "thereby give employees broad rights to acquire, retain, and deploy their human capital"); see also Bishara, *supra* note 66, at 311–12 (describing an employees' right approach to analyzing restrictive covenants, which "emphasizes the sovereignty of the employee and challenges the firm's ability to control the individual's labor post-employment"); see also Stefan Lücking & Susanne Pernicka, *Knowledge Work and Intellectual Property Rights: New Challenges for Trade Unions*, 14 J. WORKPLACE RTS. 311, 316 (2009) (noting that intellectual property rights affect "the balance of power between knowledge workers and their employers;" also noting parallels to Marx's theory of primitive accumulation: "the double process of transforming public goods . . . into private property and expropriating workers from their means of production).

71. Bishara, *supra* note 58, at 762 n.40.

72. Garmaise, *supra* note 57, at 413 (finding that increased enforcement of noncompetes leads to lower executive compensation).

73. See *id.* at 401–02. This finding seems somewhat counterintuitive, but the explanation appears to be as follows: executives in states where noncompete covenants are strongly enforced initially bargain for higher compensation, perhaps in the form of a signing bonus, but once they are locked into a firm, their pay increases diminish over time relative to pay increases for executives in states without

Garmaise also considers the effect of noncompete covenants on employers' human capital investments—for instance, employee training or the revelation of trade secrets—and employees' investments in their own human capital—for example, networking with managers at other firms or taking on leadership positions in industry associations.⁷⁴ He finds that noncompete covenants tend to encourage firm investments in managerial human capital and discourage individuals' investments in their own human capital.⁷⁵

What little evidence there is at this point suggests that workers lose out when their labor is propertized into intellectual capital. It is also reasonable to surmise that business owners benefit from this propertization. On the other hand, it is possible that business owners end up no better off, or actually end up worse off, because, for example, their workers perform less well when their mobility is restricted,⁷⁶ or because they lose out on the benefits of information spillovers.⁷⁷ But whether, as a result of propertization, the pie is bigger, smaller, or the same size, it seems likely that business owners end up with a bigger piece relative to the workers.

II. TAX SUBSIDIES OF PROPERTIZATION

The rise of a new form of capital—intellectual capital—illustrates how labor contributes to the creation or enhancement of capital and becomes embedded in capital. The conversion of labor into intellectual capital—its

strong enforcement of noncompete covenants. Over time, it appears that pay in the low-enforcement states outstrips pay in the high-enforcement states. *See id.*

In addition, Garmaise finds that strong enforcement of noncompete covenants also leads to more salary-based, as opposed to incentive-based, compensation and lower pay increases for executives who change jobs. *See id.* at 402–07. He also finds that strong enforcement leads to longer job tenure and reduced mobility. *See id.* at 400, 413.

74. *See id.* at 382–83.

75. *See id.* at 413–14; On Amir & Orly Lobel, *Driving Performance: A Growth Theory of Noncompete Law*, 16 STAN. TECH. L. REV. 833, 846 (2013) (observing that covenants not to compete cause employees to perform less well and invest less in their own human capital).

76. *See* Amir & Lobel, *supra* note 75, at 863 (finding that individuals' quality of work declined when they were subject to restrictions their mobility).

77. *See* Garmaise, *supra* note 57, at 411–12 (finding that enforcement of covenants to compete has no significant effect on firm value or profitability and theorizing that “the positive spillovers from low enforceability may roughly balance out the disadvantages at the individual firm level”); Samila & Sorenson, *supra* note 57, at 436 (finding that noncompete covenants limit entrepreneurship and impede innovation); Kenneth A. Younge, *Employee Mobility and the Appropriation of Value from Knowledge: Evidence from Three Essays* 8 (2012) (unpublished Ph.D. dissertation, University of Colorado), <http://gradworks.umi.com/35/27/3527377.html> (finding that constraints on employee mobility initially boost firm value but that the effect is eventually undone because firms are harmed by the slower circulation of talent and ideas).

proptertization—enables capital owners to capture a greater share of the economic gains derived from the combined efforts of labor and capital. This section shows how the tax law subsidizes proptertization and thereby magnifies the distributional effects of proptertization as between capital owners and workers.

A. *Deductions for Intellectual Capital*

Capital owners have two ways to acquire ownership of intellectual capital. First, they can acquire it from third parties by purchasing a specific asset such as a patent or by purchasing an ongoing business, thereby acquiring intellectual capital such as good will, workforce in place, and other types of organizational capital. The second way that capital owners acquire intellectual capital is to create it themselves. Self-created intellectual capital entails a variety of expenditures including computer software development; scientific R&D; nonscientific R&D such as development and design of products by the publishing, entertainment, and financial services industries; advertising and market research used to develop and maintain brands; workforce training and education; and organizational strategic planning.⁷⁸

78. This list of intellectual capital expenditures is based on Corrado, Hulten, and Sichel's taxonomy of the various types of investments in intellectual capital. They identify three major areas of business investment in intellectual capital: (1) computerized information software, (2) innovative property (scientific and nonscientific research and development), and (3) economic competencies (brand-related investment such as advertising and organizational investments such as training and strategic planning). See Corrado et al., *Intangible Capital*, *supra* note 27, at 669–70; Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 22–29.

Of particular note is the expansive R&D category, which includes nonscientific R&D—the development and design of products by the publishing, entertainment, and financial services industries—as well as scientific R&D, which includes work in the physical sciences, the biological sciences, and mineral exploration. See Corrado et al., *Intangible Capital*, *supra* note 27, at 670, 674; Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 24–28. Corrado, Hulten, and Sichel estimate that by the late 1990s, nonscientific R&D was at least as large as traditional scientific research. See Corrado et al., *Intangible Capital*, *supra* note 27, at 670; Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 26.

Also noteworthy is their expansive economic competencies category, which includes advertising and market research used to develop and maintain brands, costs of developing and launching new products and developing customer lists, workforce training and education, and organizational change and development. See Corrado et al., *Measuring Capital and Technology*, *supra* note 24, at 28–29; see also Corrado et al., *Intangible Capital*, *supra* note 27, at 670. They estimate that from 2000 to 2003, the most recent period for which they have data, total investment in economic competencies was nearly as large as the other two major categories combined. See Corrado et al., *Intangible Capital*, *supra* note 27, at 670.

Under the principle of capitalization, the foundational importance of which the Supreme Court has affirmed in its jurisprudence,⁷⁹ capital owners ought to capitalize expenditures they incur to acquire or create intellectual capital. As the following discussion indicates, the treatment of intellectual capital acquired from third parties is consistent with this principle: capital owners must capitalize the acquisition costs. In contrast, the treatment of self-created intellectual capital contravenes the capitalization principle: capital owners can deduct almost all costs of self-created intellectual capital.⁸⁰

79. See *INDOPCO, Inc. v. Comm’r*, 503 U.S. 79 (1992); *Comm’r v. Idaho Power Co.*, 418 U.S. 1 (1974). See also *infra* notes 82–98 and accompanying text.

80. See generally Lily Kahng, *The Taxation of Intellectual Capital*, 66 FLA. L. REV. 2229 (2014). Several tax scholars have analyzed and critiqued the taxation of intangibles, most notably Calvin Johnson. See Calvin H. Johnson, *First Do No Harm: The Senate Staff Discussion Draft on Cost Recovery*, 142 TAX NOTES 549 (2014) [hereinafter Johnson, *First Do No Harm*], <http://www.ssrn.com/abstract=2394912>; Calvin H. Johnson, *Extend the Tax Life for Acquired Intangibles to 75 Years*, 135 TAX NOTES 1053, 1053–56 (2012), <http://www.ssrn.com/abstract=2070101>; Calvin H. Johnson, *Accurate and Honest Tax Accounting for Oil and Gas*, 125 TAX NOTES 573 (2009), <http://www.ssrn.com/abstract=1503574> (discussing the taxation of intangible drilling costs); Calvin H. Johnson, *Capitalize Costs of Software Development*, 124 TAX NOTES 603 (2009), <http://www.ssrn.com/abstract=1516809>; Calvin H. Johnson, *The Effective Tax Ratio and the Undertaxation of Intangibles*, 121 TAX NOTES 1289 (2008) [hereinafter Johnson, *Undertaxation of Intangibles*], <http://www.ssrn.com/abstract=1315477>; Calvin H. Johnson, *Destroying Tax Base: The Proposed INDOPCO Capitalization Regulations*, 99 TAX NOTES 1381 (2003) [hereinafter Johnson, *Destroying Tax Base*], <http://www.ssrn.com/abstract=412728>; Calvin H. Johnson, *Capitalization After the Government’s Big Win in INDOPCO*, 63 TAX NOTES 1323 (1994) [hereinafter Johnson, *Big Win*], https://law.utexas.edu/faculty/calvinjohnson/capitalization_after_the_governments_big_win.pdf; Calvin H. Johnson, *The Expenditures Incurred by the Target Corporation in an Acquisitive Reorganization Are Dividends to the Shareholders: (Pssst, Don’t Tell the Supreme Court)*, 53 TAX NOTES 463, 478 (1991) [hereinafter Johnson, *Dividends*], https://law.utexas.edu/faculty/calvinjohnson/expenditures_incurred_by_the_target_corp_10_28_91.pdf; see also Don Fullerton & Andrew B. Lyon, *Tax Neutrality and Intangible Capital*, in 2 TAX POLICY AND THE ECONOMY 63 (Lawrence H. Summers ed., 1988); Jane G. Gravelle & Jack Taylor, *Tax Neutrality and the Tax Treatment of Purchased Intangibles*, 45 NAT’L TAX J. 77 (1992); John W. Lee, *Transaction Costs Relating to Acquisition or Enhancement of Intangible Property: A Populist, Political, but Practical Perspective*, 22 VA. TAX REV. 273, 276–77, 311–20 (2002) [hereinafter Lee, *Transaction Costs*]; John Lee et al., *Restating Capitalization Standards and Rules: The Case for “Rough Justice” Regulations (Part One)*, 23 OHIO N.U. L. REV. 631 (1997) [hereinafter Lee et al., *Rough Justice (Part One)*]; John Lee et al., *Restating Capitalization Standards and Rules: The Case for “Rough Justice” Regulations (Part Two)*, 23 OHIO N.U. L. REV. 1483 (1997) [hereinafter Lee et al., *Rough Justice (Part Two)*]; George Mundstock, *Taxation of Business Intangible Capital*, 135 U. PA. L. REV. 1179 (1987); Xuan-Thao Nguyen & Jeffrey A. Maine, *Equity and Efficiency in Intellectual Property Taxation*, 76 BROOK. L. REV. 1 (2010); David A. Weisbach, *Measurement and Tax Depreciation Policy: The Case of Short-Term Intangibles*, 33 J. LEGAL STUD. 199 (2004); Ethan Yale, *The Final INDOPCO Regulations*, 105 TAX NOTES 435 (2004) [hereinafter Yale, *INDOPCO Regulations*]; Ethan Yale, *When Are Capitalization Exceptions Justified?*, 57 TAX L. REV. 549 (2004) [hereinafter Yale, *Capitalization Exceptions*]; Timothy E. Johns, Note, *Tax Treatment of the Costs of Internally Developed Intangible Assets*, 57 S. CAL. L. REV. 767 (1984); Glenn Walberg, Note, *Everything Old Is New Again: Reaching the Limits of INDOPCO’s Future Benefits with the Just-in-Time Management Philosophy*, 38 WM. & MARY L. REV. 1257 (1997).

