MEYER
FELLOWSHIP PAPER

How to See the Housing Sector

Herbert Hoover's Department of Commerce and the Origins of the Nation's Housing Data Ecosystem

OCTOBER 2023 | THOMAS SHAY HILL

JCHS
JOINT CENTER FOR HOUSING STUDIES
OF HARVARD UNIVERSITY

How to See the Housing Sector: Herbert Hoover's Department of Commerce and the Origins of the Nation's Housing Data Ecosystem

Thomas Shay Hill
Harvard University

Abstract

The volatility of the business cycle and an extreme shortage of housing were the twin problems of American economic life in the years following the First World War. Under the leadership of Secretary Herbert Hoover, statisticians at the Department of Commerce came to conceive of these dual problems as two sides of the same coin. The nation's construction sector was widely perceived as a backward field, prone to collective mania and herd behavior. The sector's tendency towards boom and bust was simultaneously the primary engine behind the ups and downs of the business cycle and the chief barrier in the way of a well-functioning private market for housing. Stabilizing the construction sector would both tame the business cycle and ensure adequate housing for all Americans, without the need for government-built public housing.

Information was key to the Commerce Department's vision of a modernized, well-functioning construction sector. Reliable, comprehensive information on prices and construction activity nationwide would allow developers to time their projects accordingly, taking advantage of low material prices during slack periods and avoiding incipient real estate bubbles. Data in the end failed to serve this utopian role. The Department's studies of housing and construction nevertheless established a government research apparatus and corresponding network of housing scholars which would lay the foundations for the federal housing and mortgage finance programs of the New Deal.

Introduction

By the mid-1920s, the national statistical apparatus for monitoring the American construction sector had emerged in essentially its contemporary form. At the beginning of the decade, the construction sector – and in particular its largest component, housing supply – was an opaque and mysterious field, essentially void of serious economic research or statistical analysis. By the end of the decade construction activity had become an essential barometer of national economic health.

In the decade after the First World War, economists in industry, academia, and at Herbert Hoover's Department of Commerce saw data as the key to stabilizing the vast and chaotic world of construction. Monthly statistics on the volume of new construction by location and property type would allow economists, policymakers, and leaders of the construction field to trace the course of the business cycle and to understand its uneven impact on the nation's cities, states and regions. Government would play a limited but still important role in this vision, more as an information provider than as a regulator. Hoover's Department of Commerce would centralize the masses of private statistics produced by individual enterprises, which companies and industry bodies would it turn use to guide their own behavior. Price bubbles, crashes, waste, and over-production were self-evidently at odds with the interests of every individual producer and with that of society at large; widely-available information would make these market failures wholly avoidable.

Statistical information, in the end, failed to serve this stabilizing role. The "Roaring Twenties" ended with a catastrophic real estate bubble fueled by the proliferation of mortgage-backed securities which left millions of Americans penniless and seriously hindered the recovery of the nation's financial sector. Unthinkably, the largest and most technically advanced real estate concerns emerged as the era's most heinous villains. It is easy to dismiss the excesses of 1920s real estate development as yet another episode of "irrational exuberance", an inevitable spasm of speculative mania in a decade of paltry federal regulation. Contemporary accounts of construction, housing supply, and mortgage finance in the period before the New Deal typically depict a sort of "Wild West" of minimal government oversight: in the words of the economists William Goetzmann and Frank Newman in a 2010 article on the role of the mortgage bond business in the speculative bubble of the late 1920s, "Through the entire movement, regulation and centralization were glaringly absent."[1] But this explanation misses the mark: in this period, construction, real estate, and housing production were monitored and analyzed – if not regulated – to an unprecedented degree of precision. The national real estate market had come into focus as a coherent economic object capable of being forecasted and managed.

This paper puts the nation's federal apparatus for collecting statistics on construction, housing markets, and mortgage capital flows into historical context. The origin story of these federal statistics has lessons that transcend this one historical moment of a century ago, serving as a cautionary tale about the dangers of a blind trust in statistical information and in the capacity

[1] Goetzmann, William N., and Frank Newman. "Securitization in the 1920's." National Bureau of Economic Research, 2010. See also Glaeser, Edward L. "A nation of gamblers: Real estate speculation and American history." *American Economic Review* 103, no. 3 (2013): 1-42.

of private actors to use that information for socially-desirable ends. This faith in numbers, as well as the corresponding faith that the real estate industry would use these numbers to regulate its own behavior, would not survive the decade. But the indices, statistical agencies, and analytic methods which grew in tandem with this faith are still with us, and remain the means by which policymakers, economists and regulators understand the nation's housing supply and its relationship to the broader economy.

In Part I of this paper, I detail the ideology of data which took shape in the nation's research centers, largest firms, and government agencies in the aftermath of the First World War. Business statistics – and the economists trained to analyze them – were given pride of place in the quest to stabilize American economic life. A broad consensus emerged by the mid-1920s about the minimal functions of a competent federal administration: at the very least, federal agencies had a role to play in the compilation and dissemination of statistics. The masses of private statistical series produced by individual companies were on their own of little use to society at large: only by making them public, putting them in relation to one another, and subjecting them to the analysis of trained economists would they serve their true purpose to society by allowing private businesses to regulate their own behavior.

In Part II, I trace the ways in which this philosophy was applied to the housing and construction field by the Department of Commerce under the leadership of Herbert Hoover. The Department of Commerce became the central clearinghouse for datasets produced by the worlds of business and industry.[2] The built environment – and in particular the field of housing production – became the primary mechanism through which the Department of Commerce sought to influence the economy at large.[3]

In Part III, I examine the impact of these new sources of information and new federal programs on the construction industry itself. The Department of Commerce actively fostered nation-wide industry organizations to compile and disseminate information among industry members. Tuned to the pulse of the construction sector, these industry organizations were likewise expected to serve as instruments of the industry's self-regulation, instituting standards of industry behavior that would prevent seasonal and year-over-year swings in construction.

[2] While the Department of Commerce had been in existence since 1903, the decade saw a massive expansion in its scope and activities. Several excellent studies examine the impact of these two institutions in this decade, among them Ellis Hawley's *Herbert Hoover as Secretary of Commerce: Studies in New Era Thought and Practice* (1981); Guy Alchon's *The Invisible Hand of Planning: Capitalism, Social Science, and the State in the 1920s* (1985); William Barber's *From New Era to New Deal* (1989); and Timothy Shenk's recent doctoral dissertation, *Inventing the American Economy* (2016). I draw extensively from this secondary literature in this paper.

[3] Snowden, Kenneth. "A Historiography of Early NBER Housing and Mortgage Research." In *Housing and Mortgage Markets in Historical Perspective*, 15–36. Chicago: University of Chicago Press, 2019.

Part I: The Ideology of Data

"Of the hundreds of thousands of construction projects that have been entered on the records of the Statistical Department of the F.W. Dodge Corporation", wrote the statistician Thomas Steele Holden in the October 1923 edition of *Architectural Record*, "there are three that stand out more strongly than any others in the writer's mind." Holden was writing in the midst of a marked upswing in construction activity nationwide, with the number of contracts awarded – and thus the costs of labor and materials – reaching record levels in the early months of 1923.[4]

The three projects Holden chose to emphasize to his readers were not among the countless developments initiated in the early part of 1923, at the inflection point of a nation-wide development boom. These three – a factory, a hotel, and a bank building – had instead begun construction in the languid summer of 1921, a time when "general business conditions were at their very lowest ebb since the war." The depression of 1920-1921, while brief, was the most severe nation-wide downturn since the Panic of 1893. To begin a construction project at such a time might have seemed reckless. To the contrary, in Holden's estimation, "Those three projects have stood out in the writer's mind because they exhibited unusual business sagacity on the part of their owners and because they showed courage when the majority were afraid to risk their money on building projects." The majority waited until business conditions improved, and thus faced the high costs of labor and materials one typically finds in the midst of a building boom.

The timing of these three projects was no accident:

> In the case of the factory project a statement was issued by the owners to the press to the effect that careful study of conditions led them to believe that the building could be erected then as advantageously, costs and availability of materials and labor considered, as at any time within the next year or so. While the writer never saw any statements made by the owners of the hotel or the bank project initiated at that time, he is reasonably certain that the courage shown by the owners in venturing millions of dollars at such a moment must have come from similar study of conditions and a conviction that the moment was propitious.[5]

By so calibrating the timeline of construction, the owners of these three projects had maximized their chances of financial success: taking advantage of low costs during the recession and bringing their projects to completion at a moment of high demand for space. Such calibration was a wholly new practice, premised on the analysis of month-by-month statistical figures produced by the American business world. Holden sat at the heart of this world, and would play a formative role in how the fields of business, government, and academia would make use of such statistics from the 1920s through the post-war era.

[4] Holden, Thomas S. "Architects and the Business Cycle." *Architectural Record* 54. October 1923: 383-387.

[5] Ibid.

