



4th LJUBLJANA DOCTORAL SUMMER SCHOOL
3 - 21 July 2017

University of Ljubljana

**FACULTY OF
ECONOMICS**

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10-14 July 2017, from 9.00 to 16:00

Course title:

INNOVATIVE ENTERPRISE

ECTS credits: 6

Lecturer: Professor William Lazonick, University of Massachusetts Lowell, USA

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AIMS OF THE COURSE:

The purpose of this course is to elaborate and apply “the theory of innovative enterprise” as an approach to analyzing the operation, performance, and regulation of a national economy engaged in global competition. The organization of the course follows the “social conditions of innovative enterprise” (SCIE) framework that prof. Lazonick has developed through the integration of the theory of innovative enterprise with empirical analyses of the process of economic development.

The theory of innovative enterprise focuses on three social conditions – strategic control, organizational integration, and financial commitment – that, through their interaction, define the operation and determine the performance of a business enterprise. The need for these social conditions derives from the uncertain, collective and cumulative character of the innovation process. These characteristics of the innovation process vary markedly across different industrial sectors with different types of markets that must be accessed, technologies that must be transformed, and competitors with which the innovative enterprise must compete as it seeks to generate a product that is higher quality and lower cost than previously available. The enterprise operates, moreover, in a particular social context characterized by national economic institutions that influence the social conditions of innovative enterprise. Governance institutions influence strategic control, employment institutions influence organizational integration, and investment institutions influence financial commitment.

In elaborating a theory of innovative enterprise rooted in the comparative-historical experience of economic development, the SCIE perspective confronts the ill-conceived and highly ideological neoclassical theory of the market economy. SCIE offers a rigorous alternative to the foundations of economic analysis, grounded in historical reality rather than ideological fantasy, that is relevant to not only economists but also social scientists, business academics, industry analysts, corporate executives, government policy-makers, and informed citizens.

Topics and schedule:

Monday, July 10

1. Who needs a theory of innovative enterprise?
2. Economics of innovative enterprise

Tuesday, July 11

3. Social conditions of innovative enterprise
4. Strategic control



Wednesday, July 12

5. Organizational integration
6. Financial commitment

Thursday, July 13

7. Industrial sectors
8. Economic institutions

Friday, July 14

9. Government policy
10. Sustainable prosperity

TEACHING METHODS:

- 1) Class participation, with attendance as a necessary but not sufficient condition: Students must come to class prepared to engage in discussion about the course readings. On each day, the first half of the class will be a lecture on the course material, and the second half will be class discussion.
- 2) Each student will write *a paper that applies the theory of innovative enterprise to a company, industry, government agency, civil society organization, or national economy*. The paper must display an understanding of the analytical concepts, historical perspectives, and theoretical frameworks that are the substance of the course.

Lecturer's Biographical Note:

William Lazonick is a professor of economics at the University of Massachusetts Lowell. He is president and co-founder of The Academic-Industry Research Network (www.theAIRnet.org), a non-profit research organization. His most recent research has been funded by the Institute for New Economic Thinking, Ford Foundation, European Commission, and Korea Economic Research Institute. Currently he occupies visiting positions at the University of Ljubljana, Telecom School of Management in Paris, and the University of London.

Previously, Lazonick was Assistant and Associate Professor of Economics at Harvard University (1975-1984), Professor of Economics at Barnard College of Columbia University (1985-1993), and Visiting Scholar and then Distinguished Research Professor at INSEAD (1996-2007). He has also been on the faculties of University of Toronto (1982-1983), Harvard Business School (1984-1986), and University of Tokyo (1996-1997), and was a visiting member of the Institute for Advanced Study in Princeton (1989-1990).

Professor Lazonick is the author of six books, including *Sustainable Prosperity in the New Economy?* *Business Organization and High-Tech Employment in the United States* (Upjohn Institute for Employment Research 2009), which was awarded the 2010 Schumpeter Prize by the International Schumpeter Society. He has also edited eight books and published about 150 articles. In September 2014, his article "Profits Without Prosperity: Stock Buybacks Manipulate the Market and Leave Most Americans Worse Off" appeared in the Big Idea section of Harvard Business Review, and subsequently received the HBR McKinsey Award for outstanding article in the magazine in 2014. Lazonick is currently writing a book, *The Theory of Innovative Enterprise*, to be published by Oxford University Press.

Within the context of the financial crisis of 2008, the Great Recession of 2008-2009, the subsequent "jobless" recovery in the United States, and the growing concern with extreme income inequality, media articles based on Lazonick's research on the negative impacts of stock buybacks and stock-based executive compensation on innovation and job creation have appeared in many magazines and newspapers.