*I. In Principle: The “Norm of Capitalization”*⁸¹

Tax law generally provides for the deduction or capitalization of business expenditures. I.R.C. § 162 allows businesses to deduct “all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business.”⁸² I.R.C. § 263 provides that businesses cannot deduct capital expenditures—“amount[s] paid out for new buildings or for permanent improvements or betterments made to increase the value of any property or estate.”⁸³

As the Supreme Court explained in *INDOPCO v. Commissioner*, capitalization “endeavors to match expenses with the revenues of the taxable period to which they are properly attributable, thereby resulting in a more accurate calculation of net income for tax purposes.”⁸⁴ The idea that businesses should capitalize expenditures that produce future benefits is integral to the concept of income,⁸⁵ and tax law has required capitalization since its inception.⁸⁶

The Court has interpreted the capitalization requirement of I.R.C. § 263 expansively, stating that “deductions are exceptions to the norm of capitalization”⁸⁷ and are guided by the principle that “a taxpayer’s realization of benefits beyond the year in which the expenditure is incurred is undeniably important in determining whether the appropriate tax treatment is immediate deduction or capitalization.”⁸⁸

81. *INDOPCO*, 503 U.S. at 84.

82. I.R.C. § 162(a) (2012).

83. I.R.C. § 263(a)(1).

84. *INDOPCO*, 503 U.S. at 84.

85. As Calvin Johnson states:

A strong law of capitalization is extraordinarily important to an income tax. Under the norms of an income tax, costs that constitute investments, generating future income for the taxpayer, are capitalized and may not be deducted so long as the costs continue to generate income. . . . The thesis that expensing an investment, that is, deducting it immediately, is equivalent to exempting the subsequent income from the investment from tax, is one of the bulwarks of modern tax economics, but it is not generally known or appreciated within the tax law community.

Johnson, *Dividends*, *supra* note 80, at 478. For a comprehensive overview of capitalization in general, see Lee et al., *Rough Justice (Part One)*, *supra* note 80; see also Lee et al., *Rough Justice (Part Two)*, *supra* note 80.

86. *Woodward v. Comm’r*, 397 U.S. 572, 574–75 (1970).

87. *INDOPCO*, 503 U.S. at 84.

88. *Id.* at 87. See generally Lee, *Transaction Costs*, *supra* note 80, at 311–19 (analyzing Supreme Court capitalization jurisprudence). As an example of the Court’s expansive interpretation of the capitalization principle, it has in several cases required capitalization of expenses such as legal fees that might be viewed as quintessentially deductible expenses. See, e.g., *INDOPCO*, 503 U.S. at 88–90 (holding that investment banking, legal, and accounting fees paid in connection with the taxpayer’s being acquired by another company were capital; creation or enhancement of a separate and distinct

With respect to tangible property, the Court's expansive view of capitalization reached its zenith in *Commissioner v. Idaho Power Co.*,⁸⁹ where the Court held that depreciation allowances for equipment used to construct new facilities were not deductible, but rather must be capitalized—that is, added to the basis of the new facilities.⁹⁰ Congress subsequently enacted I.R.C. § 263A, a far-reaching extension of *Idaho Power* that requires businesses to capitalize the direct and indirect costs of constructing or producing tangible property.⁹¹

With respect to intangible property (which the tax law defines in a manner similar to intellectual capital as defined in this Article), the Court, in *INDOPCO*, further expanded its sweeping capitalization principle. In *INDOPCO*, the taxpayer, the National Starch Corporation, paid investment banking, legal, and accounting fees in connection with a merger in which Unilever acquired the stock of National Starch.⁹² National Starch claimed the majority of these expenses as deductions under I.R.C. § 162; the government argued that the expenses were capital in nature.⁹³

Rejecting the taxpayer's argument that a capital expenditure must relate to the acquisition or enhancement of a "separate and distinct asset," the Court found that National Starch's expenses were capital, even though National Starch was the target of a takeover by Unilever, and, therefore, had not acquired anything.⁹⁴ The Court reasoned that by becoming a subsidiary of Unilever, National Starch would realize long-term benefits in the form of synergies with Unilever product lines and customer bases, access to Unilever's R&D resources, and the elimination of separate

asset was not necessary); *Comm'r v. Lincoln Sav. & Loan Ass'n*, 403 U.S. 345, 347–49, 354 (1971) (concluding that mandatory premium payments made by bank to Federal Savings and Loan Insurance Corporation were capital, and created or enhanced a "separate and distinct additional asset" (i.e., rights in a secondary reserve fund), and were therefore, not ordinary); *Woodward*, 397 U.S. at 573–74, 579 (holding that legal, accounting, and appraisal expenses incurred in acquiring minority stock interest were capital); *United States v. Hilton Hotels Corp.*, 397 U.S. 580, 582–83, 585 (1970) (holding that legal, consulting, and other fees paid by acquiring firm in connection with minority appraisal rights were capital).

89. 418 U.S. 1 (1974).

90. *See id.* at 19.

91. *See* I.R.C. § 263A (2012); *see also* Treas. Reg. §§ 1.263(a)-1-(a)-6 (2013). Due to a definitional divergence between "intangibles" and "intellectual capital" for tax purposes, certain types of intellectual capital are also subject to § 263A of the Internal Revenue Code. *See infra* notes 101–102, 109 and accompanying text.

92. *INDOPCO*, 503 U.S. at 80–82.

93. *See id.* at 82.

94. *See id.* at 85–87 (internal quotations omitted). National Starch was the target of the acquisition and therefore did not itself acquire any asset. *See id.* at 80. The taxpayer's argument was based on the Court's prior decision in *Comm'r v. Lincoln Sav. & Loan Ass'n*. *See id.* at 86.

reporting requirements and governance procedures.⁹⁵ In light of these long-term benefits, the Court held that National Starch's expenditures to facilitate the acquisition were capital.⁹⁶

INDOPCO established a strong capitalization principle for expenditures related to a broad conception of intellectual capital including brand and customer enhancement, research capabilities, and corporate organization.⁹⁷ Indeed, in the aftermath of *INDOPCO*, many scholars and practitioners speculated that *INDOPCO* would vastly expand the capitalization requirement.⁹⁸ However, as discussed in the next Section, the speculation proved unfounded. On the contrary, the capitalization requirement has been nearly eliminated for self-created intellectual capital.

2. In Practice: "Deductibility as the Default Rule"⁹⁹

As discussed above, the Supreme Court in *INDOPCO* articulated a sweeping capitalization principle which requires most expenditures related to intellectual capital to be capitalized rather than immediately deducted. Consistent with *INDOPCO*, current law generally requires capitalization with respect to *acquired* intellectual capital. However, the current law's treatment of *self-created* intellectual capital defies *INDOPCO* and instead allows most expenditures for self-created intellectual capital to be deducted immediately.¹⁰⁰

95. *Id.* at 88–89.

96. *Id.* at 89–90. *INDOPCO* raised taxpayer concerns about the possibility of a greatly expanded capitalization requirement, but these have proved to be unfounded. See Joseph Bankman, *The Story of INDOPCO: What Went Wrong in the Capitalization v. Deduction Debate?*, in *TAX STORIES*, 238–45 (Paul L. Caron ed., 2d ed. 2009). Subsequent case law and regulatory guidance adopt a considerably diminished capitalization requirement. See *infra* notes 108–123 and accompanying text; Bankman, *supra*, at 240–45.

97. This broad conception of intellectual capital tracks closely with Corrado, Hulten, and Sichel's expansive taxonomy of intellectual capital investments. See *supra* note 78. The Court in effect held that National Starch's expenditures related to it being acquired by Unilever were capital enhancements to National Starch's goodwill. See Johnson, *Dividends*, *supra* note 80, at 466–67, 476.

98. See, e.g., Johnson, *Big Win*, *supra* note 80, at 1332–38 (predicting capitalization of a variety of other previously deductible expenses including prepaid fees, business expansion costs, environmental cleanup costs, and remedial costs). Johnson is one of the few who wrote approvingly of *INDOPCO*'s expansive view of capitalization. See, e.g., *id.* at 1340–41. Many practitioners and lobbyists were highly critical of it. See Bankman, *supra* note 96, at 238–40 (describing the negative reactions to the decision).

99. James L. Atkinson, *The Final INDOPCO Regulations: A Primer*, 56 *TAX EXECUTIVE* 222, 224 (2004).

100. See Bankman, *supra* note 96, at 240–250 (describing subsequent judicial decisions on capitalization and the administrative response and concluding that the *INDOPCO* decision was a failure); Lee, *Transaction Costs*, *supra* note 80 (describing the audit and litigation challenges faced by the Internal Revenue Service (IRS) in attempting to implement a broad capitalization principle, the congressional and judicial resistance to such efforts, and the IRS's retreat).

*a. Acquired Intellectual Capital*¹⁰¹

Where a business acquires intangible assets, as defined in I.R.C. § 197,¹⁰² from a third party as part of a taxable acquisition of a larger business,¹⁰³ the purchaser capitalizes and amortizes most of those intangible assets ratably over fifteen years.¹⁰⁴ Where intangible assets are purchased separately and not as part of a larger business, their treatment is quite varied. Some of them, such as customer lists, are subject to the fifteen-year amortization rule of I.R.C. § 197.¹⁰⁵ Others, such as patents and copyrights, are excluded from the fifteen-year amortization rule and instead are treated under other applicable tax laws.¹⁰⁶ For example, the

101. Tax law does not use the term “intellectual capital.” Rather, it uses “intangibles” and “intangible assets,” as defined in a variety of statutory provisions and regulations. *See, e.g.* I.R.C. § 197 (2012). There is a fair amount of overlap between these tax terms and intellectual capital as defined in this Article. The following discussion generally uses the tax terms “intangibles” and “intangible assets” interchangeably with the term “intellectual capital” and notes where the two terms diverge.

