Newsletter of the Institute of Social Science, The University of Tokyo ISSN 1340-7155



Social

Science

On Keynes's Thought and Theory





Published by Institute of Social Science The University of Tokyo

Editorial Committee Nakagawa Junji Ikeda Yoko

Distribution Social Science Japan is available on the World Wide Web at: http://newslet.iss.u-tokyo.ac.jp

All Inquiries to

Social Science Japan Institute of Social Science The University of Tokyo 7-3-1 Hongo, Bunkyo-ku Tokyo 113-0033 JAPAN Tel +81 3 5841 4988 Fax +81 3 5841 4905 E-mail: ssjinfo@iss.u-tokyo.ac.jp

Cover

Cover photograph by Milan Acosta

Editorial Notes

All personal names are given in the customary order in the native language of the person unless otherwise requested.

Acknowledgements

We would like to thank Dr. Maggie Gibbons and Dr. Jeremy Breaden for their Japanese to English translations and Dr. Robert Sauté for his editorial and proofreading assistance.

Copyright © 2018 by the Institute of Social Science, The University of Tokyo, except where noted. All rights reserved.

Introduction

Social Science Japan newsletter covers a wide variety of topics. In issue 58, featured articles explore the work of John Maynard Keynes and his influence on the past and today. Horiuchi Akiyoshi introduces several of Keynes's biographical essays that show Keynes as a man of diverse interests. Mamiya Yosuke looks into the depths of Keynesian economics by exploring its theoretical underpinnings. Jindo Hiraoki points out Keynes's view on economics as a "moral science" and discusses his analysis of the real economy of pre- and post-World War I Germany and German reparations. Along with Keynes's career background, Watabe Akira looks at Japan's administrative policy reforms with a view to how Keynes's ideas can be applied to their improvement. Otaki Masayuki examines the validity of Keynes's analysis of involuntary unemployment under the assumption of flexible prices.

The ISS Research Report by Kawata Keisuke is on the use of economic theory in quantitative empirical studies. Focus on ISS by Owan Hideo is about the *Economic Analysis of Internal Corporate Data Project*, which has made advanced research findings on personnel economics available to human resource management in participating firms. As usual, the *SSJ* is your source to learn about the latest publications by ISS members and speakers for the Contemporary Japan Group here at ISS.

Thank you for your interest.

Ikeda Yoko Managing Editor

Table of Contents

On Keynes's Thought and Theory

HORIUCHI Akiyoshi The Biographical Essays of John Maynard Keynesp.3
MAMIYA Yosuke The Ideological Background of Keynesian Economicsp.6
JINDO Hiroaki Keynes's Multifaceted Thinking on Determining German Reparationsp.9
WATABE Akira Rivalry and Succession between the "Administrative Reform Era" in Japan and Keynesian Thoughtp.14
OTAKI Masayuki Has the Second Postulate of Classical Economics Been Abandoned or Extended?p.18
ISS Research Report
ISS Research Report KAWATA Keisuke How Can Economic Theory Help Causal Inference?
ISS Research Report KAWATA Keisuke How Can Economic Theory Help Causal Inference?
ISS Research Report KAWATA Keisuke How Can Economic Theory Help Causal Inference?
ISS Research Report KAWATA Keisuke How Can Economic Theory Help Causal Inference?

The Biographical Essays of John Maynard Keynes

HORIUCHI Akiyoshi



Horiuchi Akiyoshi is a professor emeritus at the University of Tokyo

The University of Tokyo 7-3-1 Hongo, Bunkyo-ku Tokyo 113-0033 E-mail: ahoriuchi916@yahoo.co.jp

Author of The General Theory of Employment, Interest and Money, John Maynard Keynes is surely the first scholar committed to memory by any student of economics. He is also, however, remembered as the author of a number of biographical essays on individuals he encountered over the course of his life—not only his direct contemporaries but also his predecessors, those of a younger generation, and even individuals whose lives never directly crossed paths with his own. In a broad sense, therefore, it is no exaggeration to suggest that Keynes's work was of great significance not simply for students of economics, but for a much broader range of people interested in developments in human society. In this article, I discuss Keynes's biographical works and the approaches he employed therein by reference to one of his principal outputs in this field, Essays in Biography, and incorporating my own reflections thereon.

Allow me to begin with a brief introduction to *Essays on Biography*. This collection includes writings from across Keynes's entire life with the exception of his youth. It begins with an essay on

Keynes's own experience of participating in an international peace conference at the end of the First World War, and ends with a paper Keynes prepared shortly before his death, for a celebration of the 300th anniversary of the birth of Isaac Newton at Cambridge University. We can therefore assume that the general evaluative standards employed by Keynes underwent considerable transformation over the course of his life as an essayist. *Essays in Biography* must be read with this point in mind.

The question of what criteria to employ in biographical evaluation naturally invites different answers depending on who is writing the biography. Not all of the criteria employed by Keynes will gain the endorsement of all readers. To state my own personal thoughts on this matter, however: I find Keynes's evaluations to be generally wellbalanced and extremely comprehensible.

Keynes on Newton

Below I discuss a small number of the works in *Essays*. which furnish insights into Keynes's approach to writing, and offer my own evaluation of his biographical essays. I begin with the essay on "Newton, the Man," written in Keynes's final years. This essay was prepared for a celebration of the 300th anniversary of Isaac Newton's birth, which took place in 1946, also the year of Keynes's death. It is included in the third section of *Essays*.

Isaac Newton is renowned as a pioneer of the fully-fledged discipline of physics, but what attracted Keynes's interest as an essayist were Newton's achievements in the study of magic and astrology, which he pursued covertly. A long-time sufferer of nervous exhaustion, Newton fell into an especially severe nervous decline in 1692. This was one of the reasons why he left Cambridge University and moved to London to take up a post as President of the British Academy. Keynes writes that what so troubled Newton at this juncture was the need to keep secret the "findings" of his many years of research in fields such as astrology and alchemy. At the time, such fields were gradually being marginalized and divested of their former status as legitimate subjects of scholarly inquiry. Newton's struggle to conceal his work reflected his prescient grasp of this shift.

Keynes, however, casts a benevolent gaze on the figure of Newton immersing himself in these heretical fields of research. The essay suggests that in Keynes's estimation, Newton was an outstanding scholar not only for his work in the legitimate disciplines of astronomy and physics, but also for his interests in alchemy and astrology. It was Keynes who endeavored to gather together the numerous outputs of Newton's research (including the works on astrology and alchemy which Newton himself had tried so hard to conceal) posthumously and bring them back to Cambridge University.

Keynes on Alfred and Mary Marshall

It is well known that during his time at Cambridge University, Keynes studied under the economist Alfred Marshall, gaining both a familiarity with Alfred's scholarship and the opportunity to build a friendship with his wife Mary. The Marshalls feature in an essay on Alfred in the second section of *Essays in Biography*, and one on Mary in the third section. When read in combination, these two essays offer an exceptional insight into both Alfred Marshall's contributions to the discipline of economics and the limitations thereof.

Despite having a troubled relationship with his father during his youth, Alfred Marshall applied himself to academic life at Cambridge and made a major contribution to the development of the ideas that provide the foundation for our study of economics today. Keynes observes that as Marshall never articulated these ideas clearly in his own writings, most of them are attributed to other scholars. The concept of the "marginal," for example, which is fundamental to economics today, is said to have been introduced by Jevons in 1871. Keynes states, however, that Marshall expounded on the same concept at an earlier stage. It appears that rather than recording these basics of economics in his own writing, Marshall chose to communicate them in the oral medium to his students and young scholars, Keynes included. Keynes writes that this approach to

scholarly communication clearly demonstrates Marshall's outlook as a researcher, but works somewhat unfortunately against his own reputation as a scholar.

Alfred Marshall's wife Mary also studied economics when she was young and found work educating women in the basics of that discipline. However, as Alfred's health began to decline from the end of the nineteenth century through the start of the twentieth century, Mary began assisting her husband in his work and compensating for his loss of faculty. Alfred is well known for having traveled to Switzerland and interacted with the Austrian School of Economics, as well as for furthering his connections with the working class at home in England, but Keynes notes that it was his wife Mary who provided the resolute support that enabled these activities. Mary continued to serve the discipline of economics steadfastly for the two remaining decades of her life after her husband passed away.

Keynesian Economics and Malthus

Keynes is well known for arguing that the socalled neoclassical school of economics was highly inadequate for analysis of the conditions facing the British economy, and for introducing what became known as the Keynesian system which treats underemployment as a kind of equilibrium. This system formed part of his *General Theory* published in 1936, but by that time Keynes himself, little by little and in a variety of forms, had already revealed much of the theory's content. Perhaps the most famous example can be found in his essay on Robert Malthus, contained in the second section of *Essays*.

In this essay, Keynes touches on Malthus' interaction with David Ricardo, suggesting that the two maintained an extremely close relationship despite their differing approaches to economics. Looking back on the evolution of economics in the first half of the nineteenth century, it is clear that Ricardo exerted an overwhelming influence on developments in the period subsequent to that which he had shared with Malthus. Ricardo's thinking on general equilibrium soon became the mainstream of economic thought. Malthusian economics on the other hand, as understood by Keynes, concerned a state of incomplete equilibrium in which part of the market did not achieve full equilibrium. In practice, despite a certain vagueness on some points, Malthus advocated a model in which "effective demand" determines national prices and profits. Keynes argues that it is precisely this state of incomplete equilibrium which characterized the position of British workers at the time.

In his *General Theory*, Keynes properly formulated this argument and developed it into important policy recommendations. The foundation of these recommendations lies in the schema of macroeconomics in a state of imperfect equilibrium, as envisaged by Malthus. Keynes himself notes how Malthus's idea that the economy at its core is regulated by effective demand had disappeared from the mainstream of economics in the nineteenth century, and describes this loss as highly regrettable. Keynes's arguments in this regard are reiterated more formally and with a great degree of care in *The General Theory*. Today they constitute a principal stream of economic thought.

