China's Looming Economic Crisis
by Clifford Cobb

Introduction

In 2007, when the rest of the world entered a downward economic spiral, China's economy remained healthy. But now there are signals that China may be going in the same direction as the rest of the world. Although China's leaders began to consider policies to prevent an economic crisis early in 2010, by then it may already have been too late to avoid a catastrophe. If that is the case, then perhaps it will be possible to learn how to recognize the warning signs in advance, so the same mistakes will not be made in the future.

In order to show how the crisis facing China emerged, I will examine the experience of the United States, England, Japan, Latin America, and Southeast Asia and draw some parallels. I claim no special expertise in understanding the Chinese economy. I am merely going to suggest that China is not immune to the disasters that strike other economies. Before examining the patterns that have been experienced in many countries, I will first explain why economists have been unable to recognize those patterns as significant.

Misdiagnosis: the heart of the problem

The standard explanations of the 2007 economic contraction are sui generis (unique). That means commentators have looked for particular causes for this disaster, as if there were no precedents, nothing to be learned from past crises. By diagnosing the problem in this manner, they have completely overlooked the true causes of the crisis, which means they will do nothing to prevent another one in the future. As a result, when Chinese leaders ask experts in the U.S. and Europe for guidance, those foreign experts have failed to provide information that would help China avoid a similar calamity.

In the United States, the typical explanations for the crisis are 1) that the Federal Reserve Bank allowed interest rates to fall too low, 2) that Congress improperly deregulated banking in the late 1990s, 3) that banks were permitted to break up housing loans and then repackage them as standardized financial instruments, 4) that Congress required banks to lend to borrowers who were bad risks, and 5) that bankers are ruthless, greedy capitalists. The last is not an explanation offered by economists, but most Americans now seem convinced that that is the only explanation required.

Before considering an alternative explanation of the current crisis, let us step back and examine the more general question of what it means to explain events. Unless we recognize different kinds of explanations, it will not be clear why the current set of explanations is not helpful.

Two Kinds of Explanation: Ex Post and Ex Ante

The kinds of explanations that one finds in most articles about the global economic crisis and about most other social phenomena are called "ex post" (after the fact) explanations. That means the theory is based on evidence gathered after an event. For example, after an accident occurs, the police arrive and try to determine the cause. They create a plausible story or description of the event, reconstructed from the evidence. That story is an "ex post" explanation. Although such a story might loosely be referred to as a "theory," it is not a scientific theory because it cannot generate hypotheses to be tested.

An "ex ante" (before the fact) explanation, is much rarer, but it is the kind that makes scientific generalizations and predictions possible. An "ex ante" explanation begins with a puzzle, something that is unknown about a pattern of events. If the answer can be observed directly there is no puzzle and no theory is needed. But if the puzzle persists, the researcher posits an underlying cause—a cause that is invisible. A classic example of this is Isaac Newton's theory that the planets remain in constant motion because of a single, unobservable variable: gravity. We cannot measure gravity directly. We know of its existence only through inference. The same is true of natural selection, the engine of biological evolution. We cannot observe it directly. We can only infer its existence and observe its outcomes.

The proposal that an unobserved or inferred variable is the cause of an event is the first step in the formulation of a scientific theory. The theory then creates an expectation that we will find new evidence in some unexpected place or form. For example, even though we cannot see gravity, we can use the concept of gravity to predict where the planets will be on a future date and then check to see if they are there. Any good theory allows us to predict where we will find *new* evidence that confirms or contradicts the theory. Thus, "ex ante" explanation not only shows how existing evidence fits together (just as an "ex post" explanation does); the "ex ante" theory *creates* new evidence by pointing the researcher toward evidence that would otherwise be overlooked. That is why it is called "ex ante," because the theory exists first, and potential evidence is generated from it. By testing inferences derived from the theory, new evidence is found. This is how a scientific theory generates testable hypotheses and predicts events before they happen.