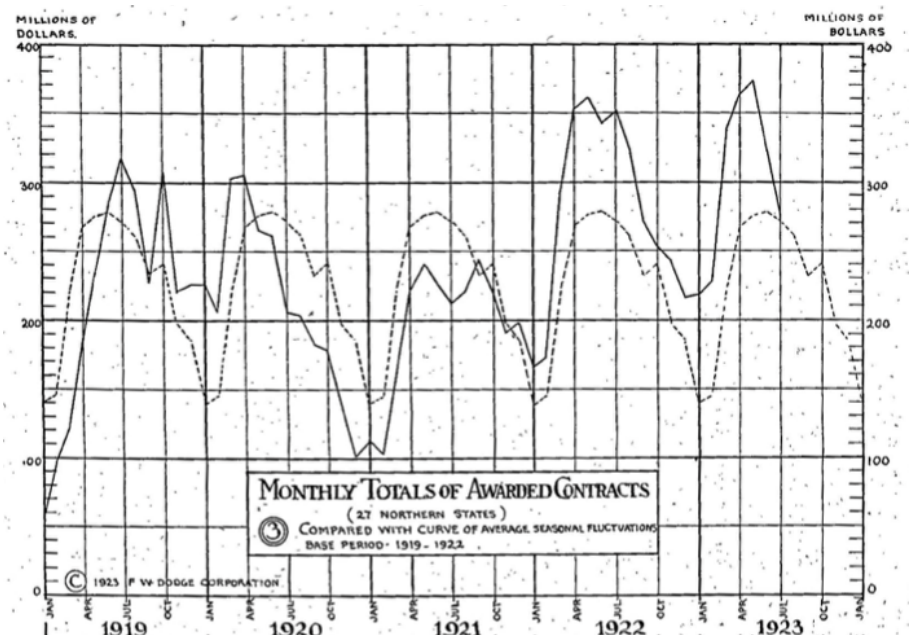

Figure 2.1: Monthly totals of contracts awarded across the 27 Northern and Eastern states in which F.W. Dodge then operated. The dashed line indicates the average trend, the solid line the actual trend. Note that contracts awarded fell significantly below the seasonal norm from mid-1920 through late 1921, before rising significantly above the average for all of 1922 and 1923. Source: Holden, Thomas Steele. "Architects and the Business Cycle". *The Architectural Record*, vol. 54. October, 1923. P. 385.

The F.W. Dodge Corporation was the paradigmatic example of a new type of firm to emerge in American economic life by the turn of the twentieth century. Its line of business was not consumer goods or capital equipment but rather information. Founded by Frederick W. Dodge in Boston in 1891, Dodge's original business model was simple: to collect information about projects currently under construction in the city, and to sell that information back to local builders, so that they could better understand the state of the market – and their potential competitors – at a given point in time. Dodge developed a full-time staff of trained employees who would continuously call on builders, architects and contractors for information on the status of current and anticipated development projects.[6]

Holden represented the second generation of senior management at the F.W. Dodge Corporation, whose business statistics and various trade publications had gradually expanded across the country over the previous thirty years. Dodge's executive leadership – Frederick

[6] Babson, Roger W. "F.W. Dodge: A Tribute". *Architectural Record* 39: January 1916; Thompson, Howard M. "The House that Dodge Built". Internal company document. *McGraw-Hill.* 1991. An article from March 1913 in Dodge's own publication *The Real Estate Record and Builders Guide* discussed the company's methods and general line of business. By that year, the company was issuing an average of 250,000 reports each working day, covering every step in the construction process for nearly all large construction projects in the 21 eastern states. The company employed 200 clerks in its central New York office as well as hundreds more in its various field offices distributed across the country. "The reporters for the company average 2,000,000 calls a year upon architects and builders and upon owners of and agents for real estate, and investigate clippings from 2,500 daily and weekly papers." *The Real Estate Record and Builders Guide.* March 22, 1913. P. 608.

Warren Dodge and his successors, Franklin T. Miller and Thomas S. Holden – developed close personal and professional ties with the major professional organizations in the construction and real estate industries, such as the National Association of Building Owners and Managers (NABOM, founded 1907), the National Association of Real Estate Boards (NAREB, founded in 1908 as the National Association of Real Estate Exchanges) and the National Association of Construction Industries (NACI, founded 1920), of which Franklin T. Miller would be vice-president. Such statistics offered the promise of subduing a field of American economic life which had long born a reputation for instability, uncertainty, and risk.[7]

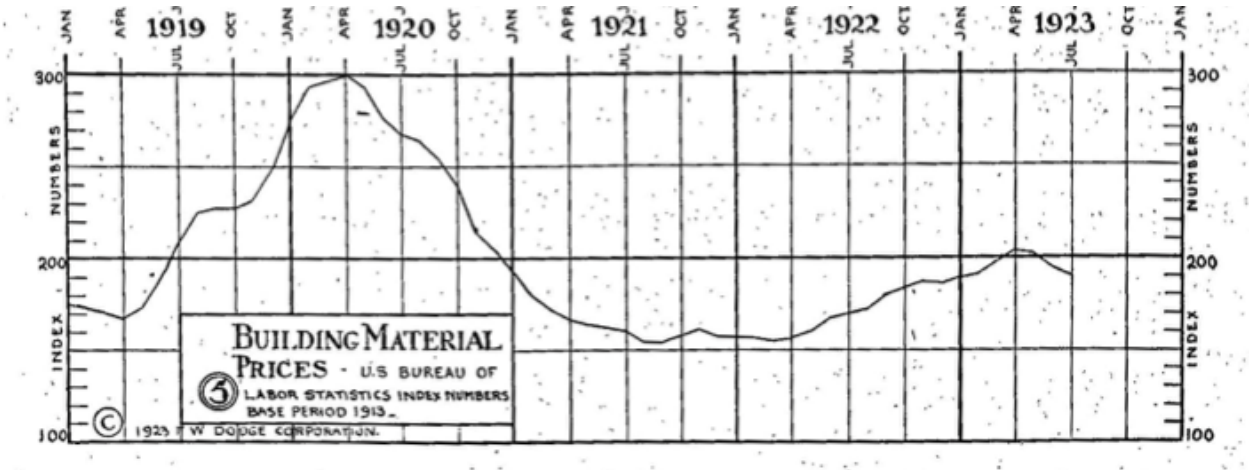

Figure 2.2: Building Material Prices, collected by F.W. Dodge and printed in *The Architectural Record*. Note the very high levels in the aftermath of the War (1919-1920) and then the collapse in prices after April 1920. Prices reached a low in the second half of 1921 before rising substantially over the following two years. Source: Holden, Thomas Steele. "Architects and the Business Cycle". *The Architectural Record*, vol. 54. October, 1923. P. 385.

By the eve of the First World War, the civic purposes of private statistical series had become obvious: understanding the tempo of economic fluctuations allowed governments, capitalists, and academics to predict the state of the market at some future point in time. Such forecasting had myriad applications. Governments would know when to time public works projects, in order to take advantage of low materials prices and to put idle laborers to work. Producers of heavy equipment would know when to accelerate production in order to prepare for a coming uptick in demand. They would likewise know when to halt production even when demand seemed in full swing.[8]

---

[7] Weiss, Marc A. *The Rise of the Community Builders: The American Real Estate Industry and Urban Land Planning*. Columbia History of Urban Life. New York: Columbia University Press, 1987. Pp. 53-60. Davies, Pearl Janet. *Real Estate in American History*. Washington: Public Affairs Press, 1958. Abbott, Paul, and Scott Bruns. *Reminiscences of Paul Abbott*, 1964. P. 15. Kitchens, Alton Walker, Elisabeth Earley, and Dwight D Rangeler. *Reminiscences of Alton Walker Kitchens*, 1973. P. 15.

[8] The historian Walter Friedman navigates the babble of private consultancies and forecasting services which made use of this new wealth of information in the first three decades of the twentieth century in *Fortune Tellers: The Story of America's First Economic Forecasters.* These included Moody's Investors' Service; the Bankers Statistics Corporation of New York City, which counted among its editors and

By the second decade of the twentieth century, the most obvious and immediately pressing application of these private statistics was military mobilization. In the fall of 1915, Franklin T. Miller penned an article in the business publication *Outlook* advocating for a comprehensive inventory of the nation's industrial capacity: in effect, an immense scaling-up of the statistical documentation his firm already undertook for construction to the world of industrial production as a whole. "The plan which obviously suggests itself as most effective for the production of munitions at the shortest notice involves the working out on a practical basis of a system which may well be called the Industrial Mobilization of America." That system would include "the enumeration and classification of all manufacturing plants in the country, the ascertaining of the number and kinds of machines they use, and the number of workmen, skilled and unskilled, they employ."[9]

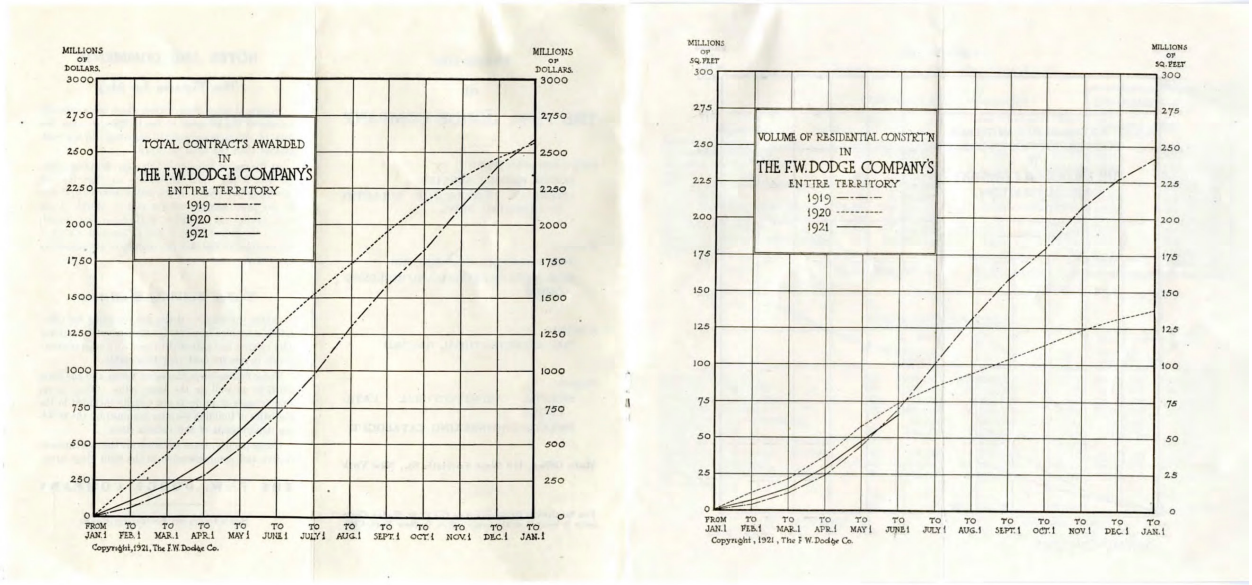

Figure 1.3: Volume of nation-wide construction month-by-month, for the years 1919, 1920, and 1921 (through May). Source: F.W. Dodge Corporation. Franklin T. Miller Papers, Hoover Presidential Library.