COURSE SYLLABUS:**Lecture 1. Who Needs a Theory of Innovative Enterprise?**

Economists, social scientists, business academics, industry analysts, corporate executives, government policy-makers, and informed citizens all need a theory of innovative enterprise. Here is why:

- *Economists* need a theory of innovative enterprise in order to break free from the ideological grip of the theory of the “optimizing firm” that takes technology and markets as given constraints in making its production decisions and that underpins the misconceived belief in “perfect” competition as the ideal of economic efficiency. The optimizing firm and perfect competition provide critical foundations for the theory of the market economy, which lacks a theory of innovative enterprise and hence a perspective on how an economy can generate the higher quality, lower cost products that enable real productivity growth.
- *Social scientists* need a theory of innovative enterprise in order to imbed the analysis of the operation and performance of the business enterprise in social contexts that, depending on what I call the “social conditions of innovative enterprise”, may support or undermine innovative enterprise. The theory of innovative enterprise permits social science to link the evolution and interaction of economic institutions, business organizations, and industrial sectors in one integrated conceptual framework.
- *Business academics* need a theory of innovative enterprise in order to render “resource-based” theories of the firm dynamic, to add rigor to concepts such as “dynamic capabilities,” and to critique faulty ideologies such as “maximizing shareholder value.” The theory of innovative enterprise permits a critical evaluation within a coherent conceptual framework of many of the leading perspectives on the operation and performance of business enterprise that have emanated from business schools since the 1980s.
- *Industry analysts* need a theory of innovative enterprise so that they can engage in in-depth research on the sources and sustainability of the innovative performance of successful firms and uncover why unsuccessful firms fail to be innovative. The theory of innovative enterprise can contribute to a significant improvement in “industry studies” carried out within academic institutions, business enterprises, government agencies, and civil society organizations.
- *Corporate executives* need a theory of innovative enterprise so that they can make decisions to invest in and sustain the innovation process. For example, if corporate executives were equipped with a theory of innovative enterprise, they would find it difficult to adhere to an ideology that the companies over which they exercise allocative control should be run to “maximize shareholder value” – an ideology that is destructive of innovative enterprise. The theory of innovative enterprise provides executives with a perspective on the allocation of corporate resources to “retain-and-reinvest” rather than “downsize-and-distribute.”
- *Government policy-makers* need a theory of innovative enterprise so that that they can make coherent decisions concerning investments in human knowledge and physical infrastructure, and provide subsidies that support the innovation process. Armed with a theory of innovative enterprise, they can avoid implementing policies that reward value extraction at the expense of value creation. The theory of innovative enterprise is essential for understanding the role of “the developmental state” in the performance of a national economy as well as for avoiding the rise of “the predatory state.”
- *Informed citizens* need a theory of innovative enterprise so that they can elect politicians who recognize that business innovation, supported by the developmental state, is fundamental to economic development. At the same time, these informed citizens would understand that the policy challenge is not only to support innovative enterprise but also to find ways in which it can contribute to equitable and stable economic growth.

Readings:

- ❖ William Lazonick, “Who Needs a Theory of Innovative Enterprise?,” paper presented at the Conference of the International Schumpeter Society, University of Queensland, Brisbane, Australia, July 4, 2012.
- ❖ William Lazonick, “Innovative Enterprise or Sweatshop Economics? In Search of Foundations of Economic Analysis,” *Challenge*, 59, 2, 2016: 65-114.
- ❖ William Lazonick, “Stock Buybacks: From Retain-and-Reinvest to Downsize-and-Distribute,” Center for Effective Public Management, Brookings Institution, April 2015 at <http://www.brookings.edu/research/papers/2015/04/17-stock-buybacks-lazonick>

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Lecture 2. The Economics of Innovative Enterprise

The *innovating* firm engages in strategies to transform technologies and access markets. In sharp contrast, the *optimizing* firm of neoclassical economics textbooks seeks to maximize profits (or minimize costs), taking technologies and markets as given constraints. From the perspective of the innovating firm, the “optimizing” firm is an *un-innovating* firm. More generally, constrained-optimization analysis represents a methodology that cannot understand the process of change. The economics of innovative enterprise employs a methodology that integrates theory and history; theory is both a distillation of what we have learned from the study of history and a guide to what we need to learn to understand how history unfolds over time, including at present. The lecture starts with a review of the key intellectual influences on my own theory of the firm and its relation to innovation and economic development, including the work of Karl Marx, Alfred Marshall, Joseph Schumpeter, Edith Penrose, and Alfred Chandler. All of these thinkers understood that, in analyzing the economy, one must integrate theory and history.