Treating these two kinds of explanations as if they were the same or of equal value is the source of a great deal of confusion, not only for the general public, but also for scholars in the social sciences. Devising a good story that fits all the known facts may be plausible and convincing, but unless it permits the generation of non-obvious (surprising) propositions that can be tested, an elegant "ex post" story has no capacity to make accurate predictions, particularly predictions of a change in the existing trend.[1] When social scientists engage in "ex post" story-telling instead of "ex ante" prediction, they modify the story every time new facts come to light. Thus, "ex post" explanation is always ad hoc and has no consistency. It describes only one particular event. Only an "ex ante" theory can reveal the pattern that lies behind a variety of events—thus giving a

general explanation that applies in many different circumstances. If it does not have that universal quality, it does not enable prediction.

Another important feature of an "ex ante" explanation is that it is simple. "Ex post" stories tend to be complex, like Russian novels, with numerous characters interacting. By contrast, "ex ante" explanations cut through the complexity and offer a simple, elegant way of undestanding large numbers of diverse events by finding a key element that stands behind all of the diversity.

The following chart gives a brief description of the characteristics of each mode of explanation.

Method	Ex post	Ex ante
Type of evidence	existing evidence (known data)	constructed evidence (new data)
Applicability	particular	general
Use/Function	interprets prior observations	predicts
Knowledge formed	ad hoc	cumulative
Source of theory	derived from observations	independent of observations
Results	expected	surprising
Level of change	individual	system
Complexity	complex (many variables)	simple (one crucial variable)

One can distinguish an "ex post" from an "ex ante" explanation by one simple test: is the independent variable—the proposed causal factor—visible or not? If the independent variable is known only by inference, it is an "ex ante" explanation. The independent variable is rarely visible. There is a reason for this: if one can observe the action of the independent variable on the dependent variable, there is usually no mystery and no reason for scientific investigation.

Applying Scientific Method to the Economic Crisis

The same principles that apply to formulating theories in astronomy and biology should also apply to economics, but this seldom happens. What normally happens is that "ex post" stories flood the channels of communication, drowning out any possibilty that "ex ante" theories will be taken seriously.

In the case of the current economic contraction, President Obama has appointed a Financial Crisis Inquiry Commission. Until now, the commission has operated on the assumption that banking deregulation caused the crisis. Even though its stated purpose is to find the causes of the crisis, it is clear that it will rely entirely on "ex post" explanations, which merely tie together what is directly observable into coherent stories.

Similarly, the public statements of Joseph Stiglitz and Paul Krugman have resembled their diagnoses of the 1997 Asian crisis. The fault, they say, lies with the deregulation of financial markets, allowing money to be invested without proper government oversight.

Since Stiglitz and Krugman apply the same analysis to two separate events, it might seem that they are relying on an ex ante explanation—a theory that can be generalized. That is not the case. Instead, they start with the assumption the financial failures are caused within the financial system, as if money functioned independently of the real economy. They then apply the same sort of "ex post" reasoning to both crises—by pointing to the events that occurred immediately before each crisis and naming those events as the cause of the crisis. Since both men are Nobel Prize winners and well-respected in the economics profession, the problem with their analysis is not personal. It reflects a methodological failure of the entire economics profession.

The problem of recurring crises in market-based economies requires a "ex ante" explanation. It should be based on a general theory of crises, not an ad hoc, "ex post" explanation that describes each crisis as unique. An "ex ante" explanation would apply to every similar crisis, and it would allow future crises to be predicted and possibly prevented. An "ex ante" explanation would do all of this by specifying a variable that is not directly observable and that precedes and underlies each crisis. Is such an explanation possible?

Three Non-Theories of Economic Crisis

There are three frameworks that have been widely used to discuss economic crises—the frameworks proposed by Karl Marx, John Maynard Keynes, and Milton Friedman. I refer to them as frameworks, because none of them offers an "ex ante" explanation of periodic crises. None proposes an inferred hidden variable that would explain a sudden reversal from rapid growth to sudden contraction. Instead, each is a plausible story that fits some of the observed facts of crises, but none explains the Asian Financial Crisis of 1997 or the recent global crisis.