Miller's proposal provided a model for the separate programs adopted by the US Departments of the Army and Navy, respectively, which were in turn consolidated into the War Industries Board in 1917. Miller served as Director of the Division of Construction and Development for the U.S. Department of Labor during the First World War. Miller would prove a pivotal figure: both in forging a closer liaison between government and industry through the sharing of national statistics, and – as we shall see – in making housing and construction a core

consultants such economists as W.C. Mitchell, R.T. Ely, and W.I. King; the Composite Plot of the statistician Roger Babson; the Brookmire Economic Service; and the Harvard Economic Service. Friedman, Walter A. *Fortune Tellers: The Story of America's First Economic Forecasters*. Princeton: University Press, 2013. For a discussion of several of these forecasting services by a contemporary observer, see Clark, *Journal of the Canadian Bankers Association.* P. 215.

[9] Miller, Franklin T. "Industrial Mobilization by Pre-arrangement." *Outlook*, November 17, 1915.

part of the federal government's reconstruction efforts after the war.[10]

The crisis of war forged an alliance between government, business, and academia; and the experience of war yielded lessons for each. For government bureaucrats, wartime pressures illuminated the need for a permanent set of national statistics; captains of industry were assured of the value of economic models and mathematical techniques as methods for improving efficiency and projecting future market conditions; and academic economists became convinced of the value of industrial statistics as a testing ground for economic theories.[11]

Miller's vision of a centralized clearinghouse for the nation's mass of private business statistics was realized in 1920 as the privately-funded National Bureau of Economic Research (NBER), with the economist Wesley Clair Mitchell as director. The NBER offered an institutional space where economic theory could be applied to industry statistics and thereby provide practical insights to both government policymakers and business leaders. In the vision of the institution's founders, the NBER would be a force for tempering the hazards of the American industrial system: its inclination towards waste, inefficiency, overproduction, and misallocation of resources, and its corresponding tendency towards periodic downturns which threatened the social order. The NBER would serve as the brain to American industry's brawn: consolidating production statistics produced by private enterprises into industry-wide tallies and then publicizing market analyses which no individual concern had the resources to undertake on its own. The NBER functioned in many ways as a research arm of the federal government, and many of its economists held official or unofficial posts within one of the federal agencies at some point during the decade.[12]

The self-evidently destructive fluctuation of the so-called "business cycle" was the chief object of this world. In the words of Wesley Clair Mitchell, "No one who studies the record of the past can doubt the reality of this cyclical movement in business."[13] To better understand this cyclical movement was the core objective of the economics establishment. The topic consumed

---

[10] Thelander, Theodore A. "Josephus Daniels and the Publicity Campaign for Naval and Industrial Preparedness Before World War I." *The North Carolina Historical Review* 43, no. 3 (1966): 316–32.

[11] In words of Wesley Clair Mitchell: "We cherish the hope that what they have helped accomplish during the war toward the guidance of public policy by quantitative knowledge of social fact may not be lost in the period of reconstruction through which we are passing, and in the indefinite period of peace upon which we are about to enter. To forward that hope the Association may seek a more active share in the work of federal statistics in the future than it has ever taken in the past." "Statistics and Government," *Publications of the American Statistical Association* 16.125 (March 1919), p. 224.

[12] The historian Timothy Shenk comprehensively explores the founding of the NBER, its early objectives, and its intellectual and political milieu in his 2016 PhD dissertation *Inventing the American Economy.* In Shenk's words, "The triple shocks of continuing fallout from the Great War, the beginning of the transition to peace, and Bolshevik victory in Russia all helped spur the NBER's founding." Timothy Edward Shenk, "Inventing the American Economy", (Columbia University, 2016), p. 38

[13] Mitchell, Wesley C. "The Crisis of 1920 and the Problem of Controlling Business Cycles." *The American Economic Review* 12, no. 1 (1922): 20–32.

economic thinkers from across industry, government and academia and spanned the political spectrum, from communists to advocates of *laissez faire*.[14]

The NBER's philosophy found a devotee in the new Secretary of Commerce, the former mining engineer Herbert Hoover. Appointed to Harding's cabinet in March 1921, Hoover had a deep faith in the power of statistics to transform American industry and was captivated by the idea that the key to stable prosperity lay in better information. Hoover was an admirer of Wesley Claire Mitchell and stayed abreast of the NBER's business cycles research throughout his time in office. The NBER and the Department of Commerce would become reciprocal organizations: the NBER summoned the greatest minds of American economics to the problems of industry, oftentimes using industry data which had been collected by the Department of Commerce. The Department of Commerce, in turn, worked to form industry organizations, best practices, and codes designed to translate NBER research into industry practice. The NBER took as its principal object the analysis of the business cycle, the Department of Commerce its management.

Thinkers in both institutions cultivated the philosophy that comprehensive business statistics would allow private actors to temper their own behavior. Statistical information about the direction of market movements would enable private actors to time their production accordingly and thus reduce the extremes of the market cycle. The role of organizations like the NBER and the Department of Commerce would be to secure information from private sources, to compile these various resources into a comprehensive snapshot of economic movements, and to generate market analysis thereon. These agencies together would function as a weather service for the business world: not regulating private actors outright, but giving them the information they needed to make more sensible decisions.

PART II: Construction Statistics and Federal Policy

The business cycle – and the role of construction within it – was of more than academic interest. The intense Depression of 1921 left millions of young men – only just returned from military service in Europe – out of work. The recession also seemed to exacerbate the chronic under-supply of housing which had afflicted the country since the end of hostilities in 1919. The co-incidence of mass unemployment and inadequate housing supply seemed paradoxical: how could the United States, with its boundless productive capacity, have both a surplus of workers and a shortage of housing? Why was the market not channeling the abundance of labor towards this scarcity of built space? The individual occurrence of either one of these problems risked pushing the populace towards Bolshevism; their co-occurrence pointed to the fundamental bankruptcy of *laissez-faire* economics itself, of the idea that a competitive market system would on its own yield socially desirable outcomes.[15]

---

[14] King, Willford I. "Trade Cycles and Factory Production". In Persons, Warren M. *The Problem of Business Forecasting; Papers Presented at the Eighty-Fifth Annual Meeting of the American Statistical Association, Washington, D.C., December 27-29, 1923*. Boston and New York, [c1924]. Pp. 13-14.

[15] In the words of the historian Evan Metcalfe, "Hoover explicitly denied the ability of Adam Smith's model of independent competition to meet twentieth century American problems." Metcalf, Evan B. "Secretary Hoover and the Emergence of Macroeconomic Management." *Business History Review* 49, no. 1 (Spring 1975): 60–80.

The simultaneity of these two vast problems was the formative challenge facing Herbert Hoover upon his appointment as Secretary of Commerce in March 1921. The business cycle scholarship emanating from the NBER and from statistical services such as the F.W. Dodge Corporation provided a template for understanding these linked problems and for charting a path forward. Britain and France had responded to their own domestic housing shortages with the first large-scale experiments in public housing in the years immediately following the First World War. The ideas in circulation among American economists in these years pointed towards a different, subtler approach. The nation's housing shortage was patently a market failure; the private market for housing could nevertheless be made to function better through the application of economic research, statistical analysis, and scientific management. In the eyes of the era's leading economists and statisticians, better quality information held the key to taming this vast industry. Reliable, comprehensive statistics would allow the construction sector to temper its more chaotic impulses and to subject its production to the careful analysis of trained economic experts. Such analyses offered the promise of a stabilized and continuous supply of high-quality built space, without the need for more heavy-handed government intervention.