The key concepts in the theory of innovative enterprise are “strategic control”, “organizational integration”, and “financial commitment”. In the face of uncertainty, the innovative enterprise makes strategic decisions to allocate resources that can either, if successful, provide the foundation for a sustained competitive advantage over its rivals or, if unsuccessful, place the firm at a competitive disadvantage. “Strategic control” means that the incentives and abilities of the particular executives who make resource allocate decisions within an innovative enterprise matter to the types of investments in innovation that are made and the ultimate success or failure of these investments. The success of an innovative investment strategy then depends on the “organizational integration” of the skills and efforts of people in the hierarchical and functional learning processes that are the essence of innovation and the “financial commitment” of resources to sustain the innovation process until it can generate financial returns.

The centrality of strategic control, organizational integration, and financial commitment to the operation and performance of the innovative enterprise confronts the neoclassical theory of the optimizing firm that “chooses” an investment strategy imposed on it by exogenous technologies and markets, making it impossible for any one firm to differentiate itself from others in its industry. Yet, as I show, the essence of innovative enterprise is the ongoing strategic investment of resources to “unbend” the U-shaped cost curve if and when it occurs in the attempt to drive down unit costs. When successful, the innovative enterprise outcompetes the optimizing firm. With the theory of monopoly, neoclassical economists have sought to deal with the prevalence of “big business” in the economy, with the conclusion that monopoly results in less output at higher costs (and hence prices) than perfect competitors. But as Joseph Schumpeter recognized, and as I will show in this session, the comparison between perfect competition and monopoly is flawed because it is assumed that the monopolist optimizes subject to the same cost structures that prevail under so-called “perfect” competition. In fact,

in a wide range of industries, we rely on “big business” to generate higher quality products in large quantities that permit lower unit costs. When applied to economic reality, the theory of innovative enterprise confirms Schumpeter’s observation that “perfect competition is not only impossible but inferior, and has no title to being set up as a model of ideal efficiency.” Quite the contrary, I show that the small firms that engage in “perfect” competition have the characteristics of an overcrowded sweatshop in which shirking workers yield very low levels of labor productivity.

Besides elaborating a theory of the firm characterized by the transformation of cost structures, this session also provides an analytical framework for understanding how innovative enterprises access different product markets characterized by a combination of income levels and price sensitivities. I show how business enterprises that can commercialize fundamental research engage in product innovation by selling initially to high-income, price-insensitive markets, then to middle-income, price-matters markets, and then, if the enterprise chooses to continue to produce the good or service once it has become a commodity, to low-income, price-sensitive markets. A prime example is the electronic pocket calculator, first produced for high-end customers by companies such as Sharp, Casio, Hewlett-Packard and Texas Instruments at the beginning of the 1970s but with prices falling precipitously over the ensuing years. Conversely, process innovation, as it often occurs in developing economies that transfer technology from abroad, begins with low-income, price-sensitive markets. But, as the innovating firm learns, it can progress to middle-income, price-matters markets, and even to high-income, price-insensitive markets. A prime example is the Japanese automobile as it evolved from low-end to high-end markets over the course of the 1970s and 1980s.

Readings:

- ❖ William Lazonick, *Business Organization and the Myth of the Market Economy*, Cambridge University Press, 1991, ch. 5 (“The Making of the Market Mentality”)
- ❖ William Lazonick, “Alfred Chandler’s Managerial Revolution: Developing and Utilizing Productive Resources,” in William Lazonick and David J. Teece, eds., *Management Innovation: Essays in the Spirit of Alfred D. Chandler, Jr.*, Oxford University Press, 2012: 3-29.
- ❖ William Lazonick, “The Theory of Innovative Enterprise: A Foundation of Economic Analysis,” AIR Working Paper 13-05/01, The Academic-Industry Research Network, February 2013.

Lecture 3. Social Conditions of Innovative Enterprise

Some social environments promote innovative enterprise and other social environments undermine it. This session lays out the “social conditions of innovative enterprise” framework for analyzing the interactions of institutions, enterprises, and industries in a national economy.

If and when innovation is successful in a particular nation over a sustained period of time, the types of strategic control, organizational integration, and financial commitment that characterize the nation’s innovating firms will constitute distinctive social conditions of innovative enterprise. Why, one might ask, would the social conditions of innovative enterprise exhibit similar characteristics across firms in a nation, particularly when they are engaged in different industries? And why, for a given industry, would the social conditions of innovative enterprise differ across nations? The answer to both questions is that historically nations differ in their institutions. At any point in time these institutions both enable and proscribe the activities of firms, while over time distinctive elements of these institutions become embedded in the ways in which firms function. Of particular importance in influencing the social conditions of innovative enterprise are *economic* institutions related to *governance*, *employment*, and *investment*. Through a historical process, the strategic, organizational, and financial activities of a nation’s innovative enterprises shape the characteristics of these economic

institutions, but these institutions also exist and persist independently of these enterprises as part of the “social fabric” – the laws and norms that regulate economic activity that find application in the social conditions that characterize a nation’s business enterprises.