Concluding Comments

Keynes's biographical essays garnered public attention for many reasons. He wrote in a critical spirit, producing candid profiles of his subjects and subjecting them to sharp criticism on more than a few occasions. The opening sections of the first section of *Essays* (written in November 1919) offer particularly a clear illustration of this style. I omit details here, but the style is exemplified in his cutting assessments of the British, French, and American delegations to the Versailles Peace Conference after the First World War, which Keynes himself attended, only to withdraw before the conference concluded. Surely I am not the only one to speculate that if the representatives of the victorious states had, like Keynes, turned a more sympathetic eye to the situation faced by Germany in defeat, it may well have been possible to prevent the subsequent rise of Adolf Hitler and the outbreak of the Second World War. Despite being produced immediately after the end of the First World War, Keynes's writings could be read as a foretelling of the Second.

Moreover, Keynes's appraisals of his subjects appear to have grown milder with his increasing years. In the first section of *Essays*, for example, Keynes offers a scathing critique of the theory of revolution in Britain put forth by Trotsky, one of the leaders of the Russian Revolution. This critique was written in March 1926, at the height of Trotsky's influence. Keynes's tone in the essay may well have been different if it had included the period after Trotsky fell out of favor in Russia. At any rate, the writings produced in the final years of Keynes's life, such as the aforementioned essays on Mary Marshall and Isaac Newton, offer readers generous portraits of the subjects' lives, with virtues and faults clearly distinguished.

References

John, M. Keynes, *Essays in Biography*, edited by Geoffrey Keynes, Rupert Hart-Davis 1951

John, M. Keynes, *The General Theory of Employment*, *Interest and Money*, the Macmillan Press LTD 1936

The Ideological Background of Keynesian Economics

MAMIYA Yosuke



Mamiya Yosuke is a specially-appointed professor at Aoyama Gakuin University

Aoyama Gakuin University 4-4-25 Shibuya, Shibuya-ku Tokyo 150-0002 E-mail: you.mamiya@nifty.com

Positive and Negative Images in Keynesian Theory

The economics of John Maynard Keynes comprises two very different aspects, analogous to positive and negative images on photographic film. The positive side is of course the one generally referred to as Keynesian economics or macroeconomics: put simply, the economics of numerical expressions and graphs. Macroeconomics for Keynes, however, did not always conform to the present day definition of the term. His prosaic style of writing in particular is at odds with the mathematical detail common in macroeconomics today. The General Theory contains almost no numerical expressions and only one graph, showing the monetary supply and demand curve. It is possible to attribute this absence to a lack of theoretical rigor, but it may also be seen as the inescapable product of the problems raised in The General Theory itself.

I have chosen to examine the ideological background of Keynesian Economics, not out of academic curiosity at the position of his work in the history of economics itself, but because I believe that there is another, deeper layer of meaning hidden in Keynes's theories that is seldom explored. In fact, it may be more accurate to describe my subject as the "theoretical depths" rather than "ideological background" of Keynesian economics. Previous examinations of these deeper layers have focused on the existence of uncertainty and economic activity under conditions of such uncertainty—in particular the role of expectation and the function of convention in consumption and investment.

Without doubt, Keynesian theory is characterized by elements such as uncertainty, expectation and convention, which are in turn founded on Keynes's unique philosophy and outlook on the human condition. It is not these elements however that distinguishes Keynesian economics from other doctrines on the theoretical level. Keynes emphasizes the role of convention in consumption, but convention itself can be hidden beneath the shadow of the consumption propensity parameter.

At the risk of being misunderstood, I would suggest that it is possible to view uncertainty, expectation and convention as components of the economic structure. Certainly, if components of classical political economy are replaced with Keynesian components then the structure as a whole is affected. Depending on the components, the entire economic structure can be stabilized or destabilized, and the economy can take full employment or sub-employment as its normal condition. Are these differences between components all that lies at the depths of Keynesian theory? Is there not something else—the historical transformation of the structure of the economy itself? Below I give a brief sketch of this possibility.

From Real Rights to Claims

The structural transformation of the economy (the capitalist or market economy) over the course of history has been viewed in various ways. Marxian economics for example perceives it in terms of the shift from industrial capitalism to financial capi-

talism. T. B. Veblen discusses a similar sort of transformation as the change from industry to business. Veblen characterizes an economy centered on industry as the old regime, while the transference of focus to business signifies an economy's transition to the new regime. The economy described in Adam Smith's *Wealth of Nations* was thus seen by Veblen as one in transition from the old to the new regime.

Despite the apparent similarities between Marx and Veblen's conceptions of economic change, they differ completely in regard to the factors that lead to such change. In Marxian economics, the morphological transformation of capital-that is, the transition from industrial to financial capital—is seen as the factor responsible for the structural transformation of capitalism. For Veblen, however, changes in the system of ownership are seen as bringing about the transformation. In other words, Veblen perceives a shift from an economy where individuals directly control assets and enjoy the fruits of industry, to a system of "absentee ownership" where individuals do not directly control assets. Civil law scholar Wagatsuma Sakae interprets this as a shift from an economy based on real rights to one based on claims. It seems to me that this shift from real rights to claims lies at the root of Keynesian theory, and that Keynes's monetary economy is actually another expression for capitalism based on claims. Keynesian theory differs from classical political economy not only in the way it perceives the economy, but, more fundamentally, in the actual "economy" that it takes as its subject matter.

The Negative Image of Keynesian Theory

Both traditional economics and Keynesian economics consider the consumption of goods to be the *ultimate* goal of economic activity. They differ however, in that traditional economics takes consumption to be the *actual* goal of economic activity and production to be the means to attain it, whereas in Keynesian economics this is not necessarily so. For example, in classical political economics money is simply the means of economic activity, whereas for Keynes money can constitute a goal in itself. J. S. Mill saw money simply as a lubricant to facilitate economic activity, and thus not at all important in itself. In contrast, Keynes perceived money as an actual goal. The possession of money is thus not limited by the individual's capacity to consume.

The transformation of money from a means to facilitate economic activity to a goal in itself is analogous to the shift from real rights to claims. The economy as described by traditional economics was centered on the production, exchange and consumption of goods. It thus followed that property rights were mainly concerned with real rights, that is, the rights of control over goods. (The right of possession—comprising usage rights, revenue rights, and disposal rights—is the most exemplary real right.) In the economy described by Keynes, however, the major concern of property rights has shifted from real rights to claims: that is, rights to the payment of monetary value.

Let us represent a claim by X against Y as $X \rightarrow Y$. In general, if party B has a financial obligation to party A, he is able to settle the obligation using a claim against a third party, C. This settlement is not automatic, however. There remain two distinct sets of claims and obligations: that between A and B, and that between B and C. The transitivity rule whereby these relationships become $A \rightarrow C$ does not automatically apply. The method of financial exchange has been devised to overcome this problem, allowing the relationship of claim and obligation that exists between A and B to be replaced by one between A and C. In this way, financial claims ($B \rightarrow C$, in above case) can effectively assume the role of money: such claims include not only the specific withdrawal rights of a depositor with a bank, but also by bills of exchange, debentures, government bonds et cetera. The method of financial exchange also allows these claims to become tradable, profit-producing instruments in themselves.

If one likens the world of classical economics to the economy of "production of commodities by means of commodities" (P. Sraffa) or "real exchange economy" (Keynes) in which money plays no major role, then counter world of Keynesian economics is the economy of "production of money by means of money" or using Keynes's phrase "monetary economy." This counter world has grown in autonomy until, in our present day, it has effectively absorbed the world of real goods.

Keynes and Veblen

Keynes did, however, not go so far as to invert the relationship between the world of real goods (the real exchange economy") and the counter world centered on claims and obligations (the "monetary economy"). The traditional terms of economics consumption, production, investment, savings and so on—remain in use, and Keynes's counter world permeates only into the several components, not into the economic structure itself. On the other hand, Keynes's predecessor Veblen totally inverts the two economic worlds, characterizing the modern economy as business capitalism, or capitalism based on claims. In "Credit and Prices" (1905), Veblen develops a theory of economic fluctuations focused on the growth and collapse of economic bubbles, while in *The Theory of Business Enterprise* (1904), he attempts a systematic treatment of business capitalism. Despite living a generation before Keynes, Veblen's writing addresses issues of the present day more directly than that of his successor. This seems a reasonable way to summarize the relationship between these two economists.

Keynes's Multifaceted Thinking on Determining German Reparations

JINDO Hiroaki



Jindo Hiroaki is a professor at National Graduate Institute for Policy Studies

National Graduate Institute for Policy Studies 7-22-1 Roppongi, Minato-ku Tokyo 106-8677 E-mail: h-jindo@grips.ac.jp

Introduction

Who Killed John Maynard Keynes? was the provocative title chosen by W. Carl Biven, professor at the Georgia Institute of Technology, for his 1989 book. Biven presents Robert E. Lucas, the University of Chicago economist who famously declared the "death of Keynesian economics," as a cautionary exemplar. Biven argues that Keynesian thought is still being debated and developed, and that Keynes's presence can be felt in the work of economists today.

Although nearly thirty years have passed since then, these viewpoints persist unchanged, which shows how it is no exaggeration to say that Keynes's intellectual vitality continues to course through economics and spur the generation of new ideas.