The vision which took shape at Hoover's Commerce Department over the following years was of a business community voluntarily adopting methods of planning, production standards, and inter-firm cooperation in order to avert such market failures. Hoover's Commerce Department came to embody and also further develop a philosophy which had been central to the Progressive movement: large businesses and trade associations could function as an embodiment of the collective will of civil society, working to attain sensible societal goals such as full employment, safe living and working environments, homeownership, city planning, and the economical use of natural resources. In many instances, large business associations sought to obviate the need for direct government regulation by attempting – or appearing – to regulate the practices of their own members and to further the public interest.[16]

Housing, construction, real estate, and mortgage finance had remained largely peripheral to the research of the NBER through the 1920s. Only in the 1930s, with the birth of large federal agencies focused on housing finance, would these topics come to occupy a central place in the NBER's research agenda. By contrast, the built environment figured centrally in the Department of Commerce's activities from the very beginning of Hoover's term as Secretary in 1921. Intervention in the built environment – whether through introducing standards for new housing production, facilitating new channels for the flow of mortgage credit, or encouraging zoning

[16] The historian Ellis Hawley refers to Hoover's vision of businesses and business associations working in tandem with government agencies as that of an "associative state". Hoover's vision bears a jarring resemblance to the Leninist ideas then taking shape in Soviet Russia. Marxism-Leninism also valued the planning and management capabilities of larger business units vis-à-vis smaller ones. Hawley, Ellis W. "Herbert Hoover, the Commerce Secretariat, and the Vision of an 'Associative State,' 1921-1928." *The Journal of American History* 61, no. 1 (1974): 116–40. On Hoover's philosophy, see also: Barber, William J. *From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921-1933*. Historical Perspectives on Modern Economics. Cambridge; New York: Cambridge University Press, 1985. Metcalf, Evan B. "Secretary Hoover and the Emergence of Macroeconomic Management." *Business History Review* 49, no. 1 (Spring 1975): 60–80. Alchon, Guy. *The Invisible Hand of Planning: Capitalism, Social Science, and the State in the 1920s*. Princeton: Princeton University Press, 2014.

laws across American municipalities – became the primary mechanism by which the Department of Commerce sought to influence the economy at large.[17]

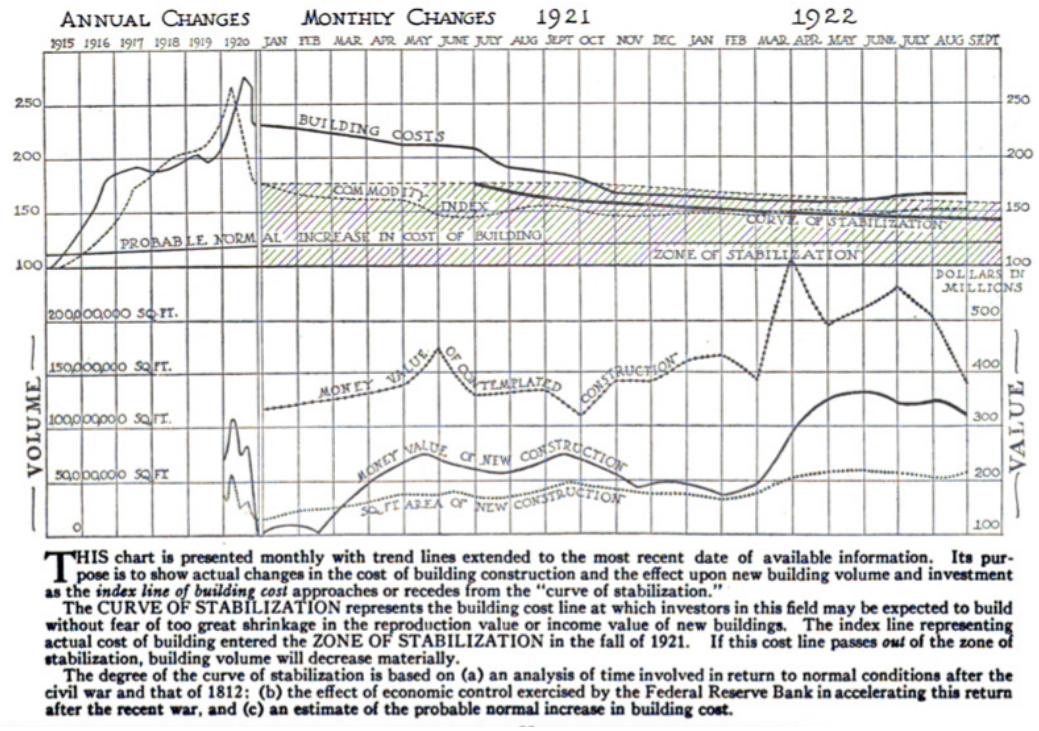

Figure 2.4: Trends in the building industry, as reported in the October 1922 issue of *Architectural Forum*. Note the upward trend in "Money Value of Contemplated Construction" beginning in October 1921. This uptick corresponds with the time at which the trend of "Building Costs" falls into what the *Forum* refers to as the "Zone of Stabilization". Note that the "Money Value of New Construction" begins a substantial increase several months later, in March 1922. At the time of this graph's publication, the trend of "Building Costs" had very recently passed above the Zone of Stabilization, driving the dollar value of contemplated construction downwards. *Architectural Forum* did not at this time detail the source of these statistics (they would for later versions of this chart in subsequent years) but the series tracking the volume and value of new construction most likely come from the F.W. Dodge Corporation. "With the decline of construction costs, however, there has been such a marked decrease in the ratio of necessary equity to total land and building cost that the first healthy signs of speculative building activity have developed, particularly in the various classes of buildings which constitute dwellings." Source: Taylor, C. Stanley. "1922 Should Prove a Good Year for Architects." The Architectural Forum. April, 1922.

There were three reasons for the heightened importance of construction in the Department of Commerce's vision. In the first instance, there was already a long and established tradition of municipal, state, and even federal intervention in the built environment in the form of public works. That government should invest in basic infrastructure such as roads and waterworks as well as civic structures such as schools, post offices, courthouses, and municipal buildings was widely accepted, even by those who feared the prospect of government overreach.

[17] Snowden, Kenneth. "A Historiography of Early NBER Housing and Mortgage Research." In *Housing and Mortgage Markets in Historical Perspective*, 15–36. Chicago: University of Chicago Press, 2019.

In the second instance, the Department of Commerce as a federal agency was more subject to political currents than was the NBER, which had a degree of autonomy in setting its research prerogatives. Calls for greater government involvement in the built environment had been building since the final years of the nineteenth century across a broad cross section of American society. These calls obtained a new urgency with the acute nation-wide housing shortage in the immediate aftermath of the First World War, as returning military personnel encountered housing markets which had seen minimal new stock introduced for several years.

The third reason for the elevated position of the built environment in the Department's vision was the vast scope of the construction industry itself, whose true size and complexity came into view with the new sources of statistical information then emerging. To view "construction" as a cohesive industry – encompassing not just the on-site building activity itself but the respective processes of raw materials production, design, engineering, etc. – seems itself to be a product of this era: in the words of F.W. Dodge's Thomas Holden,

> The conception of construction as a well-defined industry is a new one and has not yet been generally accepted. We are accustomed to think of the lumber industry, the brick and clay industries, the cement industry, the contracting business, the architectural and structural engineering professions, and the building trades, as units. But we rarely consider them all grouped together as various elements of an enormously diverse and complicated industry whose finished product is that very important economic unit, a building.[18]

With "construction" defined thus, no industry save agriculture employed a greater number of workers or yielded a greater amount of wealth. Likewise, no industry was nearly so complex or so ramified: a single construction project was "the initiator of a practically endless series of transactions", stimulating production on the part of dozens of different industries. When it came to tempering the flux of economic life, construction was thus "the balance wheel of business" in Thomas Steele Holden's view. The philosophy that crystallized at the Department of Commerce from Hoover's earliest days as Secretary was that stabilizing the business cycle – and thus putting to work the millions of laborers left idle in times of recession – rested ultimately on stabilizing construction. [19]

[18] Holden, "Construction: A Balance Wheel of Business." *Administration: the journal of business analysis and control."* 1923, Volume 5 Issue 6. See also Franklin D. Roosevelt. "The Task Ahead for Building." *Nation's Business* 11, no. 1 (1923). Roosevelt wrote as chairman of the American Construction Council, organized in May 1922 with the support of Commerce Secretary Herbert Hoover. Roosevelt emphasizes that it is unusual but nevertheless important to view construction as a cohesive industry.

[19] Hoggson, Noble Foster and E. J. Russell, "Uniting the Construction Industry: Progressive Aims of American Construction Council Now Being Formed The Raising of Standards and Efficiency Its Object," *Building Age and the Builder's Journal (1922-1924)* 44, no. 6 (June 1, 1922): 27–28; Holden, Thomas Steele. "Construction: A Balance Wheel of Business." *Administration: the journal of business analysis and control."* 1923, Volume 5 Issue 6.

The Calder Committee

The nation-wide housing shortage was already the subject of a major Senate investigation chaired by Senator William Calder of New York. The so-called Calder Committee, established in 1920, was the first such federal investigation into the nation's building stock, and served to forge new links between the federal government and the private real estate development industry. The Committee released its final report on the nation's housing situation just days before Hoover took office. Its findings would be formative for Hoover's vision of the appropriate role for government in the supply of housing.[20]

The investigation had begun with the intention of uncovering abuses on the part of both construction labor and mortgage capital. It concluded by essentially blaming labor for the lack of good-quality housing. Construction unions drove up the cost of new housing by disrupting the construction process: orchestrating strikes, setting prices for materials, and refusing to work with certain materials suppliers. The investigation's findings emphasized the backwardness of the construction trades, wholly inadequate to the physical needs of a complex, urbane society such as the United States. A utopia of universal high-quality buildings was attainable with modern production and management techniques, but it was blocked by the pugnacity and incompetence of construction labor.[21]

F.W. Dodge's Franklin T. Miller was intimately involved with the Calder Committee from the start, with the official title Executive Secretary to the investigation committee.[22] The committee's report, released in early March 1921, was notable for its rejection of government housing programs along the lines of those then emerging in France and the United Kingdom. Government-built public housing in the European style was unconscionable in the United States

---

[20] The Calder Committee presented its findings in Senate Report 829 in March 1921. Kenneth Snowden offers a helpful summary of the Calder Committee's recommendations and impact in "A Historiography of Early NBER Housing and Mortgage Research." In *Housing and Mortgage Markets in Historical Perspective*, 15–36. Chicago: University of Chicago Press, 2019.