Governance institutions determine how a society assigns rights and responsibilities to different groups of people over the allocation of its productive resources and how it imposes restrictions on the development and utilization of these resources. Employment institutions determine how a society develops the capabilities of its present and future labor forces as well as the level of employment and the conditions of work and remuneration. Investment institutions determine the ways in which a society ensures that sufficient financial resources will be available on a continuing basis to sustain the development and utilization of its productive capabilities. These economic institutions both enable and proscribe the strategic, organizational, and financial activities of business enterprises, thus influencing the conditions of innovative enterprise that characterize social relations within any given firm at any point in time. As these business enterprises succeed at innovation, they may reshape the conditions of innovative enterprise; for example, their strategic decision-makers, acting collectively, may take steps to reform these institutions to suit the new needs of their enterprises.

This highly schematic perspective, therefore, posits a dynamic historical relation between organizations and institutions in the evolution of the social conditions of innovative enterprise. To go beyond this schema requires the integration of the theory of innovative enterprise with comparative research on the evolution of the conditions of innovative enterprise in different times and places. To study the innovative enterprise in abstraction from the particular social conditions that enable it to generate higher quality, lower costs products is to forego an understanding of how a firm becomes innovative in the first place and how its innovative capabilities may be rendered obsolete. A comparative analysis that integrates theory and history enables us to learn from the past and provides working hypotheses for ongoing research.

In a theory of innovative enterprise, strategy, finance, and organization are interlinked in a dynamic process with learning as an outcome. To fully comprehend innovative enterprise, there is a need to understand the actual learning processes: the relation between tacit knowledge and codified knowledge, between individual capabilities and collective capabilities, and between what is learned at a point in time and how that learning cumulates over time. The prevailing social conditions of innovative enterprise provide the context for those *collective and cumulative* learning processes, shaping the types of learning that are attempted, the extent to which these processes are sustained, and the ways in which people interact both cognitively and behaviorally in the process of organizational learning. The influence of the social context is manifested by the functional and hierarchical integration of skill bases that can vary dramatically across industries and institutional environments as well as over time, with, as I have shown through comparative-historical analysis, implications for economic performance in international competition

Readings:

- ❖ William Lazonick, “The Theory of the Market Economy and the Social Foundations of Innovative Enterprise,” *Economic and Industrial Democracy*, 24, 1, 2003: 9–44.
- ❖ William Lazonick, “The Innovative Firm,” in Jan Fagerberg, David Mowery, and Richard Nelson, eds., *The Oxford Handbook of Innovation*, Oxford University Press, 2005: 29-55.
- ❖ William Lazonick, “Innovative Business Models and Varieties of Capitalism: Financialization of the US Corporation,” *Business History Review*, 84, 4, 2010: 675-702.

Lecture 4. Strategic Control

This session explains the implications of the theory of innovative enterprise for the ways in which business executives should allocate resources, manage the labor force, and deal with financial interests for the sake of generating higher quality products at lower unit costs (the economic definition of innovation). The session considers how, as a result of the dynamic interaction of strategy, organization, and finance, the roles of top business executives vary across firms, industries, and regions.

It is my view that in many times, places, and industries, top executives of business enterprises have made allocative decisions on the basis of a “business model” that conforms to the theory of innovative enterprise, with equitable and stable economic growth as the result. These executives have recognized that in making investments in new products and processes, which inevitably means investing in the knowledge and capabilities of employees who can at any time walk out the door, they are confronting technological, market, and competitive uncertainty. Technological uncertainty exists because the firm may be incapable of developing the higher quality processes and products envisaged in its innovative investment strategy; if one already knew how to generate a new product or process at the outset of the investment, it would not be innovation. Market uncertainty exists because, even if the firm is successful in its development effort, future reductions in product prices and increases in factor prices may lower the returns that can be generated by the investments. Moreover, the innovative enterprise must access a large enough extent of the product market to transform the fixed costs of developing a new technology into low unit costs. Like transforming technology, accessing the market is an integral part of the innovation process, and, at the time when resources are committed to an innovative strategy, it is impossible to be certain, even probabilistically, about the extent of the market that will be accessed. Finally, even if a firm can overcome technological and market uncertainty, it still faces competitive uncertainty: the possibility that a competitor will have invested in a strategy that generates an even higher quality, lower cost product.

Yet, despite the uncertainty inherent in innovative investment strategies, senior executives must make these allocative decisions to create the possibility, but by no means the certainty, that the firms over which they exercise strategic control will indeed be innovative enterprises. In this session I argue that the executives who confront uncertainty are those who have both the abilities and incentives to invest in innovation. Their abilities derive from a deep understanding of the technological, market, and competitive conditions of the industry in which their company operates and of the productive capabilities of the business organizations over which they preside. Their incentives derive from a system of rewards that ensures that their own personal gains depend on their willingness to invest in “value creation,” which comes from innovation, rather than “value extraction,” which comes from speculation in and manipulation of the financial value of the companies that employ them as executives.