First, let us consider Karl Marx. He presents an "ex ante" theory, but it does not deal with the specific puzzle of the cycle of booms and busts by which economies suddenly become hyperactive, then collapse, and finally start to grow again. In Marx's theory, the independent variable is the expropriation of wages by capitalists. From that premise, he infers that capitalism will fail because of overproduction and a declining rate of profit. This theory is designed to explain long-term secular [continuous] decline, not cyclical change. Even if it can explain periods of decline, it does not explain periods of growth. Since capitalist financial crises involve distinct turning points, Marx's theory does not explain the central puzzle.

Second, the analysis by John Maynard Keynes begins by criticizing "Say's Law," which claims that depression is impossible because supply creates its own demand. Keynes posits, instead, that the circular flow of money and goods in a modern economy may contract if saving exceeds investment, leading to a decline in total spending or aggregate demand. This is a story, not a theory, because Keynes never proposed a variable that would explain why investors suddenly lose confidence or why saving would autonomously increase.[2] Paul Krugman has admitted in his introduction to Keynes's

General Theory that Keynes had no theory of what precipitates a contraction. Krugman says he just had an ad hoc prescription for what do *after* a sudden downturn occurs. Since the "stimulus package" prescribed by Keynesians did not help Japan in the 1990s or the United States today, there are strong reasons for questioning the validity of the Keynesian model. It may not even be the right medicine to take after a contraction begins. Nevertheless, the Keynesian story of under-consumption remains the dominant way of defining macroeconomic issues today.

The third story about economic crisis is monetarism. Its most famous advocate is Milton Friedman. In *A Monetary History of the United States, 1867-1960* (Princeton University Press, 1963), Anna Schwartz and Milton Friedman argue that the money supply affects price levels and the stability of the economy. They provide evidence that the depression of the 1930s was made worse by the failure of central banks to provide sufficient liquidity. Although they differ from Keynes in many specific areas, monetarists and Keynesians are in fundamental agreement that crises cannot be predicted. Instead, they can only be managed. Neither Keynesians nor monetarists have a theory about which endogenous factors (the factors within an economy) cause either demand or the money supply to fluctuate. They attribute the cause of change to random psychological factors that cannot be subsumed under an "ex ante" explanation. Thus, they offer not so much a theory of crises as a set of ad hoc remedies of how to reduce the severity of crises.[3]

Land Speculation as the Source of Economic Crisis

A fourth theory was proposed by Henry George in one short chapter of his 1879 book, *Progress and Poverty*. George argued that a cyclical rise in land prices causes an increase in payments to landowners and a corresponding decline in wages and in productive investment. In that way, rising land prices cause production to slow down and unemployment to rise. With fewer people able to buy goods, there is a downward spiral. The decline in production continues until land prices fall far enough to restore equilibrium. Prof. Mason Gaffney of the University of California has recently developed Henry George's partial theory into a much more complete theory.[4] Since this theory is less well known than the Marxian and Keynesian theories, I will elaborate on it here.

Land speculation is the initiating factor in causing a depression. That is the core of Henry George's theory, and it is the point of departure for Prof. Gaffney's theory as well. Gaffney's theory is that land speculation creates periods of expansion followed by sudden contractions, which weaken the financial system.[5] As evidence, he points to an cycle of rising land prices, followed by sudden economic contraction, declining land prices, and slow recovery, which has occurred every 16 to 20 years for the past 200 years. (The theory says to look for this cycle, which would otherwise remain hidden. This is a clear sign that Henry George's theory is an "ex ante," not an "ex post," explanation.) The same reversal that the world economy experienced in 2007 occurred in the U.S. economy in 1797, 1819, 1837, 1857, 1873, 1893, 1912, 1932, 1958, 1974, and 1991. It will likely occur again in 2026.

The theory predicts the periods of land speculation followed by economic downturns. The fact that those periods can be found partially confirms the theory, but it does not prove causation. Nevertheless, the repetition of that pattern should at least cast doubt on ad hoc theories that attribute crises to immediate causes. If the current crisis is similar in many details to previous crises, the stagnation experienced today cannot be blamed on derivatives or the Federal Reserve Bank, neither of which existed in the 19th century.