102. The definition of intangibles under I.R.C. § 197 includes (but is not limited to): goodwill; going concern value; workforce in place; business books and records; operating systems or other information bases including customer lists; patents; copyrights; formulas; processes; designs; knowhow; customer-based intangibles; supplier-based intangibles; licenses; permits; other rights granted by a governmental unit; covenants not compete; franchises; trademarks; and trade names. I.R.C. § 197(d)(1). Certain intangibles such as computer software, oil and gas exploration, and financial intangibles are excluded from the general treatment of intangibles under I.R.C. § 197, but they are still considered intangibles for other tax purposes. *See id.* § 197(e).

103. In general, an acquisition is taxable when cash or other property is the sole or primary consideration for the acquisition; an acquisition is tax-free when equity of the acquiring party is the sole or primary consideration for the acquisition. *See* I.R.C. §§ 354, 368; Michael L. Schler, *Basic Tax Issues in Acquisition Transactions*, 116 PENN ST. L. REV. 879, 882 (2012). I.R.C. § 197 applies to taxable acquisitions (i.e., purchases) but not to tax-free acquisitions. *See* Jack S. Levin & Donald E. Rocap, *A Transactional Guide to New Code Section 197*, TAX NOTES 462 (Oct. 25, 1993), <https://www.kirkland.com/siteFiles/kirkexp/publications/2582/Document1/Transactional%20Guide%20to%20New%20Code%20Section%20197.pdf>. Where intangible assets are acquired in a tax-free acquisition, the acquiring party generally “stands in the shoes” of the selling party to determine treatment of the intangibles. *See* I.R.C. § 197(f)(2); MARK J. SILVERMAN, STEPTOE & JOHNSON, PURCHASE PRICE ALLOCATION RULES: SECTIONS 1060, 338, and 197, 55 (2013), <http://www.step toe.com/publications-1630.html>.

104. *See* I.R.C. §§ 197, 338, 1060. *See generally* MARTIN D. GINSBURG ET AL., MERGERS, ACQUISITIONS AND BUYOUTS ¶¶ 403.4.1–403.4.2 (2012); Levin & Rocap, *supra* note 103, at 461–62; Schler, *supra* note 103, at 887, 896; SILVERMAN, *supra* note 103, at 41–43, 45–52.

Certain intangible assets are eligible for amortization over shorter time periods or outright deduction. *See* Levin & Rocap, *supra* note 103, at 463–66. For example, taxpayers amortize off-the-shelf computer software purchased as part of a business over three years rather than fifteen. *See* I.R.C. §§ 167(f), 197(e)(3). Taxpayers may deduct the cost of a franchise, trademark, or trade name where the purchase price is contingent on its use or productivity. *See id.* §§ 197(f)(4)(C), 1253(d)(1).

105. *See id.* § 197(d)(1)(c)(iv); Levin & Rocap, *supra* note 103, at 466.

106. *See* I.R.C. § 167(g); Treas. Reg. §§ 1.167(a)-3, (a)-14 (2016); Nguyen & Maine, *supra* note 80, at 19–21.

acquirer of a patent amortizes its cost over the remaining legal life of the patent.¹⁰⁷

b. Self-Created Intellectual Capital

Under Treasury regulations issued in 2004—known as the *INDOPCO* regulations because they address many of the questions and uncertainties raised by that case—taxpayers may deduct immediately most investments in self-created intellectual capital.¹⁰⁸ The *INDOPCO* regulations set forth an exclusive list of eight relatively narrow types of intangible assets whose development or creation costs businesses must capitalize.¹⁰⁹ Even though other self-created intangibles in theory might be subject to capitalization, in practice, the *INDOPCO* regulations permit taxpayers to deduct all other self-created intangibles “without hesitation.”¹¹⁰ One commentator characterizes the *INDOPCO* regulations as a “reversal of the notion that ‘capitalization is the norm,’ with deductibility—at least in the context of created intangibles—now being the default rule.”¹¹¹ Another has suggested

107. See Treas. Reg. § 1.167(a)-14(c).

108. See Treas. Reg. § 1.263(a)-4 (2013). The regulations set forth an exclusive list of eight relatively narrow types of intangible assets whose development or creation costs are subject to capitalization: (1) financial interests such as stock, debt and other financial instruments, and annuities; (2) prepaid expenses such as prepaid insurance or rent; (3) membership or privileges such as a doctor’s payment to a hospital for lifetime staff privileges; (4) payments to governments for trademarks, copyrights, permits, licenses, and franchises; (5) contract rights to use or be compensated for the use of property, covenants not to compete, stand-still agreements, insurance policies, endowments, or annuities; (6) contract terminations; (7) amounts paid for real property where the taxpayer transfers ownership but retains significant economic benefits; and (8) defense or perfection of title of intangible property. See *id.* § 1.263(a)-4(d); Yale, *INDOPCO Regulations*, *supra* note 80, at 440; Johnson, *Destroying the Tax Base*, *supra* note 80, at 1382; Atkinson, *supra* note 99, at 229 (stating that the final *INDOPCO* regulations have made deductibility the norm for self-created intangibles).

109. See Treas. Reg. § 1.263(a)-4(d), *supra* note 108 and accompanying text. See also Yale, *INDOPCO Regulations*, *supra* note 80, at 440. See generally Atkinson, *supra* note 99; Johnson, *Destroying the Tax Base*, *supra* note 80, at 1382.

Excluded from the scope of the *INDOPCO* regulations are two types of self-created intellectual capital. First, costs related to business acquisitions, restructuring, and recapitalizations must be capitalized in some cases. See Treas. Reg. § 1.263(a)-5; Atkinson, *supra* note 99, at 228–29; Silverman, *supra* note 103, at 62–64; Yale, *INDOPCO Regulations*, *supra* note 80, at 454–55. Second, costs of developing films, sound recordings, video, and books are subject to the more expansive capitalization rules applicable to tangible property. I.R.C. § 263A(a)–(b) (2012). Writers, photographers and artists are exempt from these capitalization requirements. See *id.* § 263A(h).

110. Yale, *INDOPCO Regulations*, *supra* note 80, at 437; see *id.* at 438 (speculating that the *INDOPCO* regulations might be invalid and thus might be supplanted by the more expensive capitalization required under *INDOPCO* and other legal precedent but concluding that, as a practical matter, taxpayers can rely on the regulations); see also Atkinson, *supra* note 99, at 224.

111. Atkinson, *supra* note 99, at 229.

that a more apt name for the regulations would be the “Anti-*INDOPCO* regulations.”¹¹²

Both prior to and after the Supreme Court’s decision in *INDOPCO*, an extensive body of case law and administrative guidance allowed deductions for many specific types of intellectual capital investments.¹¹³ Expenses that were deductible before *INDOPCO* and continue to be deductible afterwards include computer software development costs,¹¹⁴ scientific R&D,¹¹⁵ and mineral exploration such as intangible drilling costs and mining exploration costs.¹¹⁶ In cases decided after *INDOPCO*, several courts have allowed financial services businesses to deduct market research related to new product development,¹¹⁷ and one case upheld a bank’s deduction for employee compensation and overhead attributable to loan origination.¹¹⁸ Advertising is generally deductible, as it was before *INDOPCO*,¹¹⁹ as are employer-provided worker training costs.¹²⁰ Two

112. See Yale, *INDOPCO Regulations*, *supra* note 80, at 436.

113. Although the *INDOPCO* regulations could be interpreted to preempt prior law relating to the capitalization of intangibles, they do not explicitly do so. Furthermore, there is the possibility that the *INDOPCO* regulations might be invalid and supplanted by other legal precedent. See Yale, *supra* note 80, at 438.

114. See Rev. Proc. 69-21, 1969-2 C.B. 303 (holding that the IRS will not challenge a taxpayer’s decision to currently deduct costs attributable to software development), *superseded on other grounds* by Rev. Proc. 2000-50, 2000-1 C.B. 601, *modified in part* by Rev. Proc. 2007-16, 2007-1 C.B. 358.

115. See I.R.C. § 174(a)(1) (2012).

116. See *id.* §§ 263(c), 617.

117. See, e.g., *NCNB Corp. v. United States*, 684 F.2d 285, 294 (4th Cir. 1982). However, one case required a financial services business to capitalize market research where it related to a possible business expansion, i.e., the opening of a new branch. See *Cent. Tex. Sav. & Loan Ass’n v. United States*, 731 F.2d 1181, 1182, 1185 (5th Cir. 1984). This is consistent with the treatment of “start-up costs”—costs incurred before the taxpayer is actually engaged in a trade or business—which generally must be capitalized. See I.R.C. § 195(a). See generally John W. Lee, *Start-Up Costs, Section 195, and Clear Reflection of Income: A Tale of Talismans, Tacked-On Tax Reform, and a Touch of Basics*, 6 VA. TAX REV. 1 (1986) (providing an in-depth analysis of I.R.C. § 195, particularly the conflict between the definitional and functional tests for the capitalization of start-up business costs, as well as the judicial development and practical impact of the provision).

118. See *PNC Bancorp Inc. v. Comm’r*, 212 F.3d 822, 824 (3d Cir. 2000). However, in another case, the tax court required a financial services business to capitalize employee compensation related to the acquisition of installment obligations. See *Lychuk v. Comm’r*, 116 T.C. 374, 375 (2001). The *INDOPCO* regulations require capitalization of costs related to the creation of financial intangibles such as loans, but because of the exceptions for employee compensation, overhead, and *de minimis* expenses, loan origination costs are generally not subject to capitalization under the regulations. See *Treas. Reg. § 1.263(a)-4(e)(4)* (2013).

119. See Rev. Rul. 92-80, 1992-2 C.B. 57. There are some limited cases where capitalization of advertising expenses has been required. See, e.g., *Cleveland Elec. Illuminating Co. v. United States*, 7 Cl. Ct. 220, 231–33 (1985) (requiring capitalization of advertising to defuse opposition to the taxpayer’s application for a license to construct a nuclear plant where the expansion to nuclear power represented a new business).