In recent decades, the “financialization” of the business corporation has become a major impediment to investment in innovative enterprise. By financialization, I mean the evaluation of the performance of a company by a financial measure such as earnings per share rather than by the goods and services that it produces, the customers it serves, and the people whom it employs. In the financialized corporation, top executives are better at manipulating financial valuations than they are at engaging in innovation. Especially in the United States, top executives are given personal incentives to extract far more value than they create through remuneration in the form of stock options and stock awards that reward them for the manipulation of their companies’ stock prices. In the United States in the decade 2005-2014, 458 companies in the S&P 500 Index in 2015 expended \$3.7 trillion on buybacks (52.5%

of net income) and another \$2.5 trillion on dividends (35.7% of net income). These are corporate financial resources that could be invested in innovation and the creation of well-paid and sustainable employment opportunities.

Key to the justification of financialized corporate resource allocation, I will argue, is the ideology that “maximizing shareholder value” (MSV) results in superior economic performance. While many academics (especially in Europe) view MSV as an ideology of institutional shareholders that has been foisted on business executives, I contend that MSV is an ideology of corporate executives (especially in the United States) that has legitimized corporate decision-making that focuses on a company’s stock-market valuation to the personal benefit of top executives but at a high cost to corporate employees in general as well as to the economy and society in which the corporation operates. The theory of innovative enterprise confronts the basic assumptions of MSV, and calls upon corporate executives who view the generation of innovation as the fundamental purpose of the business enterprise to construct a new ideology of corporate decision-making that is compatible with equitable and stable economic growth.

Readings:

- ❖ Michael C. Jensen, “Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers,” *American Economic Review*, 76, 2, 1986: 323-329.
- ❖ William Lazonick and Mary O’Sullivan, “Maximizing Shareholder Value: A New Ideology of Corporate Governance,” *Economy and Society*, 29, 1, 2000: 13-35
- ❖ William Lazonick, “Innovative Enterprise and Shareholder Value,” *Law and Financial Markets Review*, 8, 1, 2014: 52-64.

Lecture 5. Organizational Integration

In this session, I explain the relation of the theory of innovative enterprise to “capabilities” theories of the firm that emanate primarily from business schools. Around the mid-1980s, resource-based theory surfaced in business schools to try to explain why, contrary to the neoclassical theory of perfect competition, firms that compete in the same industry typically possess different capabilities. Early proponents of resource-based theory such as Birger Wernerfelt, Richard Rumelt, and Jay Barney sought to answer this question within the neoclassical paradigm of an economy in which markets, not organizations, allocate resources. They attributed the firm’s superior competitive position to its “first-mover advantage,” without explaining the source of that advantage. By the late 1980s, resource-based theorists such as Ingmar Dierickx and Karel Cool began to move the discussion from a “positions” perspective to a “process” perspective. Yet, lacking a theory of innovative enterprise, the resource-based discussions continued to be mainly in terms of the accumulation of difficult-to-imitate capabilities that represented “market imperfections” rather than “organizational successes.”

In the 1990s, however, there was a growing body of literature that sought to understand the role of organizational processes in determining the growth and competitive advantage of firms. These included the work of Bruce Kogut and Udo Zander on “combinative capabilities” and David Teece and co-authors on “dynamic capabilities.” In this session I will draw upon the insights of these and other “organizational process” approaches to the accumulation of competitive capabilities to elaborate the ways in which the theory of innovative enterprise can be used and developed to illuminate the ways in which higher quality, lower cost goods and services get produced.

Readings:

- ❖ William Lazonick, “Varieties of Capitalism and Innovative Enterprise,” *Comparative Social Research*, 24, 2007: 21-69.
- ❖ David J. Teece, “The Foundations of Economic Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms,” *Academy of Management Perspectives*, 28, 4, 2014: 1-25
- ❖ William Lazonick, Philip Moss, Hal Salzman, and Öner Tulum, “Skill Development and Sustainable Prosperity: Collective and Cumulative Careers versus Skill-Biased Technical Change,” Institute for New Economic Thinking Working Group on the Political Economy of Distribution Working Paper No. 7, December 2014, at <https://www.ineteconomics.org/research/research-papers/skill-development-and-sustainable-prosperity-cumulative-and-collective-careers-versus-skill-biased-technical-change>

Lecture 6. Financial Commitment

Finance is required to sustain the collective and cumulative innovation process from the time at which investments are made until the development of a high-quality, low cost-product generates revenues.