[21] New York State Legislature Joint Committee on Housing. *Report of the Joint Legislative Committee on Housing*. Legislative Document (Extraordinary Session) No. 11. State of New York. Albany: J.B. Lyon Company, printers, 1920; United States Congress Senate Select Committee on reconstruction and production. *Reconstruction and Production. Hearings before the Select Committee on Reconstruction and Production, United States Senate, Sixty-Sixth Congress, Third Session, Pursuant to S. Res. 350 Authorizing the Appointment of a Committee to Inquire into the General Building Situation and to Report to the Senate before December 1, 1920, Such Measures as May Be Deemed Necessary to Stimulate and Foster the Development of Construction Work in All Its Forms.* Washington: Govt. print. off., 1921.

[22] Miller already had some experience as an industry expert consulting federal agencies on housing. He had recently spearheaded the nationwide "Own Your Own Home" campaign launched in 1918 by the U.S. Department of Labor, designed to stimulate mortgage lending by private banks. As the historian Marc Weiss explains, "The government's objective was to defeat radical protest and restore political stability by encouraging urban workers to become home owners. The industry's objective was to stimulate new investment, construction, and sales in the private residential property market." Weiss, Marc A. "Marketing and financing home ownership: Mortgage lending and public policy in the United States, 1918-1989." *Business and Economic History* (1989): 109-110.

and vehemently opposed by NAREB and other industry associations. The Calder Committee's report instead portrayed the housing problem as one of industrial disorganization: the stunted production of built space after the War reflected the country's fragmented, dysfunctional and inefficient construction sector. Other areas of economic life had been transformed by the techniques of mass production, mechanization, and scientific management. In the field of construction by contrast,

> Employers have not been able to organize for continuous work, and hence labor has not been trained or compensated in such industries as it has been in those which have greater continuity of operation. Through nonuniform building codes and through lack of exchange of knowledge of improved practices, the standardization and interchangeability of parts have not reached the degree of perfection which has been reached in mechanical processes, continuously conducted by trained organizations. It is not possible to form an estimate of the efficiency which may be expected in construction when it is allowed to function continuously.[23]

Construction, almost alone among American industries, had failed to enter the machine age. The backwardness and waste of the building industry had functioned to steer capital away from new development into consumer goods in the years following the War, goods which despite their uselessness were at least produced efficiently. As Miller wrote to Hoover in April 1921,

> Credit was not loaned for building because building was too costly, but the credit that was loaned for hoarding increased the cost of subsistence so that labor cost more and buildings cost more and prices advanced at the rate of five points a month until they reached the peak in May 1920... Today we find ourselves with a plant depleted during seven years, with some three million men idle, with an over-supply of consumables, with extended credit...[24]

A dysfunctional construction sector was thus a barrier to both adequate housing for all and to full employment. The Calder Committee's recommendations focused on bringing the production of built space into the twentieth century, and set a template for Hoover's own work as Commerce Secretary. To prod the construction industry towards modernization became the central objective of Hoover's Department of Commerce.

The Calder Committee's primary outcome was to install in the Commerce Department's Bureau of Standards a Division of Building and Housing, whose purpose would be to compile and distribute information from the various elements of the building trades in order to facilitate greater efficiency in building production.[25] One of Hoover's first actions as Commerce Secretary

---

[23] United States House of Representatives. "A Bill Authorizing the Secretary of Commerce to establish in the National Bureau of Standards, a division to be known as the Division of Construction and Housing." 67th Congress, First Session. April 1921.

[24] Miller, Franklin T. Department of Commerce Memorandum. April 12, 1921. Franklin T. Miller papers. Hoover Presidential Library.

[25] United States House of Representatives. "A Bill Authorizing the Secretary of Commerce to establish in the National Bureau of Standards, a division to be known as the Division of Construction and Housing." 67th Congress, First Session. April 1921. P. 5

in March 1921 was to request the service of F.W. Dodge's Franklin T. Miller in launching the Department's new Division of Building and Housing. Miller seems to have been the principal architect of the Division's early work, wielding his extensive industry connections to fashion the new unit into a steering committee of sorts for the construction industry.[26] The real estate publishing empire in Miller's command – which included the F.W. Dodge statistical service, the *Real Estate Record and Builders Guide*, and *Architectural Record* – already was intimately connected with the businesses of real estate, construction, and architecture, and had been party to the professionalization of real estate practice spearheaded by the National Association of Real Estate Boards (NAREB). In large part thanks to Miller's involvement with the Department of Commerce, NAREB became an important private body working to support and publicize the work of the Department's new Division of Building and Housing.[27]

The Division aimed to facilitate the construction industry's modernization by pursuing three separate lines of action. The first was to develop the Division into an information service for the construction industry: a central repository for private statistics, as well as a research laboratory filling the gaps left by private series. Regular statistics on the costs of construction materials and the volume of construction would allow builders and mortgage lenders to time their activity in accordance with the broader business cycle.[28] Hoover, Miller, and the network of economists, housing scholars, and real estate experts they assembled seem to have viewed their new Division of Building and Housing as a guiding light for the construction industry, leading the field from a state of backwardness down the path of modernization.[29] Better, more comprehensive market information would temper the fluctuations of the construction industry and, simultaneously, would so enhance the flow of liquidity to the housing sector as to make government involvement in housing unnecessary. Miller drew towards the Department of Commerce a number of statisticians with experience analyzing construction data. He helped coax the American Telephone and Telegraph (AT&T) Company to "lend" to the Department their young statistician Homer Hoyt, who had developed an expertise in analyzing the price trends of construction materials during the War and who would become a pioneering figure in American

[26] Hoover, Herbert. Letter to President Harding. March 16, 1921. Franklin T. Miller papers. Hoover Presidential Library. The "Building and Housing" folders at the Hoover Presidential Library have been an incomparable window onto the activities of this division. Franklin T. Miller's correspondence on behalf of the Division during the five months he spent with the Commerce Department number in the hundreds of pages.

[27] Weiss, Marc A. *The Rise of the Community Builders: The American Real Estate Industry and Urban Land Planning*. Columbia History of Urban Life. New York: Columbia University Press, 1987. Pp. 28-29.

[28] Snowden, Kenneth A. "Construction, Housing, and Mortgages." Cambridge University Press. Accessed February 25, 2022.

[29] In the words of the historian Ellis Hawley, by the mid-1920s the Division of Building and Housing "had become the nucleus of a network of cooperating committees and study groups, each tied to the major trade and professional associations in the housing field and each trying, through organized cooperation and educational campaigns, to overcome the "bottlenecks" that held back "modernization" and "rationalization"." Hawley, Ellis W. "Herbert Hoover, the Commerce Secretariat, and the Vision of an 'Associative State,' 1921-1928." *The Journal of American History* 61, no. 1 (1974): 125.

land economics in the 1930s and postwar decades.[30] Miller likewise secured the cooperation of the renowned housing researcher and Progressive champion Lawrence Veiller, architect of New York State's first tenement house laws, and the urban planner Harland Bartholomew.[31]

The construction industry would subsequently become the focus of two immense national surveys spearheaded by the Department under Hoover's tenure: the study *Business Cycles and Unemployment* (1923) and the subsequent *Seasonal Operation in the Construction Industries* (1924). Both entailed the compilation of large volumes of statistics produced by private enterprises. The former study reinforced the perspective that more comprehensive information would allow private enterprises to anticipate and thus counter-balance fluctuations in the market. It likewise articulated the vision that the construction industry in its vastness could itself hold the key to tempering the business cycle:

> Activity in construction bears a close relation to general industrial conditions. The construction and equipment of new buildings result not only in the employment of building trades labor but in production of lumber, cement, iron and steel products, brick, sand and gravel, lime, hardware, paint, electrical equipment, furniture, textiles and a variety of other materials.
>
> If building falls off there is bound to be slackening in many other lines of industry, resulting in unemployment, decreased purchasing power of employees and further depression. The ebb and flow in the demand for construction, seasonally and between different years, thus to a large degree affect our economic stability.[32]

The corresponding role for the federal government was clear:

> It is necessary, first, to develop information as to probable future demands for labor and materials; next, to develop the habit of scheduling construction and repair work with reference to such demands. This means better housing, better working conditions, and economies in building of all sorts. It will be to the advantage of construction industries, their

[30] AT&T itself appears to have had an interest in construction research. The Department of Commerce dossier on Homer Hoyt notes: "The American Telephone and Telegraph Company is interested in the price of building materials and the volume of building operations, and the capital requirements of the building industry, etc., because it is a very large owner and builder of buildings. It is said that if the buildings owned by the entire Bell system were assembled together, they would make a city as large as Richmond, Virginia." Department of Commerce, Office of the Secretary. "Memorandum for Mr. Herter – Subject: Regarding Mr. Homer Hoyt." March 30, 1921. Hoover Presidential Library, F.T. Miller papers.