To take one example from a few years ago, Yale University's Robert J. Shiller published *The Subprime Solution: How Today's Global Financial Crisis Happened, and What to Do about It* (2008). Shiller begins with a quote taken from *The Economic* *Consequences of the Peace,* Keynes's 1919 work which served as the single bound that launched his reputation as a journalist:

A general bonfire is so great a necessity that unless we can make of it an orderly and good-tempered affair in which no serious injustice is done to any one, it will, when it comes at last, grow into a conflagration that may destroy much else as well (p. 280).

Schiller chose this quote to conjoin the economic consequences of the subprime lending problem, namely the 2008 global financial crisis, and Keynes's predictions on the effects of the Versailles Peace Treaty between the Allies and Germany after World War I.

In this essay, I examine and appraise Keynes's multifaceted predictions and observations regarding the problem of German reparations and his proposals for a long-term solution in *The Economic Consequences* and *A Revision of the Treaty: Being a Sequel of the Economic Consequences of the Peace* (1922), referred to below as Book I and Book II, respectively.

How to Approach the Real Economy: With a Cool Head and a Warm Heart

In these two books, Keynes attempts what ought to be the mission of all economists when faced by major historical turning points—to study what is happening in the real economy and quickly devise solutions. In the limited space here, I will try to present a faithful representation of Keynes's own efforts to carry this mission.

It was August in 1914 when The United Kingdom declared war on Germany. "What an extraordinary episode in the economic progress of man that age was which came to an end in August, 1914!" (Book I, p. 10-11). "The war had so shaken this system as to endanger the life of Europe altogether. A great part of the Continent was sick and dying..." (Book I, p. 25). As this disease metaphor suggests, Keynes believed that Europe's prewar economies functioned as well as they did owing to a particular balance of economic institutions and circumstances, a balance that was extremely precarious.

Consequently, having immediately grasped the implications of the Versailles Treaty for a capitalist system that was inherently unstable, uncertain, and complex, Keynes rightly feared that the treaty (entered into force on June 28, 1919) would hinder economic and social recovery from the war's destruction. Keynes argued that the Versailles terms amounted to a "Carthaginian peace," the ironic term applied to the harsh treatment meted out by the Romans against Carthage, including the cession of vast territory and huge indemnities. To divert the Allies and Germany from this destructive path, Keynes expressed his forebodings and convictions in Book I, written with remarkable speed in less than four months. Keynes's fears were the driving force behind his attempts to make precise estimates of the treaty's effects in Books I and Book II.

Keynes considered economics to be a "moral science" rather than a mere social science, and he expressed skepticism towards the pioneering econometrics work by Jan Tinbergen. Nevertheless, Keynes did recognize the importance of statistics for analyzing the real economy. Instead of treating statistics as an "emotional barometer and as a convenient vehicle of sentiment" (Book II, p. 110), Keynes used quantitative data with the intention of assessing multiple factors to accurately calculate how high German reparations should be. By and large, we can say that Keynes succeeded in astutely assessing the risks that many others overlooked. Given that evidence-based policy making has been widely touted in Japan recently, we should treat Keynes's analysis as model to learn how to use statistical data effectively and persuasively.

The Prescient Interpretation of Reparations Estimates

The peace treaty was ratified and entered into effect on January 10, 1920 despite the fact that it only specified the types of harm Germany must compensate for. Due to the inability of the Allies to reach agreement, the treaty did not specify or estimate the amount of money Germany must pay to the victors.

Subsequently, leaders of the Allied nations held multiple international conferences, but they disagreed on the amount of money, manner of payment, and the allocation of received payments among the recipient nations until at long last the London Settlement of Reparations was reached at the Second Conference of London (April 29-May 5, 1921).

Under this process, final determinations of the amount and form of reparations were to be made by the Reparation Commission, a body made up of representatives of the Allied nations. These nations submitted their claims for reparations to the commission for final approval. Tables 1-3 below compare the amounts approved by the commission with Keynes's calculations in Book I and Book II.

These tables show two important points. First, Keynes viewed the inclusion of pensions and separation allowances as a breach of faith, so the reader should bear in mind that he did not include them in his calculations, and, thanks to the availability of more precise data during the writing of Book II, the amounts are reduced. As shown in Tables 1 and 3, in Book I, Keynes calculated the maximum amount that could be extracted from Germany was £2 billion by various payment forms, or £2.12 billion by nation. In Book II (Table 3), the total fell to £1.5 billion (30 billion gold marks).

The second point, as shown in Tables 2 and 3, is that although the amount approved by the Reparation Commission was only totals including pensions and separation allowance (£6.6 billion), the corresponding amount of reparations estimated by Keynes, £5.2 billion, is close to the same level.

The difference between the commission and Keynes's estimate narrows to £1.1 billion when the Belgian war debt of £300 million is included.

As shown in Table 2, the Reparation Commission approved roughly 60% of what the Allies asked for (£6.6 billion versus £11.2 billion). Its decision was shaped by the impact that Keynes's reparations estimates rightly had, not only on politicians and

Table 1. Keynes's estimates of	Germany's capacity	to pay by forms	of payment
--------------------------------	--------------------	-----------------	------------

Item		Estimate	
		Book I ※ maximum	
1) Imr	mediately transferable wealth (excluding gold and silver)	※ maximum 2.5∼3.5	
C	Gold and silver	0.6	
S	Ships	1.2	
F	Foreign securities	₩1~2.5	
	Net foreign investments	10~12.5	
	<4 types of assets deducted>	Xroughly estimated 10	
	(1) Investments in Allied countries and US	2~3	
 (2) Investments in Russia, Austria-Hungary, Turkey, Roumania, and Bulgaria (3) Securities resold or used as collateral during the war 		5	
		1~1.5	
	(4) Securities safely secreted domestically and abroad	1	
2 As: Armist	sets in ceded territory or surrendered under the tice	0.8	
Assets in ceded territory		0.3	
Assets surrendered under the Armistice (rolling-stock)		0.5	
③ Sul during	btracted items: Cost of the Armies of Occupation both g the Armistice and after the conclusion of Peace	about 2	
Subtotal(=①+②-③)		*1~2	
(4) Loi	ng-term annual payments in cash, coal, potash and dyes	X 30 yr present value base principal about 17	
Total(=(1)+(2)-(3)+(4))		X maximum 20[400]	

units: £100 million [100 million gold marks]

Notes

%Values concerned may differ from ones comprising multiple categories or costs derived from subtotals.%*Assumes a yearly trade surplus of 100 million pounds, 5% interest rate and 1% capital repayment

units: £100 million [100 million gold marks]							
	Totals [=	(a) + (b)]	Pensio separation a	ns and llowance (a)	Damages (b)		
			Book	I			
	Amount	Amount	Amount	Amount	Amount	Amount	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	
British Empire	27.0 [540]		18.5 [370]		8.5 [170]		
France	49.5 [990]	n 0	16.5 [330]		33.0 [660]		
Italy	13.5 [270]	11 . a.	8.5 [170]	n.a.	5.0 [100]	n.a.	
Belgium	8.25 [165]		0.5 [10]		7.75 [155]		
Others	14.25 [285]		3.5 [70]		10.75 [215]		
Totals	12.5 [2,250]	.5 [2,250] 66.0 [1,320]			65.0 [1,300]		

Table 3. Keynes's reparations estimates by nation

units: £100 million [100 million gold marks]

	Totals $[= (c) + (d) + (e)]$		Pensions and separation allowance (c)		Damages (d)		Belgian war debt (e)		
	Book I	Boo	$\frac{bk \Pi}{[= (c) + (d)]}$	Book I	Book II	Book I	Book II	Book I	Book II
British Empire France Italy Belgium Others	19.7 [394] 32.0 [640] 19.5 [390]	n.a.	n.a.	14.0 [280] 24.0 [480] 5.0 [100] 7.0 [140]	n.a.	5.7 [114] 8.0 [160] 7.5 [150]	4.5 [90] 8.0 [160] 2.5 [50]	n.a.	1.0 [20] 1.0 [20] 1.0 [20]
Totals	71.2 [1,424]	55.0 [1,100]	52.0 [1,040]	50.0 [1,000]	37.0 [740]	21.2 [424]	15.0 [300]		3.0 [60]

public administration experts, but also on public opinion. His arguments guided the commission to a better decision. Keynes wrote more favorably of the Reparation Commission in Book II than in Book I, and there is no doubt that shift is related to Keynes's confidence that public opinion could be changed.

In addition, looking at the precision of the methods Keynes used makes one want to credit him with having both wide-angle lens and telephoto insights into real world economics. Especially impressive was the evidence Keynes marshalled to support his detailed assessment of Germany's capacity to pay by various forms in Book I (see Table 1).

Comparing estimated totals for reparations for each Allied nation, the Reparation Commission wanted £1 billion paid initially, but Keynes recognized that it would be very difficult for Germany to have a trade surplus by May 1, 1921. As shown in Table 1, Keynes calculated that Germany was unlikely to have more than £100-200 million in transferable assets. Therefore, Keynes argued that unless Germany was allowed to extend its reparation payments over thirty years, it would be unable to meet the Allies demands.

Moreover, Keynes's estimate of Germany's capacity to become a net exporter was based on a painstaking analysis of Germany's prewar (1913) trade structure, which had a negative trade balance, its potential exports, and the conditions in foreign markets. Of course, the London settlement of Reparations still placed an excessive burden on Germany and was only a temporary measure, as shown by the problems apparent in the three approaches to payment (exports and trade balance, taxation and government budgets, and national income).

In regards to exports and the trade balance problem, the aforementioned reassessment of Germany's trade structure reconfirmed that it would be difficult for it to use a trade surplus to fund its reparations payments. The tax and budget problem is owing to the reparation payments being denominated in gold marks while taxes were paid in paper marks. Unpredictable and persistent fluctuations in the exchange rate between gold and paper marks predestined Germany for budget deficits.