For a new venture without a commercial product, the sources of financial commitment may include private equity, foregone salaries, and government subsidies. For a going concern, retained earnings, leveraged if necessary with debt, provide the main source of financial commitment.

The task for a theory of innovative enterprise is to explain how, by generating a higher quality, lower cost product, a particular enterprise can differentiate itself from its competitors and emerge with a significant, and even dominant, market share in its industry. Unlike the optimizing firm, the innovating firm does not take as given the fixed costs of participating in an industry. Rather the amount of fixed costs that it incurs reflects its innovative strategy. Neither indivisible technology nor the “entrepreneur” as a fixed factor dictates this “fixed-cost” strategy. An innovative strategy, with its fixed costs, results from the assessment by the firm’s strategic decision-makers of the quality and quantity of productive resources in which the firm must invest to *develop* higher quality processes and products than those previously available or that may be developed by competitors. It is this development of productive resources internal to the enterprise that creates the *potential* for an enterprise that pursues an innovative strategy to gain a sustained advantage over its competitors and emerge as dominant in its industry.

The *development* of productive resources, when successful, becomes embodied in products, processes, and people with superior productive capabilities than those that had previously existed. But an innovative strategy that can eventually enable the firm to develop superior productive capabilities may place the innovating firm at a *competitive disadvantage* because such strategies tend to entail higher fixed costs than the fixed costs incurred by rivals that choose to optimize subject to given constraints. As an essential part of the innovation proves, the innovating firm must access sufficient markets for its products to transform high fixed costs into low units costs, and, thereby, transform competitive disadvantage into competitive advantage.

These higher fixed costs derive from the *size* and *duration* of the innovative investment strategy. Innovative strategies will entail higher fixed costs when the innovation process requires the *simultaneous development* of productive resources across a broader and deeper range of integrated activities than those undertaken by competitors. But in addition to, and generally independent of, the size of the innovative investment strategy at a point in time, high fixed costs will be incurred because of the duration of time that is required to develop productive resources until they result in products

that are sufficiently high quality and low cost to generate returns. If the size of investments in physical capital tends to increase the fixed costs of an innovative strategy, so too does the duration of the investment required for an organization of people to engage in the collective and cumulative learning that is the central characteristic of the innovation process.

The size and duration of financial commitment required to transform high fixed costs of investment innovation into the low unit costs of an innovative product vary dramatically across industries characterized by different technologies, markets, and competitors. In all cases, however, in combination with strategic control and organizational integration, financial commitment is an essential condition of innovative enterprise. In general, contrary to conventional wisdom, the stock market does not provide financial commitment. The stock market serves to extract value from companies rather than to create value in them. As a major example, the stock buybacks that have come to dominate resource allocation in US companies represent the opposite of financial commitment.

Readings:

- ❖ William Lazonick, “Profits Without Prosperity: Stock Buybacks Manipulate the Market, and Leave Most Americans Worse Off,” *Harvard Business Review*, September 2014: 46-55, at <https://hbr.org/2014/09/profits-without-prosperity>
- ❖ William Lazonick, Mariana Mazzucato, and Öner Tulum, “Apple’s Changing Business Model: What Should the World’s Richest Company Do With All Those Profits?,” *Accounting Forum*, 37, 4, 2013: 249-267.
- ❖ William Lazonick, Matt Hopkins, Ken Jacobson, Mustafa Erdem Sakinç, and Öner Tulum, “U.S. Pharma’s Business Model: Why It Is Broken, and How It Can Be Fixed,” in David Tyfield, Rebecca Lave, Samuel Randalls, and Charles Thorpe, eds., *The Routledge Handbook of the Political Economy of Science*, Routledge, 2017.

Lecture 7. Industrial Sectors

The integration of the theory of innovative enterprise with a pragmatic perspective on how in different times and places business enterprises actually succeed or fail requires in-depth empirical research on companies and industries. As my co-authors and I have demonstrated in a number of industry studies, the availability of a wide variety of e-resources now makes it possible to do in-depth desk research that in and of itself helps build our knowledge base while greatly enhancing the value-added of field research. In addition, focused as it is on strategy, organization, and finance – the generic activities of any business – the theory of innovative enterprise provides a platform for academics to tap into the expertise of industrial practitioners on a systematic basis. Toward this end, I co-founded The Academic-Industry Research Network (theAIRnet) (www.theAIRnet.org).

In this session, I explain how to use the theory of innovative enterprise to study businesses, industries, and regions. The methodology that I outline in this session will be useful not only to academics but also to people working as industry researchers in government agencies, non-academic institutes, and business enterprise. It is my contention that through the application of this methodology, the study of industrial development can acquire unprecedented rigor and relevance. The rigor will come from research that, guided by the theory of innovative enterprise, mobilizes the critical evidence on an unfolding reality. The relevance will come from a methodology that, armed with historical knowledge of the enterprise, industry, or region at hand, can access and comprehend that unfolding reality in real time, or what I call “catching up with history.”