[31] All three figures would prove integral to the Department's massive data collection efforts in the 1930s and the subsequent formation of the FHA. Miller, Franklin T. Department of Commerce Memorandum. March 30, 1921. Franklin T. Miller papers. Hoover Presidential Library.

[32] Committee on seasonal operation in the construction industries. *Seasonal Operation in the Construction Industries, the Facts and Remedies; Report and Recommendations of a Committee of the President's Conference on Unemployment, with a Foreword by Herbert Hoover*. McGraw-Hill book company, 1924. P. vi.

workers, and the public which now spends in construction work billions of dollars annually.[33]

The second means by which the Division sought to facilitate the modernization of the construction industry was by encouraging standardization and efficiency among architects and construction teams. The principle means by which the Division sought to effect this was through the standardization of building codes and urban planning practices across jurisdictions nation-wide. In his first year in office Hoover organized an industry-wide conference on the *Elimination of Waste in the Building Industry*, whose central conclusion was that municipal building codes represented ideal media through which to guide private actors towards greater efficiency.[34] From the perspective of Miller and his staff of statisticians at the Division of Building and Housing, building codes should be treated as optimization problems. The fact that codes differed along such fundamental dimensions as permissible wall thickness, floor load, or stress on timber, concrete or steel was nonsensical, when surely there was an ideal figure for each of these structural characteristics which minimized construction costs while maintaining structural integrity.[35] Miller enumerated the social benefits of optimizing building codes thus:

> With the co-operation of manufacturers of materials, fire insurance companies, architects, and engineers, the federal government might bring about better buildings at a cost within the reach of the average buyer or renter – that is, a five-room house at $3000, or at $600 per room, compared with $1000 per room at the peak of prices, or compared with approximately $800 per room at present.
>
> Authorities agree that with already established data – based on tests and practice and consistent with durability, safety, and healthfulness – modern scientific design can reduce the amount of materials and labor necessary for construction by approximately 20%, besides the incident conservation of fuel and transportation.[36]

The third means through which the Department sought to modernize the construction industry was by encouraging the emergence of industry organizations and the formation of larger, more sophisticated business units capable of applying techniques of mass production and scientific management to the construction field. Fashioning these changes via government fiat

---

[33] Committee on seasonal operation in the construction industries. *Seasonal Operation in the Construction Industries, the Facts and Remedies; Report and Recommendations of a Committee of the President's Conference on Unemployment, with a Foreword by Herbert Hoover*. McGraw-Hill book company, 1924. P. vii.

[34] Boyd, D. Knickerbocker. "Elimination of Waste in the Building Industry". Structural Service Bureau, Philadelphia, PA, March 31, 1921. Memorandum. Hoover Presidential Library, F.T. Miller papers. Franklin T. Miller. "Building Codes". Memorandum to Secretary Hoover. March 30, 1921. Pp. 1-2. Hoover Presidential Library, F.T. Miller papers.

[35] To this end, Franklin T. Miller attempted to secure the services of New York City Building Commissioner and NABOM President Rudolph Miller (presumably no relation), who was a recognized authority on building codes across the country. Miller, Franklin T. United States Senate Special Committee on Reconstruction and Production. Letter to New York City Mayor John F. Hylan. March 25, 1921. Franklin T. Miller papers. Hoover Presidential Library.

[36] Miller, Franklin T. Department of Commerce Memorandum. March 30, 1921. Franklin T. Miller papers. Hoover Presidential Library.

was of course out of the question: these changes were rather assumed to emerge organically by virtue of the information streams newly centralized by the Department. As F.T. Miller noted in a Department of Commerce memorandum on the importance of uniformity in municipal building codes, "Increasing standardization in products, methods and accounts means larger business or closer business association. These may be, and many are, in the interest of public welfare."[37]

Larger, more sophisticated business units would be capable of working continuously through the year rather than seasonally; adhering to tested standards of design and building engineering; employing advanced techniques of mass production and distribution; and with greater access and legibility to the nation's capital markets. The larger business units of the new construction industry would base their development decisions on sound market data indicating the present levels and trajectories of materials prices, labor costs, rents, and national construction volume. To mandate or fashion these changes directly was beyond the remit of the state, but government agencies nevertheless could nudge the industry towards these ends by compiling business information and disseminating best practices. Municipal building codes were themselves a means by which to nudge the market towards the provision of adequate housing for all.[38]

---

[37] Miller, Franklin T. Department of Commerce Memorandum. April 12, 1921. Franklin T. Miller papers. Hoover Presidential Library.

[38] Lubove, Roy. *The Urban Community: Housing and Planning in the Progressive Era*. Westport, Conn.: Greenwood Press, 1981. John F Bauman. "Community Building versus Housing Reform: Roy Lubove and the History of Housing Reform in the United States." *Pennsylvania History* 68, no. 3 (2001): 293–313. Miller, Franklin T. Department of Commerce Memorandum. March 30, 1921. Franklin T. Miller papers. Hoover Presidential Library. The country's first wave of zoning ordinances was a product of this alliance. In 1922 the Department of Commerce sponsored and published a *Zoning Primer* which would become an important reference point for the 1929 *Regional Plan of New York and its Environs* as well as for countless local zoning ordinances over the course of the 1920s. The committee which oversaw the research and publication of the Department's *Zoning Primer* was a confederacy of the nation's leading urbanists: in addition to Lawrence Veiller, its authors included Frederick Law Olmsted, Jr., President of the American Society of Landscape Architects and former president of the American City Planning Institute; Edward M. Bassett, chief author of New York City's foundational 1916 Zoning Resolution; Irving B. Hiett, President of the National Association of Real Estate Boards (NAREB); and Nelson P. Lewis, former president of the American City Planning Institute and future executive engineer of the Regional Plan of New York. The *Primer* served as the basis for the Standard State Zoning Enabling Act issued by the Department of Commerce in 1924, thereby providing the basic legal framework for development controls and land use planning in the United States.Bassett, Edward M, Irving B Hiett, John Ihlder, Morris Knowles, Nelson P Lewis, J Horace McFarland, Frederick Law Olmstead, Lafirence Veiller, and John M Gries. "A Zoning Primer by the Advisory Committee on Zoning Appointed by Secretary Hoover." Gaithersburg, MD: National Bureau of Standards, 1922. United States Department of Commerce Advisory Committee on Zoning. *A Standard State Zoning Enabling Act: Under Which Municipalities May Adopt Zoning Regulations*. Washington: Govt. Print. Off., 1924. Meck, Stuart. *Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change*. Routledge, 2020. Lubove, Roy. *The Urban Community: Housing and Planning in the Progressive Era*. Westport, Conn.: Greenwood Press, 1981. John F Bauman. "Community Building versus Housing Reform: Roy Lubove and the History of Housing Reform in the United States." *Pennsylvania History* 68, no. 3 (2001): 293–313.

Part III: Towards a Self-Regulating Construction Sector?

The Department of Commerce and its associates at the F.W. Dodge Corporation viewed with favor the rapid expansion in inter-regional mortgage lending at the hands of large mortgage bond houses, operating across state lines, over the course of the decade. The Department lent its active support to private industry bodies – such as the National Association of Real Estate Boards and the American Construction Council – which were then working to establish inter-jurisdictional standards of property appraisal, mortgage origination, and building regulations.

The Department even took an active hand in fashioning new professional associations. Most notable on this front was Hoover's work to establish the American Construction Council in 1922, headed by Franklin Delano Roosevelt.[39] Hoover laid out his vision for the council in his address at the organization's first annual meeting:

> It ought to be possible for every business man in the United States to know the production and consumption of his commodity promptly, monthly and annually. It ought to be possible to know the volume of construction in progress, to know the demand among all the construction industries so that their plans may be made and their materials laid out long in advance of its consumption, and unless there can be better judgment that there has been as to the probable need, we will always have a very high degree of speculation in these industries.[40]

The American Construction Council (ACC) seems to have functioned as an extension of the Commerce Department, and organized regular conferences convening architects, insurance companies, public officials, materials manufacturers, and those in the business of mortgage finance. The Council adopted similar goals to the Division of Building and Housing – sharing of industry statistics, adoption of building standards, coordination among business units – with the distinction that these goals were to be pursued by industry members themselves.[41]

---

[39] Roosevelt, of course, would repay the favor by running against and then defeating Herbert Hoover in the 1932 presidential election. Hawley, Ellis W. "Herbert Hoover, the Commerce Secretariat, and the Vision of an 'Associative State,' 1921-1928." *The Journal of American History* 61, no. 1 (1974): 133. Weiss, Marc A. *The Rise of the Community Builders: The American Real Estate Industry and Urban Land Planning*. Columbia History of Urban Life. New York: Columbia University Press, 1987.

[40] "Address of Secretary Hoover Before American Construction Council," *The American Architect and the Architectural Review (1921-1924)* 122, no. 2401 (August 30, 1922): 211.

[41] "American Construction Council Organized." *The National Builder (1896-1924)* 65, no. 7 (July 1, 1922): 67–69. The American Construction Council was in part an outgrowth of the American Institute of Architects' own efforts since the War to organize a National Congress of the Building and Construction Industry. This National Congress was envisioned as a confederation of local "Building Congresses" comprised of the various segments of a given city's construction industry, whose purpose would be to settle disputes among different members and collectively respond to local problems. Boston and New York were the first cities to see local building councils form in 1921. Parker, William Stanley. "The Building Congress Idea". *The Architectural Forum* 43, no. 6 (June 1922): 235-236. "Architects Join National Group: San Francisco Men Affiliate with National Congress of the Building and Construction Industry." *The American Architect* 119, no. 2358 (March 2, 1921): 257.