120. See Rev. Rul. 96-62, 1996-2 C.B. 9. A few cases have held that worker training costs had to be capitalized. See, e.g., *Cleveland Elec.*, 7 Cl. Ct. at 227–29 (holding that a utility’s expansion from

years after *INDOPCO*, the IRS ruled that businesses could deduct severance payments related to a corporate downsizing.¹²¹ Several years after that, a federal appeals court held that a bank could deduct compensation, legal fees, and investigatory fees paid in connection with its acquisition of another bank.¹²² The IRS has also ruled that a utility company could deduct costs incurred to improve energy conservation and efficiency.¹²³

In sum, notwithstanding the Supreme Court's decision in *INDOPCO*, which affirmed capitalization as a fundamental principle of income tax law and held that taxpayers must capitalize investments in intellectual capital, other provisions of the tax law allow capital owners to deduct almost all costs of self-created intellectual capital.

3. *The Magnitude of the Subsidy for Intellectual Capital*

The tax subsidy for self-created intellectual capital makes it less costly for capital owners to propertize labor, which magnifies their ability to capture a greater share of the returns from their workers.¹²⁴ A deduction for an investment is equivalent to a tax exemption on the income from that investment.¹²⁵ Thus, the deduction for self-created intellectual capital effectively imposes a zero rate of tax on returns from this capital, providing a substantial subsidy to capital.¹²⁶ The exact magnitude of the subsidy is difficult to ascertain. Self-created intellectual capital likely constitutes a significant proportion of total investments in intellectual capital because most organizational capital, such as good will, is self-created.¹²⁷

coal powered electricity to nuclear power was a new business, and therefore, costs related to it were capital).

121. See Rev. Rul. 94-77, 1994-2 C.B. 19.

122. *Wells Fargo & Co. v. Comm'r*, 224 F.3d 874 (8th Cir. 2000).

123. See Rev. Rul. 95-32, 1995-16 I.R.B. 8. This ruling pre-dates *INDOPCO*, but the IRS did not repeal or modify it after the *INDOPCO* decision.

124. It also results in misallocations of resources and inefficiencies. See Kahng, *supra* note 80, at 2263–67; Johnson, *Undertaxation of Intangibles*, *supra* note 80, at 1289–91.

125. See E. Cary Brown, *Business-Income Taxation and Investment Incentives*, in *INCOME, EMPLOYMENT AND PUBLIC POLICY: ESSAYS IN HONOR OF ALVIN H. HANSEN* 300, 309–10 (1948).

126. See Johnson, *Undertaxation of Intangibles*, *supra* note 80, at 1289–91; Weisbach, *supra* note 80, at 200 (“[T]ax law . . . allows an immediate deduction, effectively choosing not to tax the return to [intangible benefit] activities at all.”); Yale, *Capitalization Exceptions*, *supra* note 80, at 555 (noting that misidentifying a capital cost as a deductible can cause over or under taxation).

Chris Sanchirico makes a similar observation about the deductibility of self-created goodwill, brand names, and other intangibles in his analysis of carried interest. See *infra* notes 170–171 and accompanying text.

127. I am indebted to Daniel Sichel for insights and information about the mix of acquired and

To provide a sense of the magnitude of the tax subsidy for self-created intellectual capital, economists estimate that the U.S. Bureau of Economic Analysis, in its measures of economic productivity, expenses, rather than capitalizes, \$1 trillion or more of yearly investments in intellectual capital.¹²⁸ Assuming a comparably large amount is deducted for tax purposes, the subsidy is substantial. Furthermore, in 2014, the Finance Committee and House Ways & Means Committee proposed to require capitalization of just two types of costs—scientific R&D and advertising—and estimated that such a change would raise \$362 billion in tax revenues over ten years.¹²⁹ Because these two types of costs comprise only a fraction of all intellectual capital investments, a more comprehensive capitalization requirement for self-created intangibles would increase tax revenues by several times that estimate.¹³⁰

The tax subsidy for self-created intellectual capital nominally benefits the capital owners who make the expenditures involved in its creation, but determining who ultimately benefits is a complex empirical question that has not yet been studied. The tax subsidy for self-created intellectual capital might cause more resources to be allocated to intellectual capital relative to other investments, such as plant or equipment.¹³¹ In other words, the tax subsidy might result in the intellectual capital “pie” growing bigger, and the question is then, who benefits from the bigger pie: intellectual capital owners, their workers, or both?¹³² Another way to

self-created intellectual capital. With respect to organizational capital, businesses do sometimes acquire it through the acquisition of an ongoing business. However, this is likely a small fraction of total organizational capital investments because only a small proportion of all companies change hands during a given time period. Experts estimate that mergers and acquisitions volume has averaged 6.5% of total global market capitalization over the last thirty years. *SEE STEFANO GATTI & CARLO CHIARELLA, M&A IN UNCERTAIN TIMES: IS THERE STILL VALUE IN GROWING?* 1 (2013), <http://www.goldmansachs.com/our-thinking/archive/bocconi-conference-2013/bocconi-report.pdf>.

128. *See supra* note 24 and accompanying text.

129. *See* U.S. S. COMM. ON FINANCE, 113TH CONG., SUMMARY OF STAFF DISCUSSION DRAFT: COST RECOVERY AND ACCOUNTING 8 (2013) [hereinafter U.S. S. COMM. ON FINANCE, COST RECOVERY]; Tax Reform Act of 2014, 113th Cong. § 3108 (Discussion Draft 2014) 55–56 [hereinafter Tax Reform Act of 2014 Discussion Draft], http://waysandmeans.house.gov/uploadedfiles/statutory_text_tax_reform_act_of_2014_discussion_draft_022614.pdf (proposing to capitalize and amortize over five years R&D and fifty percent of advertising).

130. Economists estimate scientific R&D to comprise less than one-fifth of all investments in intellectual capital. *See* Corrado et al., *Intangible Capital*, *supra* note 27, at 671 tbl.1. For the years 2000–2003, they estimate total annual investment in intellectual capital to be \$1.226 trillion and scientific R&D to be \$230.5 billion. *Id.*

131. *See* Kahng, *supra* note 80, at 2263–64.

132. Leandra Lederman has similarly argued that the tax law’s liberal loss deductibility rules for active trades and businesses under I.R.C. § 162 encourage investment in active businesses as compared to passive investments. *See* Leandra Lederman, *The Entrepreneurship Effect: An Accidental Externality in the Federal Income Tax*, 65 OHIO ST. L.J. 1401, 1444–55 (2004).

analyze this question is to consider the consequences of eliminating the tax subsidy for intellectual capital. Eliminating the subsidy (that is, requiring capitalization of the costs of creating intellectual capital) would increase business owners' post-tax costs for self-created intellectual capital, which might cause them to reduce wages. On the other hand, requiring capitalization would make propertization more costly for business owners, which would in turn reduce their share of the returns from economic productivity (assuming it is true that propertization enables business owners to increase their share of returns). In addition, capitalization would help to equalize the treatment of business owners and workers in the development of human capital.

B. Human Capital Investments

Scholars such as Katherine Stone argue that employers, by controlling their workers through restrictive covenants and other legal mechanisms, in effect acquire ownership of human capital.¹³³ These scholars acknowledge this claim is somewhat metaphorical because except for the case of slavery, human capital, unlike other forms of capital, is not entirely marketable and controllable.¹³⁴ As Gary Becker states, “you cannot separate a person from his or her knowledge, skills, health, or values the way it is possible to move financial and physical assets while the owner stays put.”¹³⁵

Metaphor or not, what is literally true is that business owners make human capital investments in their workers¹³⁶ and treat them as valuable,

133. See Stone, *supra* note 49; Joellen Riley, *Who Owns Human Capital? A Critical Appraisal of Legal Techniques for Capturing the Value of Work*, 18 J. AUSTRAL. LABOUR L. 1, 24 (2005) (describing the term “[h]uman capital” as a “colourful metaphor for the contribution that people’s work and talent make in commercial enterprise”). But see PIKETTY, *supra* note 6, at 223 (questioning whether human capital is illusory).

134. See Riley, *supra* note 133, at 24.

135. GARY S. BECKER, HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS WITH SPECIAL REFERENCE TO EDUCATION 16 (3d ed. 1993).

136. Intellectual capital and human capital are closely related but not coterminous. Broadly speaking, human capital refers to resources in people or human capabilities that produce future monetary and psychic income. See *id.* at 15–16. Intellectual capital focuses on businesses’ investment in and production of intangible sources of future value, which often require a high proportion of labor inputs. Human capital focuses on an individual’s capabilities to produce future value. Capital owners can make human capital investments in their workers—training, for example—and workers can also make human capital investments in themselves. Investment in human capital includes formal education, on-the-job training, healthcare, and migration. Theodore W. Schultz, *Investment in Human Capital*, 51 AM. ECON. REV. 1, 9–13 (1961). But see PIKETTY, *supra* note 6, at 223 (suggesting that human capital is illusory).

albeit risky and difficult to manage, assets.¹³⁷ As discussed above, they are particularly inclined to make human capital investments in their workers when propertization enables them to capture the return on these investments.¹³⁸ Workers similarly make human capital investments in themselves, although, as discussed above, they are less likely to do so when the returns are likely to redound to the benefit of their employers.¹³⁹

The tax law treats human capital investments differently depending on who makes the investments, as Mary Louise Fellows and I have argued.¹⁴⁰ When capital owners make investments in human capital and otherwise incur human-capital related expenses in their production of income, the law recognizes these are legitimate costs of economic production and allows them to be offset (that is, deducted) in the computation of taxable income.¹⁴¹ In contrast, when workers make the same investments and incur the same expenses in their production of income, the law either treats these costs as entirely personal expenses or otherwise places limits on the ability

Scholars typically measure returns to human capital by reference to individuals' increased income resulting from investments in education, healthcare, and the like. *See generally* BECKER, *supra* note 135, at 147–200 (providing an empirical analysis of the effect of college education on earnings and productivity); Dale W. Jorgenson & Barbara M. Fraumeni, *The Accumulation of Human and Nonhuman Capital, 1948–84*, in *THE MEASUREMENT OF SAVING, INVESTMENT, AND WEALTH* 227–78 (Robert E. Lipsey & Helen Stone Tice eds., 1989) (estimating, *inter alia*, the effect of education on lifetime labor income); Luca Benzoni & Olena Chyruk, *The Value and Risk of Human Capital*, 7 *ANN. REV. FIN. ECON.* 179 (2015) (surveying the theoretical and empirical approaches to valuing human capital).