Readings:

- ❖ Marie Carpenter, William Lazonick, and Mary O'Sullivan, "The Stock Market and Innovative Capability in the New Economy: The Optical Networking Industry," *Industrial and Corporate Change*, 12, 5, 2003: 963-1034.
- ❖ William Lazonick, *Sustainable Prosperity in the New Economy? Business Organization and High-Tech Employment in the United States*, Upjohn Institute, 2009, ch. 2 ("The Rise of the New Economy Business Model") and ch. 3 ("The Demise of the Old Economy Business Model").
- ❖ William Lazonick and Öner Tulum, "US Biopharmaceutical Finance and the Sustainability of the Biotech Business Model," *Research Policy*, 40, 9, 2011: 1170-1187.

Lecture 8. Economic Institutions

Linking with each of the three social conditions of innovative enterprise, I classify economic institutions as *governance*, *employment*, and *investment* institutions.

Governance institutions influence strategic control. What are the rights and responsibilities that govern the allocation of productive resources (labor and capital) in the economy? Where in the economy is control over allocation decisions located? What are the social processes that monitor, sanction, and reform such control? What is the relation between ownership of corporate shares and control over the allocation of corporate resources?

Employment institutions influence organizational integration. How does society provide the population with education, training, and access to research? Through what organizations? For what purposes? Who pays for human-capital formation? How do people get jobs, and what is the relation between jobs and careers? What expectations do members of the labor force have of rewards through employment and over what time frames? Are careers within or across firms? Are careers with business, government and/or civil society organizations? What is the role of collective organization in determining the stability, trajectory and rewards of employment over one's working life? How does one's working life provide for income in retirement?

Investment institutions influence financial commitment. How are financial resources mobilized in the economy for investments in productive resources? From what sources? On what terms? With what expected returns? What is the relation between equity and debt in financing investment? To what purposes are corporate retentions allocated? How do investment institutions shape the relation between value creation and value extraction across and among economic actors?

Readings:

- ❖ William Lazonick, "The Institutional Triad and Japanese Development," [translated into Japanese] in Glenn Hook and Akira Kudo, eds., *The Contemporary Japanese Enterprise*, Yukikaku Publishing, 2005, Volume 1: 55-82 [pdf in English].
- ❖ William Lazonick, "Labor in the Twenty-First Century: The Top 0.1% and the Disappearing Middle Class," in Christian E. Weller, ed., *Inequality, Uncertainty, and Opportunity: The Varied and Growing Role of Finance in Labor Relations*, Cornell University Press, 2015: 143-192.
- ❖ William Lazonick, Yu Zhou, and Yifei Sun, "Introduction: China's Transformation into an Innovation Nation," in Zhou, Lazonick, and Sun, eds., *China as an Innovation Nation*, Oxford University Press, 2016.

Lecture 9. Government Policy

In ignoring the role of innovative enterprise in the performance of the economy, the neoclassical theory of the market economy also ignores the role of “the developmental state.” In the conservative version of the theory of the market economy (the legacy of Milton Friedman and the Chicago school), state intervention in the workings of the market can only undermine the efficient allocation of resources. In the liberal version of the theory (the legacy of Paul Samuelson and the Harvard-MIT Keynesian school), state intervention can help remedy “market failures” so that the “market economy” can perform its function of efficiently allocating resources. I argue, however, that well-functioning markets are the *outcomes* of the success of innovative business organizations that are supported by developmental government investments. As will be outlined in this session, the historical record shows that, in supporting innovative enterprise, no government in modern history has been more developmental than the United States.

In elaborating upon the role of the developmental state, this session will engage with the “varieties of capitalism” debate. In their well-known contribution to this debate, Peter Hall and David Soskice highlight the distinction between a “coordinated market economy,” as exemplified by Germany’s system, and a “liberal market economy,” as exemplified by that in the United States. In effect, Hall and Soskice accept the conventional ideology that, in terms of the coordination of productive activity that results in superior economic performance, the United States – the world’s largest and richest economy – can be understood as a “market economy” with a deregulated state. In this session I will show that there are a number of problems with this perspective. First, to view the United States as essentially a “market economy” is to ignore the role of powerful business enterprises in the allocation of the economy’s resources. Second, the US government has always played a major role in funding the physical and human infrastructure that permits US capitalism to operate at a high level of productivity. Third, insofar as the deregulation of economic activity and the rise of “flexible” capital and labor markets have brought a high degree of accuracy to the characterization of the United States as a “liberal market economy” over the past three decades or so, this variety of capitalism may, in fact, be resulting in inferior, not superior, economic performance. In the twenty-first century, Hall and Soskice’s characterization of the United States as a “liberal market economy” may be an apt description of what the US variety of capitalism has become. If so, however, it is not a variety of capitalism that yields a high level of economic performance in terms of equitable and stable growth.