In his address to the Council at the organization's third annual meeting in 1924, Council president Franklin Delano Roosevelt spoke with confidence about the progress of the industry in the two years since the organization's founding:

> There has not been the marked seasonal decline appearing so noticeably in the past with the coming of the fall and winter months. On the contrary the amount of new work contracted for and begun has held up for this time of the year unusually well. This shows a very favorable response on the part of the public to promote the scheduling of building operations so as to take advantage of the relative slack in materials and labor during the fall and winter months.[42]

The Council had been instrumental in curbing an incipient boom in construction before it snowballed into an outright bubble:

> One year ago a general condition, characterized by nearly every one trying to build at once, existed throughout most of the country. The resulting congestion created a serious situation which caused the American Construction Council, in cooperation with others, to sound a note of warning and suggest that speculative and unnecessary building be suspended until the supply of labor and materials could catch up. This view of the situation came to prevail throughout the country and the volume of construction and price levels did not rise to the breaking point.[43]

The American Construction Council would demonstrate its sagacity and capability of collective action once again in the fall of 1926, after the collapse of the mortgage bond house G. L. Miller & Co.. The company was ordered into receivership on September 4, 1926 after defaulting on the outstanding bond of a Manhattan real estate venture the previous month. The incident appeared to be a one-off: no other such company failed for the remainder of the year. As head of the Construction Council, Roosevelt promptly convened a conference of the nation's bond houses alongside investment bankers, state securities commissions, and contractors in New York in November 1926 with the purpose of investigating practices in the mortgage bond business and establishing minimum industry standards. The capacity of the industry to collectively respond to individual crises affecting their members seemed to present evidence of the field's competence and foresight.[44]

---

[42] Roosevelt, Franklin Delano. Keynote address, American Construction Council annual meeting, October 2-3 1924. Excerpt printed in The American Construction Council, "Better Building Being Urged," *Building Age and National Builder (1924-1929)* 46, no. 11 (1924): 107-108.

[43] Roosevelt, Franklin Delano. "Conditions in the Building Industry Today: A Statement by the American Construction Council." *Building Age and the Builder's Journal.* Jun. 1, 1924.

[44] The Wall Street Journal. "G.L. Miller & Co. in Receivership: Liabilities Listed at $6,915,324." September 4, 1926. The resulting agreement formulated at the American Construction Council meeting was signed by five the country's largest bond houses: Greenebaum Sons Investment Company of Chicago, American Bond & Mortgage Company of Chicago, the F.H. Smith Company of Washington, D.C., Federal Bond & Mortgage Company of Detroit and S. Ulmer & Sons, Inc., of Cleveland. The country's largest real estate bond house, S.W. Straus & Co., did not sign the agreement, although its President verbally committed to the spirit of the agreement. Allen, Irving. "Revision of Mortgage Bond Practices Inadequate." *Annalist* 29 (1927): 235–36.

In a short number of years, the mortgage bond houses had become the most important intermediaries in the country's urban property markets. Their business had grown from a meager $50 million in 1920 to over $1 billion of outstanding issues at the time of Holden's writing at the beginning of 1927. Confidence in this form of financing was integral to the nation's continued prosperity: as Holden noted, the mortgage bond houses were responsible for a great portion of the nation's offices, apartment buildings, hotels and theaters. Holden commented with approval on the wherewithal of the mortgage finance business in voluntarily auditing its members' own behavior:

> Now it seems that the first mortgage bond business is taking the initiative in demonstrating to the investing public that it deserves the same confidence that any other conservatively-managed investment business does. Such things do not ordinarily happen in a period of great prosperity; they are characteristic of the present era of "prudent prosperity.[45]

Holden spoke for a construction field which saw in these new financial actors precisely the sort of erudition and responsible management for which they had been advocating in the construction field. Bond houses and other large, inter-regional real estate companies marketing securities to the public were seen as the solution to the industry's need for greater organization and expertise. Leaders of the construction industry and the investment banking community denied that the G.L. Miller bankruptcy pointed towards a more systemic problem.[46]

For many in the industry, the bond houses represented the vanguard of the American construction field, with the largest among them employing teams of economists and architects to promote the science of urban real estate market analysis and to decipher the process of high-rise development for investors and lay audiences. The largest of them all, the S.W. Straus Corporation, was a fount of original scholarship on the dynamics of property markets and the science of skyscraper construction. Its chief economist William Clifford Clark actively participated in research initiatives of the NBER, the American Economic Association, and the American Statistical Association (ASA).[47]

As it turned out, S.W. Straus was also the most egregious of all the bond houses. Its financial practices became infamous: intentionally over-valuing proposed buildings in order to sell more bonds, issuing new bonds to make payments on other outstanding bonds secured against buildings which had already foreclosed, hiding the inability of new projects to find tenants, actively misleading bond purchasers about the progress of construction on new buildings.

---

[45] Holden, Thomas S. "Building Prospects for 1927." *Architectural Record* 61 (1927): 27-32

[46] "Resolution on Real Estate Bonds: Mortgage Bankers' Association of America Takes Definite Stand on Construction Issues; Complete Text of Bond House Agreement: Statement Signed and Published by Five Companies." *Special Bulletin, Mortgage Bankers Association of America*, no. 105 (1928): 3.

[47] On the Institute for Land and Public Utility Economics, see Marc Weiss' excellent analysis. Weiss, Marc A. "Richard T. Ely and the Contribution of Economic Research to National Housing Policy, 1920-1940." *Urban Studies (Edinburgh, Scotland)* 26, no. 1 (1989): 115–26.

Conclusion

Few observers in the late 1920s noticed the warning signs which after the fact would seem obvious: an immense construction boom in spite of a surfeit of quality space, an epidemic of office vacancies, a systemic tendency for bond houses to over-appraise the value of their proposed projects, the use of the stock and bond markets to finance the entire cost of new buildings. Writing in the *Architectural Record* in January 1927, F.W. Dodge's Thomas Steele Holden surveyed the industry events of the previous year and anticipated trends in the year ahead. Holden had been writing such annual surveys in the January issue of *Architectural Record* since the early 1920s. The practice of anticipation had grown easier with time: not only was the science of business forecasting now more sophisticated than it had been at the dawn of the 1920s; the universality of statistical analysis and forecasting among industry participants meant that construction was less prone to panics and wild fluctuations than it had been previously. There were fewer surprises to be had.[48]

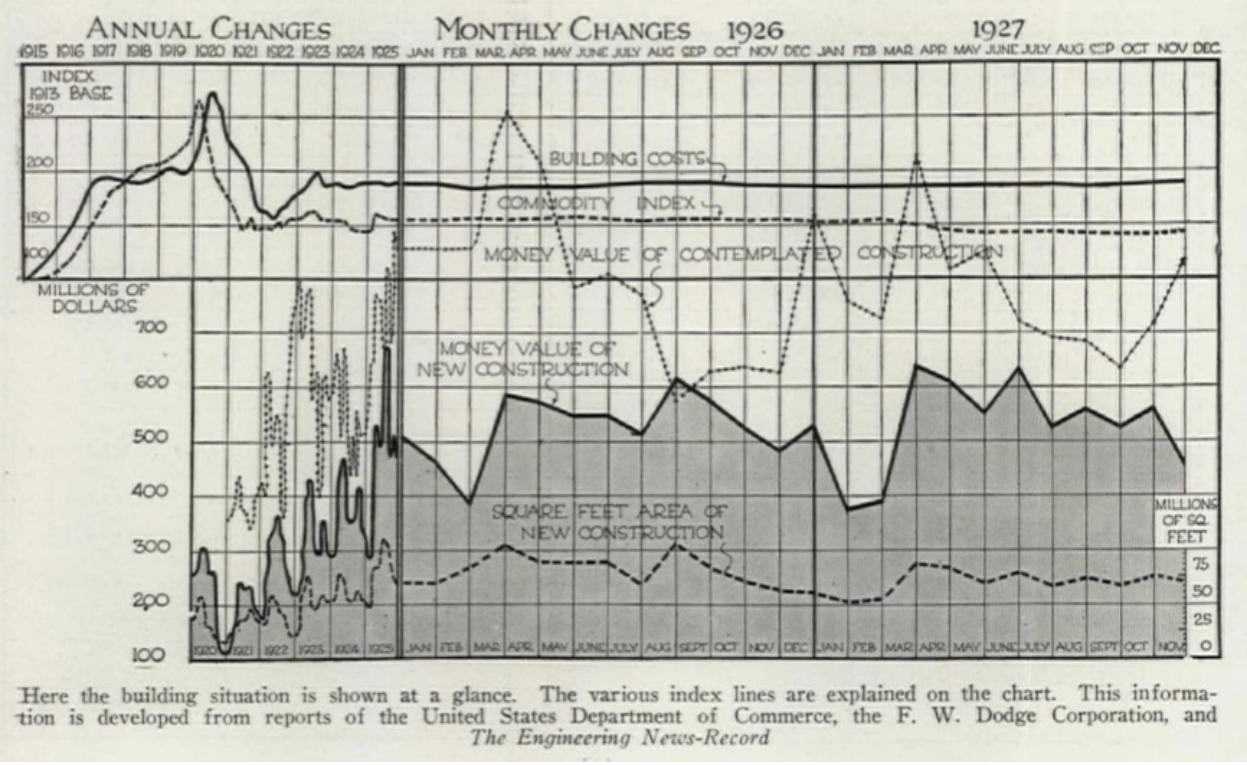

Figure 2.5: The architectural press' techniques of market analysis and forecasting reached new heights of sophistication by the latter 1920s. The data plotted comes from a combination of sources including the U.S. Department of Commerce and the competing information services F.W. Dodge and *Engineering News-Record.* Source: C. Stanley Taylor, *Architectural Forum*, Jan. 1928

Monthly statistics on construction allowed members of the industry to detect incipient bubble dynamics and to avoid getting caught in the vortex of speculation: the Florida land boom of 1926, while destructive to those involved, was contained to that state; industry observers had

[48] Holden, Thomas S. "Building Prospects for 1927." *Architectural Record* 61 (1927): 27-32

been able to track month-by-month the suspicious uptick in construction activity, land prices, and real estate transactions. A national conflagration had been avoided. When a major mortgage bank unexpectedly defaulted on its outstanding bonds that same year, the construction sector's leading industry organization, the American Construction Council – formed earlier in the decade with the express purpose of disseminating industry information and coordinating production among its members – stepped in to institute standards for the appraisal of properties, the underwriting of mortgages, and the marketing of mortgage-backed bonds.