Gauging the national income problem was complicated by the incomplete patchwork of data available. Using what information was at hand, Keynes calculated that the per capita income was around 5000 marks, of which roughly half would be collected as tax by Germany's central and local government. A decline in the standard of living would inevitably result.

The territory Germany ceded to the Allies produced 15 percent (6.2 billion gold marks) of Germany's national income in 1913 (41 billion gold marks). The amount including pensions and separation allowance (132 billion gold marks) approved by the Reparation Commission was effectively asking Germany to pay 3.8 times the prewar national income.

Because of the considerable instability of economic conditions, currency values fluctuated wildly, greatly complicating efforts to estimate national income. It is not surprising that Keynes yearned for an accurate national income metric. The gross domestic product (GDP) indicator we use today was created in 1953, thirty years after Keynes published Book II, but his recognition of the problem may have foreshadowed its creation.

At roughly the same time, a young economist named Colin G. Clark was trying out ways to calculate Britain's fiscal balance on a quarterly basis, and the connection between the two is fascinating. War is the mother of invention. Although the generally held view is that the GDP indicator came out of the Great Depression and World War II, looking further back in time, we can glimpse Keynes's germinal thinking on ways to measure the economy.

Conclusion

If followed, Keynes's multifaceted analysis of preand postwar Europe, the Allies claims excluding pensions and separation allowance would have reduced Germany's reparations to £1.8 billion (36 billion gold marks; see Table 3, Book II (d)+ Book II (e)). Furthermore, Keynes's proposal that the United Kingdom and the United States renounce debts owed to them by other Allied nations and Germany, and also offer aid to the new states of Austria and Poland, was a model for how to make a lasting contribution to Europe's recovery and stability.

When World War I began, Europe was undergoing "first-stage globalization," a phase beginning in the mid-nineteenth century and ending at the turn of the twentieth century, a time frequently noted for a dramatic rise in ethnocentrism and untrammeled nationalism.

Jumping ahead, "second-stage globalization" began in the 1980s and ended with the 2008 global financial crisis. Since then, the international situation has been disquieting and unstable. The conflict between globalism and nationalism that we are in the midst of now resembles that of the late nineteenth century. This similarity shows that Robert Shiller's use of Keynes's "general bonfire" quote to introduce his book was an apt choice.

The question now is, can economists today emulate Keynes by directly taking on major issues, examine situations with both wide-angle and telephoto perspectives, and deftly employ statistical data to prescribe appropriate solutions?

Keynes the man is certainly dead. However,

debates over the issues he raised and his pioneering work are undeniably alive a century after the *Economic Consequences* was published. Giving the public hopeful advice that improves the prospects for improvement is not a revolutionary act but rather the result of having the forces of instruction and imagination to move public opinion. History shows that Keynes's intellectual vitality has endured to the present day.

References

- Biven W.Carl (1989). Who Killed John Maynard Keynes ? : Conflicts in the Evolution of Economic Policy. Dow Jones-Irwin, Homewood, Illinois.
- Coyle Diane (2014). *GDP : A Brief but Affectionate History*. Princeton University Press.
- Keynes, J.M. (2012). *The Economic Consequences of the Peace*. The Collected Writings of John Maynard Keynes II. Cambridge University Press.
- Keynes, J.M. (2013). A Revision of the Treaty : Being a Sequel of the Economic Consequences of the Peace. The Collected Writings of John Maynard Keynes III. Cambridge University Press.
- Shiller J. Robert (2008). The Subprime Solution: How Today's Global Financial Crisis Happened, and What to Do about It. Princeton University Press.

Rivalry and Succession between the "Administrative Reform Era" in Japan and Keynesian Thought

WATABE Akira



Watabe Akira is the executive vice president of Okinawa Development Finance Corporation

Okinawa Development Finance Corporation Administration Kowa Nishi-Shinbashi Building 10th Floor 2-1-1 Nishi-Shinbashi Minato-ku, Tokyo 105-0003 E-mail: ugj10534@nifty.com

Introduction¹

Twice during his career, John Maynard Keynes was a government official. The first time began in October 1906, when Keynes was 23. He had the second highest score on the civil service exam, which qualified him for a post in the India Office, where he worked until July 1908. The second time began when Keynes joined the Treasury in January 1915 at age 32 and ended in June 1919. Due to his success at meeting the challenges of a wartime economy, Keynes was promoted to a suitably high post at Treasury.

Keynes decided to quit the India Office not long after he was hired for several reasons: he lacked a clear motivation for taking the job, was disillusioned by the work itself, and detested the bureaucracy's preoccupation with self-preservation.

At Treasury, Keynes was in charge of finance and became head of the "A Division" responsible for external finance in January 1917. After the war, the Treasury minister also chose Keynes to be the ministry's lead representative at the Paris Peace Conference, a post he held from January to June 1919.

Unfortunately, although Keynes spared no effort at the peace conference, his warnings were ignored. Keynes left Paris in June and in December published *Economic Consequences of the Peace*, a withering attack on the unrealistically high demand for German reparations in the Treaty of Versailles. The book was widely discussed and added to Keynes's reputation as a journalist.²

Thereafter, in the 1920s, Keynes supported the Liberal Party while being involved in a variety of activities. In the 1930s, Keynes's influence in the Labour Party grew stronger. In response to the severe unemployment problem, Keynes published General Theory of Employment, Interest, and Money in 1937. In 1940, shortly after Britain declared war on Germany, Keynes addressed how the British government should best manage the wartime economy in How to pay for the war. He also worked as an advisor to the Treasury secretary, represented Britain in Lend-Lease negotiations with the United States, and described himself as a "demi-semi-official" for his role in negotiating the postwar international monetary system.

¹ Nasu Masahiko. 1995. Jitsumuka Keinzu (Keynes as Practitioner). Tokyo: Chuo Koronsha.

² Jindo Hiroaki. 2017. "J.M. Keinzu 'Heiwa no keizaiteki kiketsu': Isseiki o hete nao mo ikizuku Keinzu no narashita keishō (J.M. Keynes's *Economic Consequences of the Peace*: The Alarm Bell that Resonates a Century Later)." *In* Otaki Masayuki and Cato Susumu, eds., *Keinzu to Sono Jidai o Yomu: Kiki no Jidai no Keizaigaku Bukku Gaido* (Lessons from Keynes and His Contemporary Writers: A Guide to Rethinking a Time of Crisis). Tokyo: University of Tokyo Press. Pp.23-35

1. Japan's "Era of Administrative Reform" in the Late Twentieth Century³

(1) The Keynes-Beveridge Model (Welfare State Consensus)

Keynes's remedy for unemployment, centered around his theory of effective demand, is mutually complementary with William Henry Beveridge's plan to extend a social security network to all citizens. According to the theory of effective demand, as the economy approaches full employment, unemployment benefits will plunge, making it possible to provide more generous income support to those who remain out of work. In addition, if the government ensures a minimum standard of living for all citizens through social security, effective demand will rise, which in turn will keep more people employed. This is the gist of the theory of the "welfare state" and "big government."

These policy views also took root in Japan during its postwar recovery. During the era of rapid economic growth, Japan's government expanded social security. In 1961, a public medical insurance and pension systems were opened to all citizens, making the "universal health insurance and pensions for all" slogan a reality. In 1973, dubbed the "first year of welfare," all senior citizens were provided with fee-free medical coverage.

(2) The Failed Launch of a General Consumption Tax and the Campaign for "Fiscal Reform without Tax Hikes"

In Japan, administrative reform became a priority on the political agenda after the government's reliance on deficit financing bonds increased in the wake of the economic slowdown sparked by the 1973 oil crisis.

In response to the recession after the 1964 Tokyo Olympics, construction bonds ("investment expenses," namely public works) were issued by the government in 1965 under the existing public finance laws. However, the government continued to issue bonds thereafter. The government needed more money to pay for the rising costs of social security programs. Since the supplementary budget for 1975, the issuing of "special deficit bonds" that are not for public works has become the norm. By 1979, 39.6 percent of the government budget was financed by issuing bonds.

One way to solve a government's deficit problem without high taxes is to expand the tax base. In the late 1970s, a general consumption tax in the form of a value added tax (VAT) was proposed, but during the 1979 general election, before a VAT was introduced, the public was sold on the idea that government spending should be cut through administrative reform before taxes were raised.

"Budget reform without higher taxes" became a popular slogan around the country. Otake Hideo (1997: 30) writes:

"The private business sector gave its support [to administrative reform] because it had faith in rationalization based on the principles of market competition which require the streamlining of operations. Those who argued that Keynesian policies had helped Japan recover from an economic crisis (albeit only partially) were drowned out by business leaders and the global anti-Keynesian movement."⁴

Administrative reform in this context refers to "reorganizing the roles of the administrative state and how those roles are created and abolished" (Muramatsu 1999: 71)⁵. According to Otake (1997: 28), the term "administrative reform" was chosen not only to refer to major institutional reform but also to fuel resentment towards government officials.⁶

Kato Junko finds that the timing of VAT introduction affects support for welfare state programs. Countries that introduce VAT during periods of high economic growth to maintain government revenues during economic downturns can sustain generous welfare programs. On the other hand, countries that try to institute VAT during low economic growth periods, such as Japan, face intense public opposition and will have smaller social

³ Ministry of Health, Labour, and Welfare. 2012. *Heisei 24-nenban Kōsei Rōdō Hakusho* (2012 Ministry of Health, Labour, and Welfare White Paper). Pp. 5-18.

⁴ Otake Hideo. 1997. *Gyōkaku no Hassō* (Envisioning Administrative Reform). Tokyo: TBS Buritanika. P. 30

⁵ Muramatsu Michio. 1999. Gyōsei-gaku Kyōkasho (Public Administration Textbook). Tokyo: Yuhikaku. P. 71.