Besides making developmental investments, the government must enact and enforce regulations that promote the innovative enterprise and proscribe the financialized enterprise. These regulations would a) control speculation on and prohibit manipulation of financial markets, including the stock market; b) ensure that corporate executives cannot gain personally from speculation in or manipulation of the stock prices of the companies over which they exercise allocative control; c) ensure that employees and other stakeholders who contribute to the innovative success of a company cannot be excluded from sharing in the gains of that success; d) ensure the training and retraining of workers to engage in productive employment; and e) tax the gains from innovative enterprise to fund new rounds of government investment in human and physical infrastructures that support innovative enterprise. The pursuit of this policy agenda assumes that government policy-makers comprehend the centrality of innovative enterprise to the performance of the economy.

Readings:

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- ❖ William Lazonick, *Sustainable Prosperity in the New Economy? Business Organization and High-Tech Employment in the United States*, Upjohn Institute, 2009, ch. 5 (“Globalization of the High-Tech Labor Force”).
- ❖ William Lazonick, “Entrepreneurship and the Developmental State,” in Wim Naudé, ed., *Entrepreneurship and Economic Development*, Palgrave, 2011.

Lecture 10. Sustainable Prosperity

Ultimately, it is informed citizens who elect the government policy-makers, who in turn can promote “value-creation” through innovation and proscribe “value-extraction” through speculation and manipulation. Each year millions of college students around the world take “principles of economics” courses in which they are taught that “perfect” competition results in the highest possible level of economic efficiency. Yet in a world of perfect competition, firms take technologies and markets as given constraints on economic decision-making. It is an unrealistic world of total certainty and market individualism in which the passage of time plays no role. It is also a world in which, as I have shown, the firm that is the foundation of the ideal of economic efficiency has the characteristics of a sweatshop. It is a highly *unproductive* firm. Nevertheless, on the basis of this “free market” ideology, governments make momentous political decisions in the name of economic efficiency.

In a world of innovative enterprise, in sharp contrast, firms transform technologies and access markets through a process that is uncertain, collective, and cumulative. It is uncertain because, at the time when investments in innovation are made, we do not know what *new* standards of economic efficiency can be achieved (if we did, it would not be innovation). It is collective because the process of organizational learning that transforms technologies and accesses markets involves the integration of the skills and efforts of large numbers of people with different hierarchical responsibilities and functional capabilities. It is cumulative because what the organization and the individuals within it learn today provides a foundation for what can be learned tomorrow. As a result, the social conditions for economic progress in the actual world of innovative enterprise are fundamentally different than they would be in the fictitious and misconceived world of perfect competition.

An understanding of the social conditions of innovative enterprise leads to a view of the governance of business enterprise that seeks to sustain the collective and cumulative learning processes that lay the foundations for innovation. From this perspective, a democratic government as the representative of informed citizens can play a developmental role in investing in the education, training, and health of a population who can contribute to the innovation process, while making investments in physical infrastructures that are too expensive and too collective for even the largest business enterprises to undertake on their own.

Innovation creates the possibility, although by no means the necessity, that all stakeholders in the economy can be made better off. Through the generation of higher quality products at lower unit costs, given prevailing factor prices (again, the economic definition of innovation), it is possible simultaneously for workers to have better pay and work conditions, for creditors to have more security in their principal and interest, for shareholder to have higher dividends and share prices, for the government to have higher tax revenues, for the innovating firm to have a stronger balance sheet, and for consumers to have more and better goods and services at lower prices. It all depends on how the

gains from innovative enterprise are shared among these stakeholders. It is the structure of power within business enterprises and through government policy in conjunction with “market forces” that determine the distribution of these gains at a point in time and over time. These “market forces,” moreover, are not the result of atomistic competition that neoclassical economists call “perfect.” Rather market forces depend on a distribution of financial assets and productive capabilities across households and businesses that is typically very unequal and potentially very unstable. Informed citizens need a theory of innovative enterprise as a foundation for understanding how the governance of the economy and society can result in equitable and stable economic growth.

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Readings:

- ❖ William Lazonick, “The Financialization of the U.S. Corporation: What Has Been Lost, and How It Can Be Regained,” *Seattle University Law Review*, 36, 2, 2013: 857-909.
- ❖ William Lazonick, Philip Moss, and Joshua Weitz, “The Equal Employment Opportunity Omission,” Institute for New Economic Thinking Working Paper No. 53, December 2016, at <https://www.ineteconomics.org/research/research-papers/the-equal-employment-opportunity-omission>
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