137. *See* BECKER, *supra* note 135, at 20–21; Rita Almeida & Pedro Carneiro, *The Return to Firm Investments in Human Capital*, 16 *LABOUR ECON.* 97 (2009). As Mousumi Battacharya and Patrick Wright state, in describing the challenges of managing what they call “human capital assets”:

[H]uman capital is different from other real assets in a few ways. First, human capital is almost entirely intangible and is difficult to quantify. . . . Second, unlike other forms of asset, a firm never fully ‘owns’ its human capital. The knowledge, skills, and abilities reside in the people, and are lost when people leave the firm. Therefore there is a unique risk associated with human capital, the risk of capital loss or turnover (i.e., the asset “walking away”). . . . Third, non-financial investments like time, communication, and leadership constitute a major part of investments that generate returns from human capital through eliciting commitment and competency of employees over the long run. These combined with the fact that human capital is almost never tradable in the market, makes management of this form of asset a more difficult task.

Mousumi Battacharya & Patrick M. Wright, *Options for Human Capital Acquisition*, in *THE ROUTLEDGE COMPANION TO STRATEGIC HUMAN RESOURCES MANAGEMENT* (John Storey et al. eds., 2008).

138. *See* Garmaise, *supra* note 57, at 413–14 (finding that employers invest more in their employees' human capital when they can restrict their employees' mobility through the use of covenants not to compete).

139. *See id.* (finding that employees invest less in their own human capital when they are bound to their employers by restrictive covenants).

140. *See* Mary Louise Fellows & Lily Kahng, *Costly Mistakes: Undertaxed Business Owners and Overtaxed Workers*, 81 *GEO. WASH. L. REV.* 329 (2013).

141. *See id.* at 370–80.

of workers to offset them against taxable income. In this way, the tax law undertaxes capital owners and overtaxes workers.¹⁴²

Education is the most important example of the disparate treatment of business owners' and workers' investments in human capital. Gary Becker cites education and training as "the most important investments in human capital."¹⁴³ Yet, from the earliest days of the income tax, the courts and IRS have denied workers the ability to deduct their educational expenses except under limited circumstances.¹⁴⁴ The IRS acknowledges that education might be a human capital investment, but allows no deduction or capitalization of educational expenses because they are "an inseparable aggregate of personal and capital expenditures."¹⁴⁵ Although tax law

142. *See id.*

143. BECKER, *supra* note 135, at 17; *see also* PIKETTY, *supra* note 6, at 306–07. Education unquestionably contributes to workers' productivity. *SEE* SANDRA E. BLACK & LISA M. LYNCH, *HUMAN-CAPITAL INVESTMENTS AND PRODUCTIVITY*, 86 AM. ECON. REV. 263 (1996). Economists and policy makers perennially bemoan the future of the under-educated U.S. workforce and call for more government investment in education, particularly in light of the economy's shift from manufacturing to services and technology. *See generally* DALE NEEF, *THE KNOWLEDGE ECONOMY* (1998); ROBERT REICH, *THE WORK OF NATIONS: PREPARING OURSELVES FOR 21ST CENTURY CAPITALISM* (1992); Walter W. Powell & Kaisa Snellman, *The Knowledge Economy*, 30 ANN. REV. SOC. 199, 199–201 (2004); TASK FORCE ON THE FUTURE OF AMERICAN INNOVATION, *THE KNOWLEDGE ECONOMY: IS THE UNITED STATES LOSING ITS COMPETITIVE EDGE?* (2005), <http://futureofinnovation.org/PDF/Benchmarks.pdf>; JOSEPH E. STIGLITZ, *PUBLIC POLICY FOR KNOWLEDGE ECONOMY* (1999), <http://akgul.bilkent.edu.tr/BT-BE/knowledge-economy.pdf>. Another metric demonstrating the income-producing value of education is the link between higher educational levels and higher incomes. For example, in 2010, those with a college degree earned about sixty-six percent more than those with a high school degree; those with a professional or doctoral degree earned more than two and a half times the amount earned by high school degree holders. U. S. DEP'T. OF LABOR, BUREAU OF LABOR STATISTICS, *EMPLOYMENT PROJECTIONS, EDUCATION PAYS* (2011), http://www.bls.gov/emp/ep_chart_001.htm. The correlation between levels of education and income is strong and persistent. *See* Stuart Lazar, *Schooling Congress: The Current Landscape of the Tax Treatment of Higher Education Expenses and a Framework for Reform*, 2010 MICH. ST. L. REV. 1047, 1049–51 (2010); SANDY BAUM ET AL., COLLEGE BOARD ADVOCACY AND POLICY CENTER, *EDUCATION PAYS 2010: THE BENEFITS OF HIGHER EDUCATION FOR INDIVIDUALS AND SOCIETY* 11–17 (2010), <http://trends.collegeboard.org/downloads/EducationPays2010.pdf>.

144. *See, e.g.*, I.T. 1520, I-2 C.B. 145 (1922), *revoked by* I.T. 2688, XII-1 C.B. 250 (1933) (holding that research expenses by a college professor were personal, nondeductible expenses); Appeal of Driscoll, 4 B.T.A. 1008 (1926) (holding that voice lessons in preparation for a professional singing career were personal). For a detailed account of the history of the tax treatment of educational expenses, *see* Jay Katz, *The Deductibility of Education Costs: Why Does Congress Allow the IRS to Take Your Education So Personally?*, 17 VA. TAX REV. 1, 17–37 (1997); Lazar, *supra* note 143, at 1057–68; James L. Musselman, *Federal Income Tax Deductibility of Higher Education Costs: The Good, the Bad, and the Ugly*, 35 CAP. U. L. REV. 923, 927–34 (2007).

145. Treas. Reg. § 1.162-5(b)(1) (as amended in 1967); *see* Lazar, *supra* note 143, at 1059, 1072. Only under limited circumstances is a worker allowed to deduct higher educational expenses: (1) the education must maintain or improve her skills in her trade or business or (2) it must be required by her employer or by law. In any case, the education acquired cannot be necessary to meet the minimum qualifications for the worker's trade or business, and it cannot qualify the worker for a new trade or business. Treas. Reg. § 1.162-5.

provides several subsidies for education, such as a deduction for student loan interest and tax credits for educational expense, all of these provisions are classified as special tax preferences rather than as legitimate costs of producing income.¹⁴⁶ In contrast, business owners' expenditures for worker training or education are usually deductible immediately as I.R.C. § 162 trade or business expenses. At worst, business owners may have to capitalize these expenditures and amortize them over some period of years.¹⁴⁷

As with education, tax law treats as purely personal many other expenditures that are at least in part human capital investments or costs related to the production of income. For example, two other major categories of expenditures that are integral to workers' productivity are health and child care costs. As with education, both of these suffer from having personal and social dimensions that do not fit comfortably within the traditional business model of economic productivity. Because businesses do not literally own human capital, they do not incur child care and medical expenses in the production of income.¹⁴⁸ Workers' child care

146. In addition to this limited I.R.C. § 162 deduction for the costs of higher education, the tax law provides several tax preferences for education, including the I.R.C. § 25A American Opportunity Credit and Lifetime Learning Credit, the I.R.C. § 221 deduction for educational loan interest, the I.R.C. § 527 exclusion for employer-provided educational assistance, the I.R.C. § 529 exclusion for qualified tuition programs, and the I.R.C. § 530 exclusion for "Coverdell" education savings accounts. For a complete list of tax preferences for education, see Lazar, *supra* note 143, at 1074–1107. However, all of these provisions are classified as tax expenditures—that is, preferences that purposely reduce tax liability below "normal" levels in order to advance social policy goals—rather than as legitimate costs of producing income under the Schanz-Haig-Simons definition of income. See STAFF OF J. COMM. ON TAXATION, 112TH CONG., ESTIMATES OF FEDERAL TAX EXPENDITURES FOR FISCAL YEARS 2011–2015, at 10, 12–14 (Comm. Print 2012) [hereinafter Joint Committee Tax Expenditure Estimates].

Many scholars have criticized the current tax treatment of educational expenses and have argued that they ought to be at least partially deductible or capitalized and recoverable in future years in order to measure income from labor accurately. See, e.g., David S. Davenport, *Education and Human Capital: Pursuing an Ideal Income Tax and a Sensible Tax Policy*, 42 CASE W. RES. L. REV. 793 (1992); Katz, *supra* note 144; Lazar, *supra* note 143; Michael Simkovic, *The Knowledge Tax*, 82 U. CHI. L. REV. 1981 (2015). But see Joseph M. Dodge, *Taxing Human Capital Acquisition Costs—Or Why Costs of Higher Education Should Not Be Deducted or Amortized*, 54 OHIO ST. L.J. 927 (1993) (arguing that higher education expenses should not be amortized).

147. See *supra* note 120 and accompanying text.

148. It's interesting to contemplate how the tax law would tax slave owners if legal slavery existed today. There is little historic guidance because in the pre-Civil War era, slave owners paid primarily property and excise taxes on their slaves. See generally ROBIN L. EINHORN, *AMERICA TAXATION, AMERICAN SLAVERY* (2008) (providing a historical account of the influence of slavery on United States tax law and policy); Joel S. Newman, *Slave Tax as Sin Tax: 18th and 19th Century Perspectives*, 101 TAX NOTES 1019 (2003) (describing the history of federal taxes on slavery). States that had income taxes, such as Virginia, exempted slave owners from tax. See CHARLES NORDHOFF, *AMERICA FOR FREE WORKING MEN!* 14–16 (1865). However, there is evidence that slave owners considered their slaves to be valuable investments and kept meticulous records of their value and productivity. See

expenses are viewed as personal because it is a personal decision whether to have children. Workers are eligible for a modest credit for childcare expenses or can exclude from income a relatively small value of employer-provided childcare.¹⁴⁹ Congress treats these provisions as special tax preferences for personal expenditures, as opposed to allowances that account for legitimate costs in the production of income.¹⁵⁰ Similarly, Congress allows workers to deduct medical expenses and provides additional special tax preferences related to healthcare, but in all cases characterizes health care expenditures as personal, and not as investments in human capital.¹⁵¹

Caitlin Rosenthal, *Slavery's Scientific Management: Masters and Managers*, in *SLAVERY'S CAPITALISM: A NEW HISTORY OF AMERICAN ECONOMIC DEVELOPMENT* (Sven Beckert & Seth Rockman eds., 2016) (finding that slave owners kept highly detailed records of the value and productivity of slaves and depreciated them over time, foreshadowing modern management practices). If one imagines the unimaginable—a world in which slavery existed legally in the United States today—it seems quite plausible that slave owners would be allowed to deduct or capitalize costs of providing shelter, training, healthcare, food, and childcare to their slaves, expenses that are all disallowed as personal expenses when free workers incur them.