⁶ Otake Hideo. 1997. Gyōkaku no Hassō. P. 28

welfare programs.7

In 1981, the Second Provisional Administrative Reform Commission was convened to achieve "budget reform without higher taxes." The commission was tasked with making recommendations for administrative and fiscal reform, starting with government spending, including social security. Kadomatsu Hideki describes the commission as "designed to replace the 'big government' postwar consensus among advanced nations with a 'small government' ethos."

Kadomatsu continues, "When looking at how much of the commission's recommendations were carried out, its impact does not end with the Nakasone administration...its fundamental principles can be found in 'Hashimoto's reform' and 'Koizumi's revolution.' In fact, the commission should be seen as the starting point for the 'small government' movement that has existed ever since."⁸

(3) From "Budget Reform without Higher Taxes" to "Integrated Reform of Taxes and Social Security"

In 2006, the Koizumi cabinet passed new legislation (*Administrative Reform Promotion Act*) to achieve its small government vision of a "simple, efficient government." This law had several goals: cut the size of government in half within a decade and reform government-affiliated financial institutions, total compensation for government employees, and government asset management (review special accounts and incorporated administrative agencies, for example).⁹ "Simple, efficient government" is "small government" made manifest in legal language.

government expenditure in general government accounts in the system of national accounts), gross fixed capital formation peaked in the mid-1990s. Outlays for social security cash benefits and social transfers in kind increased due to the aging population. Actual final consumption was rising in the 1990s but has generally leveled off since the 2000s.

The number of government employees per capita in Japan is low relative to other nations.¹⁰ In addition, the weakening of the safety net function and the overburdening of medical and long-term care providers accelerated after the 2008 global financial crisis. In 2009, the Democratic Party of Japan (DPJ) took power. The DPJ promised to "functionally enhance" social security and create "social security for all generations" and had enough votes in the Diet to enact "integrated reform of social security and taxes" in 2012.

Despite this, as Shinoda¹¹ observes, the DPJ took the wrong approach to winning public support. He writes, "public support for a tax increase depends on the public's confidence in the value of the social security programs it would fund and the fairness of the tax system. It is difficult to win popular support for tax increases with 'fiscal reorganization' as justification." The attempt to simultaneously achieve the goals of integrated reform of social security and taxes—expanding and stabilizing social security and restoring Japan's fiscal health—is also facing many obstacles.

2. Was Keynes an Elitist?

As Otaki Masayuki argues, Keynes's career demonstrates that he was confident in his own ability to convince others through argument. However, J.M. Buchanan sees Keynes as overly confident in his powers of persuasion and dismis-

However, looking at Japan's fiscal position (real

⁷ Kato Junko. 2003. "Fukushikokka no zeishū kōzō no hikakukenkyū: Zaiseikiban no keisei ni miru keiroizonsei" (A Comparative Study of the Structure of Tax Revenues Among Welfare States: Path Dependence in the Formation of a Financial Base). In Takechi Hideyuki, ed., Fukushikokka no Gabanansu (The Governance of Welfare States). Kyoto: Minerva Shobo, Pp.15-47

⁸ Kadomatsu Hideki. 2010. "Dainiji rinchō no secchi to shin jiyū shugi" (The Creation of the Second Provisional Administrative Reform Commission and Neoliberalism). In Kasahara Hidehiko, ed., Nihon Gyōseishi (Japanese Administrative History). Tokyo: Keio University Press. Pp.123-147

⁹ Kanzaki Shōichirō. 2010. "Shōchō saihen to kōzō kaikaku" (Ministerial Reorganization and Structural Reform). In Kasahara Hidehiko, ed., *Nihon Gyōseishi*. Tokyo: Keio University Press. Pp.149-171

¹⁰ Maeda Kentaro. 2014. *Shimin o Yatowanai Kokka: Nippon ga Kōmuin-sū no Sukunai Kuni e to Itatta Michi* (The State that Does Not Employ Its Citizens: Japan's Path to a Small Civil Service). Tokyo: University of Tokyo Press.

¹¹ Shinoda Tsuyoshi. 2014. "Fukakachi zei no dönyü katei to gyakusetsu-teki seikaku" (The Process of Introducing a Value Added Tax and Its Paradoxes). In Morotomi Toru, Ide Eisaku, and Konishi Sachio, eds. Nihon Zaisei no Gendaishi II (A History of Modern Japanese Finance II). Tokyo: Yuhikaku. Pp. 225-256

sive of the democratic process of elections. Buchanan points out that Keynes's objections to the imposition of severe reparations on Germany in *Economic Consequences of the Peace* went unheeded. During the Great Depression, the British government was unmoved by Keynes's arguments in *General Theory of Employment, Interest, and Money.* According to Buchanan, Keynes's arguments were not only ignored, his theories were also "completely off the mark."¹²

Dostaler (2008: 566) supports Otaki's assessment: "Keynes overestimated the role of ideas and the power of reason and at the same time underestimated the importance of political expediency."¹³ A rough translation of the Confucian saying, often used in Japan to criticize bureaucrats, *tami wa yorashimu beshi, shirashimu bekarazu,* "people can be made to follow without understanding the reasons why"¹⁴ may apply to Keynes, but a much more apt translation for would be "the political trust of the people can be won, but getting each of them to understand the politics is difficult."¹⁵

3. Legacy of Keynesian Thought

Now that we have gotten past the dogma of "fiscal reform without tax hikes," and are witnessing Japan's struggle with underconsumption and poverty, those of us who trained in the Keynesian approach have an obligation to keep our faith in the "role of ideas and the power of reason" and do what we can to win public support for reconstructing the welfare state and to resist policymaking based on political expediency.

Dostaler (2008: 567) states "Keynes believed that remedies for societal ills could not be prescribed dogmatically or rigidly but needed to be adapted to fit the circumstances, the point in time, and the place." ¹⁶ In *The End of Laissez-faire*, Keynes (1926) writes:

I think that capitalism, wisely managed, can probably be made more efficient for attaining economic ends than any alternative system yet in sight, but that in itself it is in many ways extremely objectionable. Our problem is to work out a social organisation which shall be as efficient as possible without offending our notions of a satisfactory way of life.¹⁷

There can be no doubt that conditions demand a new Keynes-Beveridge welfare consensus model, that we need to adapt Keynesian thought to fit the specific circumstances facing us today.¹⁸

¹² Otaki Masayuki. 2009. Kiso kara Manabu: Keizaigaku Nyūmon (Start with the Basics: Introduction to Economics). Tokyo: Yuhikaku. Pp. 266-67.

¹³ Gilles Dostaler. 2008. Keinzu no Tatakai. Tokyo: Fujiwara Shoten. Translation of Keynes et Ses Combats (2005). Paris: Albin Michel.

¹⁴ Fukuzawa Yukichi and Saito Takashi. *Gakumon no susume: Gendaigoyaku* (An Encouragement of Learning: A Modern Translation). Tokyo: Chikuma Shobo. P. 36.

^{*}This popular interpretation of the Confucian saying is reportedly taken from Fukuzawa's best-selling book from the Meiji era.

¹⁵ Miyazaki Ichisada. 2000. Gendaigoyaku: Rongo (Modern Translation of the Analects of Confucius). Tokyo: Iwanami Shoten. P. 128.

¹⁶ Gilles Dostaler. 2008. Keinzu no Tatakai. Tokyo: Fujiwara Shoten. Translation of Keynes et Ses Combats (2005). Paris: Albin Michel. P.567.

¹⁷ Keynes, John Maynard. 2010. Keinzu Settoku Ronshū. (Translation of Essays in Persuasion). Tokyo: Nikkei Publishing.

¹⁸ James Meade, a leading disciple of Keynes, advocated a "social dividend" system that is worth revisiting today. See Watabe Akira's chapter, "J.E. Mīdo Riseiteki kyūshin shugisha no keizai seisaku: Kongō keizai e no teigen: Shijō no motsu kōritsusei to zangyakusei e no fukai ninshiki" (J.E. Meade's Intelligent Radicals Guide to Economic Policy: The Mixed Economy: Toward a Deeper Understanding of Market Efficiency and Inequity). In Otaki Masayuki and Cato Susumu, eds., Keinzu to Sono Jidai o Yomu (Lessons from Keynes and His Contemporary Writers: A Guide to Rethinking a Time of Crisis). 2017. Tokyo: Tokyo University Press. Pp.159-171

Has the Second Postulate of Classical Economics Been Abandoned or Extended?

OTAKI Masayuki¹



Otaki Masayuki is a professor at Institute of Social Science, the University of Tokyo

Institute of Social Science The University of Tokyo 7-3-1 Hongo, Bunkyo-ku Tokyo 113-0033 E-mail: ohtaki@iss.u-tokyo.ac.jp

1. Introduction

Demand creates supply. This is the fundamental idea of Keynes. Stagnation occurs due to the lack of aggregate demand. This proposition seems evident; however, it is difficult to prove in a barter economy when we consider the role of prices and nominal wages. If there is excess supply in the market, the price falls relative to the nominal wage. This tendency increases demand and decreases supply because goods become cheaper than labor. Ultimately, this process continues until the demand in the goods and labor market is equal to the supply. Hence, there is no disequilibrium in neoclassical economics. To summarize, as long as price and nominal wage are flexible, there is no idle resource in the economy such as involuntary unemployment.

According to Keynes, involuntary unemployment includes those unemployed workers who are willing to work at the wage prevailing in the labor market. He considers involuntary unemployment to account for the most part of actual unemployment. One of the most important aims of *The General Theory of Employment, Interest and Money* (Keynes 1936) is to prove the presence of involuntary unemployment under the assumption of flexible prices. Otaki (2016) claims that the essence of *The General Theory* is condensed in the first three chapters, Book I, as such, it is quite difficult to understand this book properly. The aim of this essay is to demonstrate the validity of his assertion in a concise manner.