By that point, the acute housing shortage of the early 1920s had passed. F.W. Dodge's index of construction activity registered 937,000 new housing units brought to market in 1925, the highest level yet recorded, with similarly elevated annual figures over the following three years. This prolonged wave of housing development seemed to confirm the capacity of a streamlined private sector to meet the nation's housing needs.[49]

In his regular commentary on the housing situation in *Architectural Record,* Dodge's chief economist Thomas Steele Holden spoke of a construction industry exorcised of its wilder elements: "A well-tempered conservatism guided business policies for the most part; speculative excesses were checked; reactionary tendencies were kept within very moderate bounds...." Local bubbles and crises were being defused before they could morph into nation-wide panics. The pugnacity and incompetence of construction labor had been stifled by the authority of large, vertically-integrated real estate companies. The construction cycle itself had been subdued.[50]

The devastating anticlimax of this process was the nation-wide collapse of property markets at the end of the decade. In January 1931, the immense mortgage bond house S.W. Straus & Co. – the nation's largest such firm – announced to the public that it could no longer pay the interest and principle on the outstanding mortgage bonds of a number of its properties, many of them multi-story income-generating apartment buildings. Up to that point the company had upheld an unofficial policy of meeting the obligations on outstanding bonds. Its securities and those of other reputable institutions had long been assumed to be essentially risk-free. The sheer volume of defaults over the course of 1930 rendered that policy untenable.[51] As the company's defaults continued through 1931 and into the following year, the Supreme Court of the State of New York ordered the company into receivership on October 7, 1932, with Justice Alfred V. Norton finding the company guilty of defrauding its bondholders, including by selling

[49] Colton, Kent W. *Housing Finance in the United States: The Transformation of the U.S. Housing Finance System*. Harvard Kennedy School Working Papers and Reports. Cambridge, MA: Joint Center for Housing Studies, Graduate School of Design and John F. Kennedy School of Government, Harvard University, 2002.

[50] Holden, Thomas S. "Building Prospects for 1927." *Architectural Record* 61 (1927): 27-32

[51] Testimony of George W. Rossetter. "Investigation of Real Estate Bondholders' Reorganizations". Public Hearings before the U.S. House of Representatives, 73rd Congress. Second Session. September 1934. Pp. 212-214. See also "An Increase in Bond Defaults." *Barron's (1921-1942); Boston, Mass.* December 26, 1932.

bonds on properties which had already defaulted on their taxes.[52] The Straus Company's vast portfolio was sold at auction, with some properties selling for a quarter of their originally assessed value: a mere fraction of the value against which the mass of mortgage bonds was secured. Bondholders were given little choice but to redeem their holdings for pennies on the dollar.[53]

The collapse of the bond houses and of mortgage finance at large in the early 1930s decisively shattered the Hooverite vision that a consolidated, expertly-managed real estate field could on its own yield desirable outcomes. The subsequent breakdown of the national system of mortgage finance in the early 1930s was perceived by the nation's leading housing economists as a colossal market failure. The collapse of mortgage lending in the Great Depression served to reorient the economists, statisticians, and housing scholars assembled at the Department of Commerce and allied entities towards the formation of government institutions which could compensate for the inadequacies of an unregulated system of mortgage finance. The data assembled by the Department of Commerce over the course of the 1920s provided the material through which this collapse was understood and pointed the way towards a new set of public interventions.

The New Deal housing interventions of the 1930s – foremost among which was the Federal Housing Administration or FHA – would adopt the role envisioned for the "modernized" free market idealized in the laissez faire years of the 1920s. The anger and desperation of the early 1930s translated into the political will to subordinate the interests of capital to the housing needs of the nation. For a brief moment in the early 1930s, these efforts signaled the promise that the housing needs of all Americans – including African Americans – might be satisfied by directing the technical genius of American industry towards the planned redevelopment of America. This was, of course, not the ultimate outcome. The perception that housing provision could nevertheless be made to function as an immense counterweight to the broader business cycle outlasted this decade and was itself a motivating principle for the federal housing programs of the 1930s and postwar era.

[52] "Straus & Co. put into a receivership". *The New York Times.* October 8, 1932.

[53] *People v. Straus Co., Inc.*, 158 Misc. 186, 285 N.Y.S. 648. Supreme Court of the State of New York. 1935.

Bibliography

Abbott, Paul, and Scott Bruns. *Reminiscences of Paul Abbott*, 1964. P. 15.

Alchon, Guy. *The Invisible Hand of Planning: Capitalism, Social Science, and the State in the 1920s.* Princeton: Princeton University Press, 2014.

Allen, Irving. "Revision of Mortgage Bond Practices Inadequate." *Annalist 29* (1927): 235–36.

Babson, Roger W. "F.W. Dodge: A Tribute." *Architectural Record 39*, January 1916.

Barber, William J. *From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921-1933*. Historical Perspectives on Modern Economics. Cambridge; New York: Cambridge University Press, 1985.

Bassett, Edward M, Irving B Hiett, John Ihlder, Morris Knowles, Nelson P Lewis, J Horace McFarland, Frederick Law Olmstead, Lafirence Veiller, and John M Gries. "A Zoning Primer by the Advisory Committee on Zoning Appointed by Secretary Hoover." Gaithersburg, MD: National Bureau of Standards, 1922.

Boyd, D. Knickerbocker. "Elimination of Waste in the Building Industry." Structural Service Bureau, Philadelphia, PA, March 31, 1921. Memorandum.

Committee on seasonal operation in the construction industries. *Seasonal Operation in the Construction Industries, the Facts and Remedies; Report and Recommendations of a Committee of the President's Conference on Unemployment, with a Foreword by Herbert Hoover*. McGraw-Hill book company, 1924.

Davies, Pearl Janet. *Real Estate in American History*. Washington: Public Affairs Press, 1958.

Friedman, Walter A. *Fortune Tellers: The Story of America's First Economic Forecasters.* Princeton: University Press, 2013.

Goetzmann, William N., and Frank Newman. "Securitization in the 1920's." National Bureau of Economic Research, 2010.

Glaeser, Edward L. "A nation of gamblers: Real estate speculation and American history." *American Economic Review 103, no. 3* (2013): 1-42.

Hawley, Ellis W. "Herbert Hoover, the Commerce Secretariat, and the Vision of an 'Associative State,' 1921-1928." *The Journal of American History 61*, no. 1 (1974): 116–40.

Holden, Thomas S. "Architects and the Business Cycle." *Architectural Record 54*. October 1923: 383-387.

King, Willford I. "Trade Cycles and Factory Production". In Persons, Warren M. *The Problem of*

Business Forecasting; Papers Presented at the Eighty-Fifth Annual Meeting of the American Statistical Association, Washington, D.C., December 27-29, 1923. Boston and New York, 1924.

Kitchens, Alton Walker, Elisabeth Earley, and Dwight D Rangeler. *Reminiscences of Alton Walker Kitchens*, 1973.

Lubove, Roy. *The Urban Community: Housing and Planning in the Progressive Era*. Westport, Conn.: Greenwood Press, 1981.

Metcalf, Evan B. "Secretary Hoover and the Emergence of Macroeconomic Management." *Business History Review 49*, no. 1 (Spring 1975): 60–80.

Miller, Franklin T. "Industrial Mobilization by Pre-arrangement." *Outlook*, November 17, 1915.

Mitchell, Wesley C. "The Crisis of 1920 and the Problem of Controlling Business Cycles." *The American Economic Review 12*, *no. 1* (1922): 20–32.

Roosevelt, Franklin Delano. Keynote address, American Construction Council annual meeting, October 2-3 1924.

Shenk, Timothy Edward. "Inventing the American Economy." Columbia University, 2016.

Snowden, Kenneth. "A Historiography of Early NBER Housing and Mortgage Research." In *Housing and Mortgage Markets in Historical Perspective*, 15–36. Chicago: University of Chicago Press, 2019.

Thelander, Theodore A. "Josephus Daniels and the Publicity Campaign for Naval and Industrial Preparedness Before World War I." *The North Carolina Historical Review 43*, no. 3 (1966): 316–32.

Weiss, Marc A. *The Rise of the Community Builders: The American Real Estate Industry and Urban Land Planning*. Columbia History of Urban Life. New York: Columbia University Press, 1987.