149. See I.R.C. § 21 (2012) (childcare credit); I.R.C. § 129 (exclusion for employer-provided child care).

150. See Joint Committee Tax Expenditure Estimates, *supra* note 146, at 14. Many scholars have criticized the tax law's treatment of child care expenses and posited that they ought to be at least partially deductible under a Schanz-Haig-Simons definition of income. See, e.g., Grace Blumberg, *Sexism in the Code: A Comparative Study of Income Taxation of Working Wives and Mothers*, 21 *BUFF. L. REV.* 49 (1971); Mary Louise Fellows, *Rocking the Tax Code: A Case Study of Employment-Related Child-Care Expenditures*, 10 *YALE J.L. & FEMINISM* 307 (1998); Mary L. Heen, *Welfare Reform, Child Care Costs, and Taxes: Delivering Increased Work-Related Child Care Benefits to Low-Income Families*, 13 *YALE L. & POL'Y REV.* 173 (1995); Shannon Weeks McCormack, *Overtaxing the Working Family: Uncle Sam and the Childcare Squeeze*, 114 *MICH. L. REV.* 559 (2016); Allan J. Samansky, *Child Care Expenses and the Income Tax*, 50 *FLA. L. REV.* 245 (1998); Lawrence Zelenak, *Children and the Income Tax*, 49 *TAX L. REV.* 349 (1994). But see Tsilly Dagan, *Ordinary People, Necessary Choices: A Comparative Study of Childcare Expenses*, 11 *THEORETICAL INQ. L.* 589, 625 (2010) (arguing that the Schanz-Haig-Simons definition is incapable of adequately reflecting outlays, such as child care, and advocating for the adoption of additional norms into the definition of income).

151. Medical expenses are deductible under I.R.C. § 213, but they are classified as personal deductions rather than costs related to the production of income. See *STAFF OF J. COMM. ON TAXATION, 99TH CONG., GENERAL EXPLANATION OF THE TAX REFORM ACT OF 1986*, at 50 (Comm. Print 1987) (stating that "medical expenses essentially are personal expenses and thus, like food, clothing, and other expenditures of living and other consumption expenditures, generally should not be deductible in measuring taxable income"). In addition, the medical expense deduction has always been limited by a significant "floor" tied to adjusted gross income—that is, a taxpayer can deduct only those medical expenses in excess of a percentage (currently ten percent) of her adjusted gross income. See I.R.C. § 213(a). In addition, the medical expense deduction is "below-the-line," so only those taxpayers who itemize their deductions can deduct any of their medical expenses. I.R.C. §§ 62(a)(1), 63.

In addition to I.R.C. § 213, there are other tax provisions related to health care. The law excludes from income employer-provided health insurance. I.R.C. § 106(a). It also excludes from income medical expenses paid from Flexible Spending Arrangements, I.R.C. § 125, and Medical Reimbursement Plans, I.R.C. §§ 105, 106. In addition, I.R.C. § 106 provides for tax deferred treatment

In addition to education, child care, and health care, workers incur a variety of expenditures related to their work, such as outlays for commuting, clothing, and food and lodging, to name a few noteworthy examples. These are often described as “mixed personal and business” expenses, which reflects the reality that these expenditures have an element of consumption but are also connected to the worker’s trade or business.¹⁵² Yet, tax law generally treats these outlays as purely personal. The cost of commuting, for example, has long been held to be nondeductible on the grounds that it is the taxpayer’s personal choice whether, and how far, to live from his or her place of work.¹⁵³ Similarly, clothing is considered a purely personal expense except in rare instances (such as police or military uniforms), even when such clothing is required as a condition of employment and is worn exclusively at work.¹⁵⁴ Food and lodging expenses are also treated as nondeductible personal expenses except in limited circumstances.¹⁵⁵

With respect to mixed personal and business expenses, business owners enjoy a greater ability than workers to deduct their costs of producing income under § 162. For example, business owners can deduct business-related travel, lodging and meal expenses paid on behalf of their workers, and these amounts are also fully excluded from the income of their

of amounts invested in Health Savings Accounts. As is true for tax provisions on education and child care, all of these health care provisions are treated as tax expenditures. See Joint Committee Tax Expenditure Estimates, *supra* note 146, at 42 (listing the medical expense deduction, employer-paid health insurance, medical savings accounts, and other related items as tax expenditures).

152. See, e.g., Thomas D. Griffith, *Efficient Taxation of Mixed Personal and Business Expenses*, 41 UCLA L. REV. 1769, 1770 (1994). In measuring poverty, the National Academy of Sciences recommended that work-related expenses such as commuting, child care, and the purchase of tools and uniforms be treated as nondiscretionary expenses and subtracted from resources. See MEASURING POVERTY: A NEW APPROACH 4-5 (Constance F. Citro & Robert T. Michael eds., 1995). In 2011, an interagency task force including the U.S. Census Bureau, the Bureau of Labor Statistics, the Council of Economic Advisers, the U.S. Department of Health and Human Services, and the Office of Management and Budget adopted this recommendation. See KATHLEEN SHORT, U.S. CENSUS BUREAU, CURRENT POPULATION REPORTS, THE RESEARCH SUPPLEMENTAL POVERTY MEASURE: 2010, at 21–22 (2011), http://www.census.gov/hhes/povmeas/methodology/supplemental/research/Short_ResearchSPM2010.pdf.

153. *Comm’r v. Flowers*, 326 U.S. 465, 473–74 (1946). See generally Tsilly Dagan, *Commuting*, 26 VA. TAX REV. 185 (2006); William A. Klein, *Income Taxation and Commuting Expenses: Tax Policy and the Need for Nonsimplistic Analysis of “Simple” Problems*, 54 CORNELL L. REV. 871 (1969).

154. See *Pevsner v. Comm’r*, 628 F.2d 467 (5th Cir. 1980). Clothing expenses are deductible only if the clothing is worn exclusively at work, as a condition of employment, and is not adaptable for general usage as ordinary clothing. *Id.* at 469.

155. See I.R.C. § 119 (providing an exclusion from income for meals and lodging provided to an employee by the employer “for the convenience of the employer”); I.R.C. § 162(a)(2) (allowing deduction for food and lodging “while away from home in the pursuit of a trade or business”).

workers.¹⁵⁶ In contrast, when workers incur their own business-related travel, lodging and meal expenses, the expenses are more likely to be treated as personal, nondeductible expenditures.¹⁵⁷ Furthermore, even if the expenditures qualify as business-related deductions, there are structural limitations such as the two percent floor that limits workers' ability to make use of these deductions.¹⁵⁸

In sum, the tax law, by allowing capital owners to deduct the costs of self-created intellectual capital, subsidizes the propertization of labor and enhances capital owners' ability to appropriate a greater share of the return at the expense of their workers' share. In addition, the disparate treatment of capital owners' and workers' human capital investments adds to capital owners' tax advantages relative to workers.¹⁵⁹ In these heretofore unexamined ways, the tax law puts a heavy thumb on the scale in favor of capital owners; a scale, as Piketty has shown, that already tilts in their favor.

III. RECONSIDERING THE BOUNDARY BETWEEN LABOR AND CAPITAL

A. A Porous and Changeable Boundary

Part I described how capital owners are able to use intellectual property, contract, and employment laws to propertize labor inputs into the creation of intellectual capital. Their ability to do so is expanding as a result of the evolving legal landscape, and the boundary between labor and capital is shifting. This suggests that the boundary is not fixed and immutable, but rather porous and changeable.¹⁶⁰ This Part explores the tax implications of a boundary of this nature and calls into question the tax law's fundamental labor-capital dichotomy.

156. See Fellows & Kahng, *supra* note 140, at 370–76.

157. See *id.* at 372–76.

158. See *id.* at 370–72.

159. These subsidies for capital owners also result in misallocations of resources and inefficiencies. See Fellows & Kahng, *supra* note 140, at 380–87; Johnson, *Undertaxation of Intangibles*, *supra* note 80, at 1289–91; Kahng, *supra* note 80, at 2263–67.

160. See Bankman & Shaviro, *supra* note 7, at 458 (observing that “‘labor’ and ‘capital’ are not nearly as distinct, either economically or socially, as [Piketty] may appear to suggest”); Victor Fleischer, *Alpha: Labor Is the New Capital*, TAX L. REV., at 3 (forthcoming 2016) (referring to a blurring of the distinction between income from labor and income from capital in his analysis of what he calls “alpha income”, that is, carried interest, founders stock, and equity-based executive compensation). In contrast, Piketty believes the distinction between capital income and labor income is becoming sharper: “[T]he growing sophistication of capital markets and financial intermediation tends to separate owners from managers more and more and thus to sharpen the distinction between pure capital income and labor income.” PIKETTY, *supra* note 6, at 424.

The boundary between labor and capital has been extensively analyzed in the scholarly debate about “carried interest”—the profits interest received by a private equity fund manager as compensation for managerial services.¹⁶¹ Under the partnership tax rules, the fund manager’s receipt of a profits interest is not immediately taxable. Instead, the fund manager reports income in the future as the fund realizes profits, and the character of those profits—usually capital gain—flows through to the fund manager.¹⁶² The debate about this result focuses on two questions: (1) Whether fund managers should be taxed immediately upon receipt of the profits interest, rather than being able to defer the tax until the fund realizes profits;¹⁶³ and (2) whether all or a portion of the income should be

161. See Bradley T. Borden, *Profits-Only Partnership Interests*, 74 BROOK. L. REV. 1283 (2009); Victor Fleischer, *Two and Twenty: Taxing Partnership Profits in Private Equity Funds*, 83 N.Y.U. L. REV. 1 (2008); Gregg D. Polsky, *Private Equity Management Fee Conversions*, 122 TAX NOTES 743 (2009); Adam H. Rosenzweig, *Not All Carried Interests Are Created Equal*, 29 NW. J. INT’L L. & BUS. 713 (2009); Chris William Sanchirico, *The Tax Advantage to Paying Private Equity Fund Managers with Profit Shares: What Is It? Why Is It Bad?*, 75 U. CHI. L. REV. 1071 (2008) [hereinafter Sanchirico, *Tax Advantage*]; Sanchirico, *Taxing Carried Interest*, *supra* note 45; David A. Weisbach, *The Taxation of Carried Interests in Private Equity*, 94 VA. L. REV. 715 (2008); see also Laura E. Cunningham, *Taxing Partnership Interests Exchanged for Services*, 47 TAX L. REV. 247 (1991); Mark P. Gergen, *Pooling or Exchange: The Taxation of Joint Ventures Between Labor and Capital*, 44 TAX. L. REV. 519 (1989) [hereinafter Gergen, *Pooling*]; Mark P. Gergen, *Reforming Subchapter K: Compensating Service Partners*, 48 TAX L. REV. 69 (1992) [hereinafter Gergen, *Service Partners*]; Henry Ordower, *Taxing Service Partners to Achieve Horizontal Equity*, 46 TAX LAW. 19 (1992); Leo L. Schmolka, Commentaries, *Taxing Partnership Interests Exchanged for Services: Let Diamond/Campbell Quietly Die*, 47 TAX L. REV. 287 (1991).