2. The Case of American Keynesian Economics: Nominal Wage Stickiness and Separation of Investment and Savings Decisions

American Keynesian economics (e.g., Paul Samuelson and Robert Solow) considers the nominal wage to be sticky, which is the standard textbook interpretation of *The General Theory*. Indeed, Keynes argues

"Now ordinary experience tells us, beyond doubt, that a situation where labour stipulates (within limits) for a money-wage rather than a real wage, so far from being a mere possibility, is the normal case" (*The General Theory*, p.9).

As a preliminary thought, let us consider what happens in an economy where the nominal wage is fixed or sticky in a certain extent against exogenous shocks. Curve FF in the first quadrant of Figure 1 is the aggregate production function, which illustrates the technological relationship between total employment (input) N and real GDP, Y. This curve is upward sloping because an increase in the total employment increases GDP. The slope of tangent at point *A* is called the marginal productivity of labor, MPL. In economics, "marginal" implies "additional." Therefore, the marginal productivity of labor at point A represents the number of goods that are produced by the an additional unit of labor. (Note that the volume of addition is infinitesimally small).

¹ This article is supported by JSPS KAKENHI Grant Numbers, JP23530215, JP26380232, and JP17K03618.

Figure 1. American Keynesian



Once we can understand the meaning of marginal productivity of labor, we can understand why the curve *FF* is convex. That is, along with an increase in production, the scarcity of some fixed production resources such as capital becomes prominent, thus, reducing the additional increment in produced goods. Accordingly, additional labor force (marginal productivity of labor) produces only smaller goods. In a mathematical expression, the slope of the tangent of curve *FF* becomes flatter with an increase in employment volume, *N*. This discussion is summarized by curve *MLP* in the fourth quadrant of Figure 1.

The representative firm maximizes its profits on total labor N. The optimal production level is denoted by

$$p \cdot dY = w \cdot dN, (1)$$

where p and w are price and the nominal wage, respectively. dN and dY are the marginal increase in employment and the corresponding marginal increase in real GDP, respectively. According to equation (1), the marginal increase in sales must be equal to the marginal increase in production cost (Keynes (1936) calls this the first postulate of the classical school). Otherwise, the representative firm can improve its profits by manipulating the employment level. For example, when the left-hand side of equation (1) is larger than the right-hand side and the marginal sales exceed the marginal cost, the firm can increase its profits by expanding employment. Equation (1) can be transformed to

$$\frac{dY}{dN} = \frac{w}{p} \,. \tag{2}$$

Equation (2) implies that optimal employment is achieved when marginal productivity of labor is equal to the real wage.

In addition, as advocated by Keynes, decisionmaking concerning savings and capital investment are assumed to be enforced by different economic agents: individuals and firms. Then, the aggregate demand curve is defined as

$$Y^{d} \equiv c(Y) + I = c(F(N)) + I, \qquad (3)$$

where c(Y) is the aggregate consumption, which is an increasing function of the real income *Y* (real GDP). *I* denotes the aggregate real capital investment enforced by the representative firm. Equation (3) is illustrated by Curve *AD* in the first quadrant of Figure 1.

The equilibrium in the goods market is achieved at the intersection E of the aggregate supply (production) function FF and the aggregate demand curve AD. The equilibrium real GDP Y fluctuates in response to fluctuation in capital investment. If firms are embraced by good business opportunities and capital investment increases, the aggregate demand curve shifts upward as indicated by curve AD'. Thus, the equilibrium moves from point E to E', leading to a boom.

The equilibrium price is determined with respect to a firm's profit motive. When an economy is located at point E, employment is determined as N^{E} . Then, it is evident from the fourth quadrant of Figure 1 that the equilibrium relative price is

 $\frac{w}{p^{E}}$ (note that the nominal wage, *w*, is invariant

by assumption).

The neoclassical school criticizes this view of the economy. If the aggregate demand expands to curve AD', the relative price of goods rises such

that $\frac{w}{p^{E^*}}$ and the equilibrium employment level

increase. Friedman (1968) points out that this behavior of individuals is irrational at least in the long run. This is because, despite the reduction in real wage, individuals increase their labor supply. This critique is vital in American Keynesian economics and it requires the reconsideration of labor supply incentive in *The General Theory*. Therefore, we need to look at how the neoclassical school describes an economy.

3. Neoclassical View: Say's Law and Flexible Prices

Neoclassical school defies the separation between savings and capital investment decisions. Accordingly, they assume that the aggregate demand function, which is defined by equation (3), does not exist. Economists say that Say's law holds in such a situation. An increase in supply (savings) automatically leads to an increase in demand (capital investment).

Instead, optimal decision concerning labor supply is introduced, which can be represented as

$$\frac{w}{p} \cdot dN = d\varphi \,, \qquad (4)$$

where dN denotes additional increase in labor supply, and $d\varphi$ is the associated disutility of labor. The left-hand side of equation (4) is the derived utility from additional consumption because a unit increase in labor supply creates

 $\frac{w}{p}$ units of goods. Equation (4) implies that the

optimal labor supply is determined at the point where the additional utility from consumption is equal to the associated disutility of labor. Equation (4) can be transformed to

$$\frac{d\varphi}{dN} = \frac{w}{p} \,. \tag{5}$$

If the left-hand side of Equation (5) exceeds the right-hand side, a unit increase in labor supply generates more cost (disutility of labor) than benefit (utility from consumption), and thus,

labor supply decreases until the equilibrium is established. On the other hand, when the real wage increases, an individual provides more work to equalize both sides of equation (5). Keynes dubbed this optimality condition the second postulate of classical school.

The general equilibrium of an economy as described by the classical school is illustrated in Figure 2. The first quadrant of Figure 2 depicts the same production function as in Figure 1. The fourth quadrant depicts the equilibrium in the labor market. The downward-sloping curve $L^{D}L^{D}$ is the labor demand curve, which is derived from the profit maximization condition of the firm, that is, the first postulate of the classical school. The upward-sloping curve $L^{S}L^{S}$ is the labor supply curve, which is based on the utility maximization of the individual, that is, the second postulate of the classical school.

The equilibrium of the economy is achieved at the intersection E^{C} provided that the price and wage vary flexibly. The resulting equilibrium employment level N^{C} produces Y^{C} amounts of GDP. Thus, whenever Say's law and the second postulate of



Figure 2. Classical Economics

classical school hold, there is no idle resource in the economy. Even though the equilibrium employment level does not reach full employment, the associated unemployment is *voluntary* because individuals rationally prefer leisure to consumption.

Accordingly, it seems natural to abandon the second postulate of the classical school to induce the concept of *involuntary* unemployment. Nevertheless, the problem is not as simple as it looks.

3. A Reinterpretation of the General Theory

The above discussion suggests that Keynes entirely abandons the second postulate of classical economics. If such an interpretation is plausible, there is a fatal drawback in the Keynes's price theory as asserted by Friedman (1968). Nevertheless, we must consider the following remarks in *The General Theory:*

(I) "Thus it is fortunate that the workers, though unconsciously, are instinctively more reasonable economists than the classical school, inasmuch as they resist reduction of money-wages, which are seldom or never of an all-round character, even though the exiting real equivalent of these wages exceeds the marginal disutility of the existing employment; whereas they do not resist reduction of real wages, which are associated with increases in aggregate employment and leave relative money-wages unchanged, unless the reduction proceeds so far as to threaten a reduction of the real wage below the marginal disutility of the existing volume of employment" (*The General Theory*, pp.14-15).

(II) "For it is far from the general tenor of the classical theory, which has taught us to believe that prices are governed by marginal prime cost and that money-wages largely govern marginal prime cost. Thus if money-wages change, one would have expected the classical school to argue that prices would change in almost the same proportion, leaving the real wage and the level of unemployment practically the same as before...." (*The General Theory*, p.12).

The discussion in (I) implies that the workers are ready to accept the reduction in the real wage to the extent that the wage exceeds the marginal disutility of labor. This implies that the labor supply curve is not $L^{s}L^{s}$ in Figure 2 but the shaded area in Figure 3. Every point in the shaded area is incentive compatible in the sense that all workers in the economy are willing to work because an additional employment provides a net positive benefit, which is the difference between the additional utility derived from the real wage and the corresponding marginal disutility of labor. In this sense, Keynes does not abandon the second postulate of classical economics but extends it. In mathematical expression, the labor-supply becomes a correspondence as follows:

$$L^{s} = \left\{ N \mid \frac{w}{p} \ge \frac{d\varphi(N)}{dN} \right\}.$$
 (6)



This interpretation provides a rigorous microeconomic foundation for the General Theory. Figure 4, which differs from Figure 2 in terms of the aggregate demand curve, AD, existing due to the separation of capital investment and savings decisions, illustrates Keynes's price theory. Whenever the aggregate demand is reduced, effective demand is achieved at point E. The associated equilibrium in the labor market is located at point N^* . One must note that N^* is contained in the set that is designated by equation (6). In this sense, all workers seek employment opportunities, thus implying that some workers are involuntarily unemployed due to the deficiency of aggregate demand.

Let us analyze whether a nominal wage reduction can save unemployed workers. Keynes's assertion (II) is quite important in this respect. It must



Figure 4. Economic Equilibrium of the General Theory

be noted that the nominal wage, , does not appear in equations (2) and (6) independent of the real wage $\frac{w}{p}$. Accordingly, if the output price *p* falls proportionately to a decrease in the nominal wage and keeps the real wage $\frac{w}{p}$ intact, there is no change in the equilibrium conditions of the economy illustrated in Figure 4. Therefore, a reduction

in nominal wage cannot rescue involuntarily unemployed workers. This is the current interpretation of Keynes's assertion (II).