Gaffney ties the land price cycle to the cyclical behavior of banks. Since the collateral for many bank loans is real estate, this boom-bust cycle in real estate directly affects bank balances. Loanable funds expand during the period of increasing land prices, then shrink suddenly when the boom turns to bust. Banks are always heavily leveraged, meaning their reserves are a small percent of their loans. Leverage enables banks to profit during boom periods, because the value of their assets seems to be rising in the form of the real estate they hold as collateral. But eventually, the price of real estate reaches a peak and begins to fall. At that point, the value of bank assets is put in danger. Everyone tries to sell their real estate at the same time, but that just drives the price down further. When borrowers cannot repay their loans or choose to abandon property that is worth less than the loan on it, the bank takes the property that was held as collateral. Now banks have a lot of low valued property that they cannot sell. Their reserves become tied to these illiquid (unsellable) assets, so they can no longer lend money to small businesses for their operational expenses. As a result, bankruptcies rise dramatically.

The fundamental reason that land causes such economic havoc is that it is inherently lumpy and durable. When a small business borrows working capital, that capital quickly generates income and turns over several times in one year. Employment results from high turnover of existing capital, not so much from the total stock of capital. Land and large buildings yield value very slowly, and payback or turnover time is measured in decades. Capital invested in those durable assets produces little employment. As a result, when banks tie up their lending capital in real estate, they lock themselves into long projects with slow return. When that sort of lending becomes a large part of the banking system, all banks become illiquid (lacking loanable funds) at the same time, and the risk of system failure rises.

The cycle is not a natural phenomenon. It is caused by human institutions, ones that can be changed. In fact, the solution is simple. By imposing a tax on the market value of land, a normally lumpy asset that turns over slowly can be transformed into a high-turnover, income-yielding asset. Lending for land then becomes more like a loan for working capital—constantly turning over. This avoids the problem of economies becoming frozen because of the large number of long-term loans outstanding. Economic contraction can be avoided, but only by developing a theory of system failure based on a general theory of capital turnover. The aspect of the theory dealing with capital turnover is found only in Gaffney's theory, not in Henry George's. That is why Gaffney's theory has greater power and applicability than George's.

Because the "ex ante" theory provided by Henry George and Mason Gaffney has been ignored by influential academic economists, it remains invisible. The result is that major

economic crises are consistently misdiagnosed. When the economies of Mexico, Chile, Brazil, Argentina, Thailand, Indonesia, and Malaysia crashed in the 1990s, well-known economists, such as Paul Krugman and Joseph Stiglitz, explained these events entirely in terms of financial transactions. They said the crises were precipitated by the inflow and outflow of speculative capital from outside. What they failed to recognize was that foreign speculators were drawn to those nations for a reason. Just as Hong Kong capital has been attracted to Beijing and Shanghai in search of quick profits in real estate, the same phenomenon occurred in Latin America and Southeast Asia in the 1990s. For example, real estate prices in Mexico grew 600 percent before the 1994 crisis; residential construction rose 100 percent, but investment in productive machinery and equipment fell by 50 percent.[6] This precisely follows the pattern predicted by George and Gaffney, but most economists failed to see that real estate speculation was a central factor in causing both the regional crises of the 1990s (Latin America and Southeast Asia) or the global crash of 2007.

Relevance to China Today

Since 2006, land prices in major Chinese cities have been following a pattern of excessive growth that is similar to what has happened in real estate bubbles in other countries. The "median multiple" (ratio of median house price to median household annual income) has climbed in Beijing and Shanghai to between 20 and 30 (compared to an historic average of 3 in other countries).[7] Vacancy rates in high-end residences in Beijing and Shanghai are between 22% and 30%.[8] In Beijing, the price of newly constructed housing rose 362% from 2003 to 2010.[9]

Site values or land prices grow even faster than real estate prices. Existing indices combine rapidly rising land prices with slowly rising building costs, thus underestimating the rate of land price growth. Even though Chinese property owners lease land from the government rather than owning, a long-term (70-year) lease is tantamount to ownership until very near the end of the leasehold (in 2060 or so). In the meantime, leaseholders receive all of the gains from land price appreciation.