162. See generally Weisbach, *supra* note 161, at 727–33 (describing how partnership profits interests are taxed).

163. The first question relates primarily to determining the cost of the labor inputs provided by a service partner whose compensation takes the form of a profits interest that is speculative and illiquid. See Fleischer, *supra* note 161, at 38 (“The strongest argument for deferral is the difficulty of measuring a partner’s income on an accrual basis. This argument is especially strong in the context of venture capital and private equity funds, where the underlying investments are illiquid.”).

Beyond the specific situation of carried interest, determining the cost of labor inputs is often difficult, especially for intellectual capital. This difficulty is addressed in the extensive literature devoted to “knowledge management,” that is how businesses can best account for and deploy their human capital assets. See generally THOMAS H. DAVENPORT & LAURENCE PRUSAK, *WORKING KNOWLEDGE: HOW ORGANIZATIONS MANAGE WHAT THEY KNOW* (1998); IKUJIRO NONAKA & HIROTAKA TAKEUCHI, *THE KNOWLEDGE-CREATING COMPANY: HOW JAPANESE COMPANIES CREATE THE DYNAMICS OF INNOVATION* (1995); SVEIBY, *supra* note 40. The vast literature on intellectual capital and knowledge management is evidenced by several journals dedicated to the subject, including the *Journal of Intellectual Capital*, the *Journal of Knowledge Management*, and *Knowledge and Process Management*. In addition, there are innumerable books, articles, and reports on the subject.

For example, the creation of a new inventory system might involve the efforts of many different employees whose work effort is spread among many tasks and projects. It might also include investing in new computer software and hardware. It would be difficult to determine how much of each worker’s labor should be allocated to the creation of the new inventory system. However, the difference between the carried interest situation and this example is that there is no need to allocate an

taxed as ordinary income, like most other compensation income, rather than as capital gain.

This second question relates to the demarcation between income from labor and income from capital.¹⁶⁴ Critics of the current tax law's treatment of carried interest argue that some or all of the service partner's income represents compensation for services, and as such, should be taxed as ordinary income.¹⁶⁵ In response, other scholars have pointed out that the tax system often allows such a conversion of labor income into capital gain, specifically in the case of so-called sweat equity.¹⁶⁶ Sweat equity arises when an individual provides labor to his own business, drawing no salary or a below-market salary. If he ultimately sells the business, he will in many cases realize a capital gain, thereby converting his foregone salary, which would have been taxed as ordinary income, into capital gain.¹⁶⁷ Examples of sweat equity often involve sole proprietors such as grocers or dry cleaners, but as David Weisbach points out, Bill Gates is an owner of sweat equity: his fortune is attributable to services he performed for Microsoft, but most of his earnings will be taxed as capital gains.¹⁶⁸ In light of this widespread ability to convert self-supplied labor into capital gain, Weisbach argues, it is irrational to single out carried interest as objectionable.¹⁶⁹

It is beyond the scope of this Article to undertake a full analysis of the carried interest debate. Rather, this Article extends the debate's insights about how self-supplied labor is converted into capital gains beyond the

employee's salary among the assets she helps to create or enhance in order to determine the amount of compensation she receives, assuming she is paid in cash.

164. This question also arises in connection with so-called entrepreneurial income—that is, income of a sole proprietor who contributes both labor and capital to her business. Piketty gives the example of a radiologist, whose income derives from both her labor and the equipment she uses. *See* PIKETTY, *supra* note 6, at 204; *see also* Kleinbard, *supra* note 5. However, according to Piketty, entrepreneurial income accounts for a very small proportion of income—one to two percent. *See* PIKETTY, *supra* note 6, at 204.

165. *See* Fleischer, *supra* note 161, at 37; Gergen, *Service Partners*, *supra* note 161, at 103–11.

166. *See* Fleischer, *supra* note 161, at 28; Weisbach, *supra* note 161, at 744.

167. *See* Fleischer, *supra* note 161, at 35–36.

168. Weisbach, *supra* note 161, at 743–44 n.70. Weisbach identifies two factors that determine when labor income will be converted into capital gains: “First, the more entrepreneurial the activity, the more likely the treatment will be capital. Second, the more that labor and capital are combined into a single return, the more likely it will be treated as capital.” Weisbach, *supra* note 161, at 743 n.70. As discussed below, I disagree with him with regard to the second factor. Capital owners are able to convert labor of workers into capital all the time. *See also* Leandra Lederman, *supra* note 132 (finding that the tax law subsidizes entrepreneurs, that is, those who contribute both labor and capital, as compared to passive investors, who contribute only capital).

169. Weisbach argues further that the line between capital gains and ordinary income exemplifies the sort of arbitrary line drawing found in tax law, as do many aspects of partnership taxation. Weisbach, *supra* note 161, at 743–63.

limited situation of self-supplied labor. More broadly, as the discussion of intellectual capital shows, capital owners convert other people's labor—that of their workers—into capital through the process of propertization. Furthermore, the tax law subsidizes this process by allowing capital owners to deduct the costs of creating intellectual capital.

Chris Sanchirico makes this same observation about the broader phenomenon of the conversion of labor into capital gain in his analysis of carried interest. He argues that it is fruitless to analogize carried interest to sweat equity on the grounds that both allow for the tax-advantaged conversion of labor income into capital gains. It is fruitless, he argues, because virtually everyone enjoys this tax-advantaged conversion of labor into capital gain, even capital owners who do not provide their own labor, by reason of the immediate deductibility of labor costs:

“[J]udging from how the supposed sweat equity tax advantage has been described, one of its seemingly essential features is that it accrues specifically to services that are self-provided. . . . Yet the tax benefit of premature labor cost recovery is hardly dependent on labor's being self-provided. The salaries a business pays to employees who work in the marketing department building a brand name are likely expensed, even though the brand name may eventually garner long-term capital gains income. Indeed, the salary of every employee whose services help to keep the concern going is to some extent an investment in going concern value.¹⁷⁰

Although Sanchirico's analysis does not refer to the ability of capital owners to propertize labor into intellectual capital, this is exactly what he describes when he alludes to the ability of business owners who pay workers to produce a brand name or going concern value.¹⁷¹ Furthermore, Sanchirico's argument assumes that business owners can deduct immediately their workers' salaries despite the fact that the workers contribute to the creation of assets of long-term value. This is exactly the tax subsidy for self-created intellectual capital that this Article identifies as a subsidy to the process of propertization.

170. Sanchirico, *Taxing Carried Interest*, *supra* note 45, at 242.

171. Sanchirico argues further that supposed tax benefit that all these parties enjoy—the ability to convert labor income into capital gains—is illusory when one takes into account the aggregate tax paid by all participants. According to Sanchirico, the true tax advantage to carried interest inheres in exploiting the tax rate differentials of fund managers and investors. See Sanchirico, *Tax Advantage*, *supra* note 161, at 1076.

B. Returns on Human Capital

As Part II discussed, the legal landscape related to intellectual capital is shifting the boundary between labor and capital and enabling capital owners to capture a greater share of economic returns. This suggests that capital owners are in some sense able to capture some of the returns to labor.¹⁷² This is a somewhat confusing statement because purely as a definitional matter, “returns to labor” describes the amount received by workers and “returns to capital”, the amount received by capital owners.¹⁷³ However, the process of propretization shows how capital owners capture at least some of the returns to labor. Furthermore, capital owners make investments in human capital, and presumably they receive returns on these investments.¹⁷⁴ Therefore, it is reasonable to say that capital owners receive some of the returns to labor.

If it is true that capital owners capture some of the returns to labor, this calls into question the tax law’s distinction between income from labor and income from capital, along with its disparate treatment of the two categories. Not all income from labor is subject to onerous taxation relative to income from capital. Rather, income from labor *paid to workers* is taxed heavily. Income paid to capital owners, whether attributable to labor or capital, is taxed lightly. Thus, income from labor is taxed very differently depending on *who* receives the return from the labor.

Under this view, one could reframe the tax treatment of capital owners and workers to say that they are taxed differently on their respective shares of income from labor.¹⁷⁵ This reframing matters because it requires us to re-evaluate the rationales for taxing income from labor so differently from

172. Employment law scholars who criticize employer restrictions on employees frame the analysis in terms of who should be entitled to reap the benefits of the worker’s labor, employer or worker. *See, e.g.,* Stone, *supra* note 49, at 721–23.

173. *See, e.g.,* PIKETTY, *supra* note 6, at 203 (discussing the clear distinction between remuneration of labor (wages, salaries, bonuses, and other payments to employees, including managers, who contribute labor to the company’s activities) and remuneration of capital (dividends, interest, profits reinvested to increase the value of the firms’ capital, etc.); Kleinbard, *supra* note 5, at 49 (“[T]he suppliers of labor and capital can be expected to define for themselves the relative contributions of each through the process of setting wages; the post-compensation remainder by definition must be capital income.”).

174. Knowledge management scholars frame questions of employee mobility around the idea of protecting firms from expropriation of value and/or ensuring that firms protect their human capital investments and garner the returns from those investments. *See, e.g.,* Younge, *supra* note 77, at 2–6.

175. Conversely, one might also characterize part of workers’ income as a return on capital, as in the case of entrepreneurial income or carried interest.

income from capital.¹⁷⁶ On an intuitive level, it seems irrational and unfair that the tax treatment of labor income should turn on the identity of the person—worker or capital owner—who derives the income from labor.¹⁷⁷ Beyond intuition, taxing the workers more heavily than capital owners on their respective share of returns to labor seems clearly to exacerbate “rich-get-richer dynamic”¹⁷⁸ documented by Piketty.