To summarize, *The General Theory* can be regarded as being effective in proving the presence of involuntary unemployment with respect to the flexible-price assumption. In addition, such involuntary unemployment is caused by a deficiency of aggregate demand.

References

- [1] Keynes, J. M. (1936). The General Theory of Employment, Interest and Money, London, Macmillan.
- [2] Otaki, M. (2016). Reconsidering Keynes's General Theory in the Context of the Japanese Economy, Development Bank of Japan Research Series, Tokyo, Springer.

ISS Research Report

How Can Economic Theory Help Causal Inference?

KAWATA Keisuke



Kawata Keisuke is an associate professor at the Institute of Social Science, the University of Tokyo

Institute of Social Science The University of Tokyo 7-3-1 Hongo, Bunkyo-ku Tokyo 113-0033 E-mail: keisukekawata@iss.u-tokyo.ac.jp

1. Introduction

What can we learn from data? This is a central question of quantitative empirical studies in social science(s), and this short-report discusses how economic theory can help draw implications from data. Statisticians and social scientists have developed statistical toolkits. By their effort and improving access to data, empirical studies have dramatically increased in many disciplines. For instance, in three top economics journals (*American Economic Review, Journal of Political Economy, and Quarterly Journal of Economics*), 63.9% of articles, in 2011, involved empirical research. In 1963, the share was 47.8% (Hamermesh 2013). In contrast, the share of theoretical research has plummeted from 52.2% in 1963 to 27.9% in 2011.

Among empirical toolkits, design-based causal inference has recently become a popular approach

in not only political science and economics but also health, behavioral science, and other disciplines. In the approach, we can estimate the causal effect of "treatment" on "outcome." For instance, let us suppose we have an interest in the causal effect of an "online statistics course" on future income. To estimate the effect, the design-based approach suggests a randomized experiment where experimental participants are randomly assigned into a treatment group (participating in the online course) and a control group (not participating in the course). The approach has a strong advantage. It can estimate causal effects with a careful research design but without making "behavioral" assumptions about why people behave as observed in the data. We can obtain reliable estimators if such experiments can be conducted, or we can "find" situations as in the randomized experiment.

2. Potential outcome framework

Formally, design-based causal inference can estimate the causal effect defined by the potential outcome framework (Rubin 1974). The framework starts to define the potential outcome of a student i as $Y_i(t_i)$ where Y_i is future income of the student i, and t_i indicates participating in the program or not; $t_i = 1$ if the student participates the program, and $t_i = 0$ if she/he does not participate.

The "individual" causal effect (effect on a student i) is defined as the income difference in different "scenarios" as

$$Y_i(t_i = 1) - Y_i(t_i = 0).$$

Because the estimation of the above individual effects is difficult, we often estimate the causal effect on the income distribution. For instance, the average causal effect is defined as

$$E[Y_i(t_i = 1) - Y_i(t_i = 0)].$$

Recent developments, which include inference

with non- global randomness (e.g., regression-indiscontinuity, conditioning on observables, and instrumental variable approaches) and distributional causal effects, provide rich toolkits for causal inference (see, for instance, Imbens and Rubin 2015).

3. Potential outcome with economic model; Example of the WTP analysis

What is a key difference between the potential outcome framework and theoretical frameworks in economics? The potential outcome framework requires carefully ensuring the validity of the randomization assumption on treatment. The mechanism of causal effect, however, is a black box.¹

Meanwhile, economists have intensively discussed how to determine the relationship between treatments and outcomes. Even through economic theory depends on untested assumptions in most cases, it can help empirical research.

A crucial limitation of the design-based approach is that we cannot estimate the causal effect on "unobservable" outcome variables.² Economic theories have emphasized the importance of unobservable variables (e.g., preferences) to explain a social phenomenon and policy evaluations. As a result, typical evaluation indicators are also unobservable, and the "purely" design-based approach cannot then estimate them.

Some works try to estimate the causal effects on those unobservable indicators (Chetty 2009 provides a comprehensive survey). Recently, Hinn et al. (2016) shows that combining the design-based approach and a simple economic decision-model can estimate an unobservable evaluation indicator, the willingness-to-pay (WTP). WTP is a popular indicator for both economists and political practitioners that can summarize individual preferences.

Now, let us estimate the WTP of a policy (water improving policy in Hinn et al. 2016). We start to define individual i(s) WTP, **WTP**_i, which is a threshold individual policy burden under which

policy implementation and status-quo (nonimplementation) are indifferent; the individual i either will prefer the policy implementation or non-implementation.

The first challenge is to estimate the WTP distribution as

 $\Pr[WTP_i \leq X],$

which is the share of individuals whose WTP is less than X. Because the policy preference is not directly observed from the data, the purely design-based approach cannot be used.

The paper estimates the WTP distribution by using the survey data, in which respondents state whether they prefer the policy implementation or not. The data allow us to estimate the average value of a potential outcome $E[Y_i(X)]$, where X is an individual policy burden, and Y_i is a choice indicator equal to one if the respondent i prefers the implementation of a policy with costs X and equal to zero if not.

To estimate $\Pr[WTP_i \le X]$ from $E[Y_i(X)]$, we need a key assumption on preference, *monotonicity*, which requires that any respondent prefers a "cheaper" policy, other policy attributes being equal. The assumption implies that $Y_i(X) = 0$ if, and only if, $WTP_i \le X$ because a policy implementation is indifferent with non-implementation if $X = WTP_i$. Therefore, we obtain the following key equation,

 $\Pr[WTP_i \le X] = 1 - \mathbb{E}[Y_i(X)],$

which implies that $Pr[WTP_i \le X]$ can be estimated from the survey data. Moreover, the share of WTP between X and X' is also estimated by

$$Pr[X \le WTP_i \le X'] = Pr[WTP_i \le X'] - Pr[WTP_i \le X]$$
$$= E[Y_i(X)] - E[Y_i(X')],$$

which means that the share of WTP is equal to the estimated average causal effect of policy cost.

In Hinn et al. (2016), we show additional results, which can estimate the minimum bound of the

¹ There are challenges to unpack the black box, for instance, the causal mediation analysis (Imai et al. 2011).

² Another key limitation is the validity of the stable unit treatment value assumption (SUTVA). The general form of the potential outcome is $Y_i(t_1, a? |, t_i, a? |)$, which allows that the outcome of experimental participant i may depend on treatment status of other participants. The SUTVA requires that the outcome of participant i(s) depends on only her or his treatment. Econometricians have discussed how to estimate causal effects with equilibrium effects, which are a challenge of estimation without SUTVA.

ISS Research Report

WTP and the causal effect of policy attributes on the WTP distribution. The paper then shows that the economic theory can help draw rich implications for unobservable policy indicators.

4. Conclusion

The report first introduces a popular paradigm in recent empirical studies, the design-based approach and the potential outcome framework. Even though the paradigm cannot explain unobservable outcomes, combining it with economic theory can draw out the implications of those outcomes from the data.

Finally, I believe it is an important research direction to obtain more policy implications by combining design-based approaches and economic theory. Of course, theories in other disciplines including political science and sociology also provide new insight into causal inference. Inter-disciplinary research has a great value for future empirical research.

Reference

Abbring, J. H., & Heckman, J. J. (2007). Econometric evaluation of social programs, part III: Distributional treatment effects, dynamic treatment effects, dynamic discrete choice, and general equilibrium policy evaluation. Handbook of econometrics, 6, 5145-5303.

- Chetty, R. (2009). Sufficient statistics for welfare analysis: A bridge between structural and reduced-form methods. Annu. Rev. Econ., 1(1), 451-488.
- Hamermesh, D. S. (2013). Six decades of top economics publishing: Who and how?. Journal of Economic Literature, 51(1), 162-172.
- Hninn, S. T., Kawata, K., Kaneko, S., & Yoshida, Y. (2016). A nonparametric welfare analysis on water quality improvement of the floating people on Inlay Lake via a randomized conjoint field experiment (No. 6-2). Hiroshima University, Graduate School for International Development and Cooperation (IDEC).
- Imai, K., Keele, L., Tingley, D., & Yamamoto, T. (2011). Unpacking the black box of causality: Learning about causal mechanisms from experimental and observational studies. American Political Science Review, 105(4), 765-789.
- Imbens, G. W., & Rubin, D. B. (2015). Causal inference in statistics, social, and biomedical sciences. Cambridge University Press.
- Rubin, D. B. (1974). Estimating causal effects of treatments in randomized and nonrandomized studies. Journal of educational Psychology, 66(5), 688.



ISS Contemporary Japan Group at the Institute of Social Science, The University of Tokyo

ISS Contemporary Japan Group seminar series provides English-speaking residents of the Tokyo area with an opportunity to hear cutting-edge research in social science and related policy issues, as well as a venue for researchers and professionals in or visiting Tokyo to present and receive knowledgeable feedback on their latest research projects. Seminars are open to everyone. Admission is free and advance registration is not required. For further information, please consult the CJG website: http://web.iss.u-tokyo.ac.jp/cjg/.



Jacques E.C. Hymans

(Associate professor of international relations at the University of Southern California and a visiting associate professor at Waseda University)

October 26, 2017

Getting Steamed: Local-level Impediments to Geothermal Energy Exploration in Japan

Why wasn't post-oil shock Japan able to make greater progress toward improving its energy security, and in particular, increasing its domestic energy production? Beyond the obvious fact that Japan does not have substantial hydrocarbon fuel reserves, it is often argued

that the central authorities' desire to increase domestic energy production was greatly hampered by local "not in my backyard" (NIMBY) resistance to new power plant siting. This paper investigates the question of local-level impediments to Japan's exploitation of a kind of energy that has gotten almost no attention in the energy policy literature: geothermal energy. Contrary to popular belief, Japan is not totally bereft of domestic energy resources; it actually has vast untapped geothermal energy potential. The paper sheds a new light both on the geothermal energy puzzle and on the more general dynamics of power plant siting in Japan.



Karen Shire

(The Chair of Comparative Sociology at the University of Duisburg-Essen, Germany)

November 16, 2017

Private Employment Services and Temporary Labour Migration: The Case of Japanese Temporary Staffing Firms in East and Southeast Asia

In the wake of Japanese foreign direct investments in East and Southeast Asia, and a declining labour market at home, the Japanese temporary staffing industry has established a strong network of capacities for the recruitment and placement of temporary labour for client enterprises

throughout East and Southeast Asia. Increasingly these placements in host countries involve cross-border labour recruitment, for example, with private employment services managing the return migration of Chinese students and workers in Japan to Japanese clients in Beijing and Shanghai, and the transfer of staff from Taiwan, Thailand and Vietnam to client enterprises back in Japan or in other East and Southeast Asian countries. The presentation covers three aspects of the emerging cross-border labour market intermediated by staffing agencies in East and Southeast Asia. First, regulatory changes are traced at the international and national level in East and Southeast Asia to chart the opportunities for the private staffing industry in the region. Together with the world-wide liberalization of employment contracts and market transformations in former socialist and newly industrialised countries, these changes are shown to open new sources of skilled labour and to create a legal basis for private employment services to manage temporary migration. The second part of the paper examines how Japanese staffing agencies draw on different sets of regulations to establish their services in China, Taiwan, Thailand, and Vietnam, drawing on field research about the activities of temporary staffing agencies in China, Taiwan, Thailand and Vietnam. The final part of the presentation turns to analyse the practices of staffing agencies in the cross-border intermediation of temporary staff in host countries and across borders. The evidence shows that staffing agencies focus on the cross-border placement of skilled labour, and often intervene in the production of work skills through internship programs and language education. The evidence also shows that staffing agencies strategically work around regulations and restrictions in host countries to invent staffing practices, which circumvent legal restrictions on private employment services. The research reported aims to contribute to an economic sociological theory of transnational labour markets, and the key role played by the private management of temporary labour migration.



ISS Contemporary Japan Group at the Institute of Social Science, The University of Tokyo

ISS Contemporary Japan Group seminar series provides English-speaking residents of the Tokyo area with an opportunity to hear cutting-edge research in social science and related policy issues, as well as a venue for researchers and professionals in or visiting Tokyo to present and receive knowledgeable feedback on their latest research projects. Seminars are open to everyone. Admission is free and advance registration is not required. For further information, please consult the CJG website: http://web.iss.u-tokyo.ac.jp/cjg/.



Dan Slater

(Professor of Political Science and incoming Director of the Weiser Center for Emerging Democracies at the University of Michigan)

November 29, 2017

Democracy through Strength: Asia's Development and Democratization

Contrary to theoretical expectations that authoritarian regimes are most likely to allow democratization as a last resort during times of extreme weakness, authoritarian regimes in Asia have often pursued democratic reforms as a proactive strategy from a position of considerable strength. This presentation discusses

the historical forces that have facilitated democracy through authoritarian concession rather than authoritarian collapse in developmental Asia, as well as the dynamic processes through which authoritarian regimes have either brought it into being or failed to do so. Of central importance is the building up of an authoritarian ruling group's "victory confidence" and "stability confidence" over time. After surveying how victory confidence and stability confidence have historically fostered democracy through strength in Japan, South Korea, Taiwan, Indonesia, and Thailand, the presentation assesses prospects for ongoing reforms in Myanmar as well as potential future democratic reforms in China, Vietnam, Cambodia, Singapore, Malaysia, and Hong Kong.

Recent Publications by ISS and ISS Staff

大瀧雅之・加藤晋(編) 『ケインズとその時代を読む 一**危機の時代の経済学**ブックガイド』 (東京大学出版会)2017年7月



Nakagawa Junji (著)

『Nationalization, Natural Resources and International Investment Law: Contractual Relationship as a Dynamic Bargaining Process』 (Routledge) 2017年7月



Horiuchi Kozo and Otaki Masayuki (著) 『Dr. Osamu Shimomura's Legacy and the Postwar Japanese Economy』 (Springer) 2017年8月



佐々木彈(著) 『統計は暴走する』 (中央公論新社)2017年9月



片山悠樹・内田良・吉田和久・牧野智和(編) 『半径5メートルからの教育社会学』 (大月書店)2017年9月



Recent Publications by ISS and ISS Staff

井手英策・宇野重規・坂井豊貴・松沢裕作(著) 『大人のための社会科─未来を語るために』 (有斐閣) 2017年9月



トニー・ベネット,マイク・サヴィジ,エリザベス・シルヴァ, アラン・ワード,モデスト・ガヨ=カル,デイヴィッド・ライト(著); 磯直樹,香川めい,森田次朗,知念渉,相澤真一(訳) 『文化・階級・卓越化』





大村敦志・道垣内弘人(編) 『解説 民法(債権法)改正のポイント』 (有斐閣) 2017年10月



川口大司(編) 『日本の労働市場―経済学者の視点』 (有斐閣) 2017年11月



Recent Publications by ISS and ISS Staff *For more publications, please visit the ISS Homepage (http://jww.iss.u-tokyo.ac.jp/, http://www.iss.u-tokyo.ac.jp/).

深尾京司・中村尚史・中林真幸(編) 『岩波講座 日本経済の歴史1 中世 ―11世紀から16世紀後半』 (岩波書店)2017年7月



深尾京司・中村尚史・中林真幸(編) 『岩波講座 日本経済の歴史2 近世 一16世紀末から19世紀前半』 (岩波書店) 2017年8月



中村尚史・中林真幸・深尾京司(編) 『岩波講座 日本経済の歴史3近代1 ―19世紀後半から第一次世界大戦前(1913)』 (岩波書店)2017年9月



深尾京司・中村尚史・中林真幸(編) 『岩波講座 日本経済の歴史4 近代2 一第一次世界大戦期から日中戦争前(1914-1936)』 (岩波書店)2017年11月



深尾京司・中村尚史・中林真幸(編) 『岩波講座 日本経済の歴史5 現代1 一日中戦争期から高度成長期(1937-1972)』 (岩波書店)2018年1月





Economic Analysis of Internal Corporate Data Project

Owan Hideo

We started this project in 2013 with support from the Research Institute of Economy, Trade and Industry (RIETI) and Works Applications, Inc. to increase the social exposure of our research output in personnel economics and facilitate interactions with human resource (HR) managers. We inaugurated the project by organizing an international symposium and workshops in our first year, inviting leading scholars in personnel economics, including the "father of personnel economics," Professor Edward P. Lazear from Stanford University.

Our main current activity is running a workshop series for HR managers, "Workshop for Effective Use of Personnel Data." Every year, we admit roughly 15 companies that are interested in increasing their managers' statistical knowledge and skills to analyze their personnel records. We meet once a month for five to six months to hear lectures by guest speakers, discuss HR issues, and study how to use data to tackle managerial problems. At every session, we assign participants homework. For example, this year, we asked attendees to study: (1) how their companies allocate resources among different types of training; (2) how large their gender wage gap is; (3) how they select new hires and how effective their recruitment policies are; and (4) what factors affect employee turnover. We help them



compare their results with their peers and find ways to improve their practices. To receive a certificate for completing the workshop, participants need to analyze a topic of their choice and make a final presentation.

The project resulted from our struggle to obtain internal corporate data. Together with Professors Daiji Kawaguchi of the University of Tokyo and Takao Kato of Colgate University, I started the project at RIETI, in 2009, to study internal labor markets using proprietary personnel records. RIETI offered to facilitate our study by sheltering the sensitive data on, their high-security server. Although we successfully obtained data, with the help of Works Applications, Inc., from two Japanese manufacturing companies in our first year, efforts to acquire more data in following years mostly failed. Even if HR managers agreed to provide us with their data, the requests typically got turned down as they moved up the hierarchy. The main reason, I believe, is that the management had no clear idea how they would benefit from having their personnel records analyzed. They were also concerned about data leakage and reputation risks.

After the failed attempts, we shifted our efforts toward developing a long-term relationship with firms that might cooperate with our study. The Workshop for Effective Use of Personnel Data is intended to help HR practitioners understand what benefits firms can obtain by analyzing personnel records. We also advise companies how they should reform their personnel policies to solve problems revealed in their analyses. As participants better understand the value of analyses and we gain more trust in our ability to identify managerial problems, it has become much easier for us to obtain internal corporate data from firms for academic research.

What data HR management systems typically store is expanding. Until several years ago, most companies kept in their systems only wage and performance information, working hours and attendance, job assignment histories, and worker characteristics such as age, tenure, education, and family information. Nowadays, an increasing number of firms save much richer information, including employee satisfaction survey results, 360 degree evaluation results, management-by-objectives system information (goal and achievement), training program participation records, project management records, stress check test results, aptitude test scores, and applicant information and interview results collected for recruiting. Those data allow us to analyze many issues related to hiring, the gender gap, training, employee turnover, the value of managers, employee health, productivity, and other topics.

What we did not initially anticipate was the speed of some participants' learning and the excellent quality of their own analysese. Participating firms have analyzed how aptitude test scores collected at the time of hiring were related to promotion probabilities 15-20 years later; how personality differences between supervisors and their subordinates cause systematic bias in performance and competency evaluations by the former; and how men and women with similar characteristics and jobs respond differently to employee satisfaction surveys. We find analytical minds among many HR practitioners. To further develop their skills, we plan to offer more rigorous data analysis programs in coming years.