C. Workers and Capital Owners as Joint Venturers

The tax law’s distinct treatment of income from labor and income from capital assumes that the economic production can be disaggregated into these two types of income.¹⁷⁹ However, the discussion of intellectual capital highlights the interdependent relationship between labor and capital in economic productivity. This interdependence raises the question whether labor income and capital income can or should be viewed as separate types of income.

Carried interest provides a useful jumping off point to consider this question. In their analyses of carried interest, scholars argue that at least part of what the service partner receives is compensation for his labor, and should therefore be taxed as such.¹⁸⁰ The difficulty lies in determining how much of what the services partner receives should be treated this way. As Victor Fleischer puts it, “the key challenge is disaggregating the relative value of the returns on human capital, which we would presumably like to tax currently as the services are performed, from the returns on investment capital, which we would like to tax only when the income is realized.”¹⁸¹

176. Victor Fleischer makes a related argument in the context of what he calls “alpha income”—carried interest, founders stock, and equity-based executive compensation. He argues that alpha income is labor income disguised as capital income and that the best way to achieve an equitable tax treatment of this disguised labor income would be to repeal the capital gains preference. *See* Fleischer, *supra* note 160, at 28, 42. Fleischer’s argument differs from the views advanced in this Article in that Fleischer accepts the assumption that labor income and capital income are fixed and distinct categories.

177. On the other hand, we treat trade or business income differently from investor gains, so the identity of the person who derives the income does matter sometimes. However, this example may devolve back to the same suspect classifications of labor income and capital income because trade or business income implies a requisite level of labor activity in its production.

178. Robert Solow coined this term to describe Piketty’s thesis. Solow, *supra* note 11.

179. According to Fleischer, public finance economists also regularly make this assumption. *See* Fleischer, *supra* note 160, at 10.

180. *See* Fleischer, *supra* note 161, at 47; Gergen, *Service Partners*, *supra* note 161, at 103–11.

181. Fleischer, *supra* note 161, at 41.

In response to this disaggregation challenge, Borden argues that it is impossible to disaggregate returns on labor and returns on capital where partners contribute a mix of labor and capital:

The co-ownership of partnership property and services makes tracing income from either the contributed property or services to the contributor impossible. A tax partnership's income flows from the combined output of partnership property and services, over both of which the partners share control. Sharing control and the residual claims of integrated property and services gives partnerships their distinctive nature. In particular, the parties cannot trace income from its source to a single owner of the source.¹⁸²

In Borden's view, this inability to disaggregate explains why income from the combined sources should be treated as partnership income. To be characterized at the partnership level: "The partners cannot separately trace income from property and services. The income from one source fuses with the income from the other source. The income from the combined sources becomes partnership income and flows to the partners with the character determined at the partnership level."¹⁸³

Borden's observation about the inseparability of labor income and capital income has a broader applicability, particularly as it relates to intellectual capital, where labor and capital are deeply intertwined.¹⁸⁴ In view of the increasing prevalence of intellectual capital, one can question

182. Borden, *supra* note 161, at 1300. More generally, other scholars have explored at length whether and to what extent the tax law should treat a partnership as a pooling of partners' services and property, or alternatively, as an exchange of their services and property. *See, e.g.,* Gergen, *Pooling*, *supra* note 161.

183. Borden, *supra* note 161, at 1301 (footnotes omitted). In Borden's view, the inability to disaggregate is at the heart of the partnership rules allowing partners to allocate income freely among themselves, seemingly in contravention of assignment of income principles:

Partnership tax law recognizes the inability to trace partnership income from its source and allows partners to allocate partnership tax items in any reasonable manner. Normally any income from the property should be income to the property owner and income from services should be income to the service provider. Tax law cannot impose that rule in the partnership context because it cannot trace income from property and services. The allocation rules are, therefore, a compromise between the assignment-of-income doctrine and the inability to trace.

Id. at 1302–03 (footnotes omitted).

184. Borden limits his claim about the inseparability of labor income and capital income to the context of partnership carried interest. He further limits his analysis to services partnerships in which tracing problems are unavoidable. Thus, for example, he believes pure investment partnerships do not have tracing problems and should therefore be accorded less flexibility than service-property partnerships. *See id.* at 1303. Furthermore, he explains at length that his rationale for supporting the current law treatment of carried interest does not extend to equity-based corporate compensation. *See id.* at 1304–10.

more generally whether the tax law's distinction between labor income and capital income is useful, or even meaningful. As an alternative, analogizing to Borden, we could conceptualize capital owners and workers as participants in a joint venture who share in an inseparable, unitary return derived from their combined resources. This conception reflects the interdependent relationship between capital and labor in economic production and acknowledges the difficulty, perhaps impossibility, of disaggregating this collaborative return into two streams of income, one deriving from labor and the other, from capital.¹⁸⁵

Under a joint venture conception of workers and capital owners, the terms "labor income" and "capital income" would not refer to distinct, qualitatively different types of income, but rather would describe how workers and capital owners share the return derived from their collaboration.¹⁸⁶ This would necessitate the reevaluation of the tax law's preferential treatment of capital owners. With respect to the preferential treatment of their costs of producing income, the tax law should be amended to eliminate the immediate deduction for expenditures such as R&D and advertising, which subsidizes capital owners' creation of intellectual capital.¹⁸⁷ In addition, as Mary Louise Fellows and I have proposed, the tax treatment of workers' and capital owners' investments in human capital, such as education, should be equalized, and other of workers' human capital costs, such as healthcare and childcare, should be recognized as valid costs of producing income.¹⁸⁸ With respect to the preferential treatment of capital owners' income, the tax preference for capital gains and dividends should be eliminated.¹⁸⁹

A joint venture conception of workers and capital owners would also align the tax law with efforts in other legal fields to reframe doctrinal and policy analysis to recognize the centrality of workers in economic production.¹⁹⁰ Scholars in fields outside of tax have proposed a similar

185. This is not to say that a disaggregation scheme couldn't be devised. Rather, my point is that joint venture conception leads to different policy choices. For a recent disaggregation proposal, see Note, *Taxing Partnership Profits Interests: The Carried Interest Problem*, 124 HARV. L. REV. 1773 (2011); see also Kleinbard, *supra* note 5, at 49–52 (discussing the "labor-capital income centrifuge" for disaggregating entrepreneurial income into labor and capital components). Rather, my point is that joint venture conception leads to different policy choices.

186. The terms "income from labor" and "income from capital" are misleading because they imply that income can be disaggregated.

187. See Kahng, *supra* note 80, at 2274–77.

188. See Fellows & Kahng, *supra* note 140, at 391–99.

189. See Fleischer, *supra* note 160, at 41.

190. See, e.g., Kent Greenfield, *The Place of Workers in Corporate Law*, 39 B.C. L. REV. 283 (1998); Marleen A. O'Connor, *The Human Capital Era: Reconceptualizing Corporate Law to Facilitate Labor-Management Cooperation*, 78 CORNELL L. REV. 899 (1993); Katherine Van Wezel

joint venture model of workers and capital owners. For example, in her work about how legal doctrines empower employers to control and appropriate returns on knowledge workers' labor, Catherine Fisk suggested a new metaphor for intellectual property, which would conceptualize employees and employers as "joint authors" of proprietary knowledge, human capital, or firm intellectual property.¹⁹¹ Margaret Blair and Lynn Stout theorized a "team production" model of corporate governance that conceptualizes the public corporation as a team of stakeholders including shareholders, workers, creditors, and communities. The premise of their model is that all the stakeholders contribute to a product of corporate enterprise that is nonseparable and nontraceable to the individual team members' contributions.¹⁹²

CONCLUSION

This Article has endeavored to challenge the tax law's foundational, yet mostly unexamined, distinction between labor and capital by focusing on the process by which workers and capital owners collaborate in economic production and the ways in which legal rules, including the tax law, shape their entitlements to the rewards of that collaboration. It argues that the labor-capital distinction is changeable and porous, and perhaps even illusory, and that workers and capital owners should be viewed as sharing in a collaborative economic product that is not separable into two streams of income, one attributable to labor and the other to capital.

This revised view of the labor-capital distinction has profound implications for the tax law, a full exploration of which the Article leaves

Stone, *Employees as Stakeholders Under State Nonshareholder Constituency Statutes*, 21 STETSON L. REV. 45 (1991).

191. See Fisk, *supra* note 69, at 862–63.

192. Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 265–66 (1999). Their theory is grounded on Armen Alchian and Harold Demsetz's definition of team production as "production in which 1) several types of resources are used . . . 2) the product is not a sum of separable outputs of each cooperating resource . . . [and] 3) not all resources used in team production belong to one person." *Id.* at 265 (quoting Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777, 779 (1972)); see also Matthew T. Bodie, *Employees and Boundaries of the Corporation*, in RESEARCH HANDBOOK ON THE ECONOMICS OF CORPORATE LAW 85, 85–105 (2011) (describing developments in an employee-centered theory of the firm using examples from tort law, intellectual property law, and tax law); Brett H. McDonnell, *Employee Primacy, or Economics Meets Civic Republicanism at Work*, 13 STAN. J.L. BUS. & FIN. 334 (2008); Edward B. Rock & Michael L. Wachter, *Tailored Claims and Governance: The Fit between Employees and Shareholders*, in EMPLOYEES AND CORPORATE GOVERNANCE 121, 143–56 (Margaret M. Blair & Mark J. Roe eds., 1999) (questioning the prevailing view that employees have no residual claims to corporations and finding instead that they have significant ownership and governance rights).

for future research. However, in contrast to proposals such as Piketty's for a new global wealth tax, many of the specific reform prescriptions that flow from this Article would not require drastic changes to our tax laws. Rather, the problematic tax subsidies for capital owners and incongruities in the taxation of capital and workers identified in the Article are remediable within the strictures of the current law. We could reform the law to require capitalization of the costs of creating intellectual capital, as was recently proposed by the Senate Finance Committee and the House Ways and Means Committee.¹⁹³ This change could even be implemented through an executive reversal of the INDOPCO regulations. Similarly, we could introduce reforms that would treat more uniformly and equitably capital owners' and workers' investments in human capital.¹⁹⁴ Although these changes seem modest on their face, they would have an immediate and significant impact in the distribution of taxes between capital owners and workers. Furthermore, they would represent a major step toward recognizing the centrality of workers in economic productivity and reconceptualizing the relationship between capital owners and workers, not as between master and servant, but as partners.

193. See *supra* note 129 and accompanying text; Kahng, *supra* note 80, at 2274–77.

194. See Fellows & Kahng, *supra* note 140, at 394–99.