It is difficult to determine whether the Chinese experience will mirror the same approximate18-year cycle in land speculation found in other countries. One might date the beginning of the land price cycle in China a) to 1990 when privately held urban land-use rights (leases) were first permitted, b) to 1991-92, when local governments first became involved in the land development business on a large scale, or c) to 1989-90, when GDP growth was at a low point, falling below zero for the first quarter of 1990.[10] These three indicators suggest that the Chinese land market might conform to the 18-year cycle, but accurate predictions will only be possible after the current peak is more certain. For now, the peak seems to have occurred in May 2010.

The evidence that the increase in real estate prices is unsustainable became clear at least as early as 2009 to analysts who knew what to look for. Any one of three elements can signal that real estate has been overpriced and overbuilt—a pattern that will certainly be

followed by a severe contraction: 1) when housing prices rise out of proportion to the housing rental market and median household incomes, 2) when developers produce an excessive supply of office buildings and other commercial real estate, and 3) when local or regional governments engage in infrastructure development far in excess of current needs. I have already discussed the first element—housing price appreciation. An example of the second element is that office towers were still being built in Beijing and Shanghai in 2010 even though 15-17% were vacant in Beijing and 13% in Shanghai.[11]

The third element—excessive local infrastructure development—is perhaps the least obvious, but it is also important. In China, massive investment in infrastructure has been a major factor in China's overall growth, and it will be a major factor in causing the economy to freeze up after the contraction begins. In 2009, fixed investment was the source of 92% of China's GDP growth (8 percentage points out of 8.7).[12] Revenue from local land sales accounted for 4.4 percent of the GDP (or about 1.5 trillion yuan).[13] In addition, local goverments and their surrogates ("urban development corporations") have borrowed between 9 trillion (9,000,000,000,000) and 11.4 trillion yuan for infrastructure projects, and they have financed those investments by selling real estate or by borrowing against real estate.[14] When the value of the real estate assets backing those loans declines (as it must), then local and provincial governments throughout China will face a major fiscal crisis, and the growth engine of China (investment spending) will slow down or stop. In effect, local government initiatives, including government-owned enterprises, have been financed from rising land values. Local government interventions in the real estate market have helped artificially boost land values. When those values collapse, so will local governments and their commercial enterprises.

Conflicting Predictions about Chinese Real Estate

A small number of Chinese and foreign economists have been predicting the collapse of the real estate frenzy since late 2009, but in the absence of a general theory linking land prices to rest of the economy, the dangers associated with a real estate bubble are not fully appreciated by most economists. Each sees a piece of the puzzle, but no analyst has grasped the full picture.

Some economists have denied the problem entirely. Some claim that China cannot face the same fate as other countries for one of several reasons: a) because Chinese buyers were forced to make large down payments (30-40% of the house price), b) because most investment is being made by state-owned enterprises, or c) because the Chinese government has large cash reserves. This way of thinking is typical of "ex post" explanations. It draws upon a specific feature of a situation that is different from other cases and makes it a central factor. This happened in Japan in the early 1990s, when people claimed that the real estate bubble could not burst there because Japan is small and mountainous. Yet, the bubble burst in Japan, land prices declined sharply, and the banking system lost its liquidity. Japan still has not fully recovered, nearly twenty years later.

As late as June 30, 2010, Australian real estate analyst Christopher Joye (to take one example of many) argued that there is no housing bubble in China.[15] Using a 70-city index reported by the National Statistics Bureau, Joye pointed out that housing price growth in China has been no more rapid than in several other countries. Nevertheless, he also notes, "In the year to March 2010, established home prices in Beijing and Shanghai have risen by 35 per cent and 38 per cent, respectively." He imagines that since Beijing and Shanghai are only a small percent of China's total population, price bubbles in those cities do not matter.

What analysts like Joye fail to recognize is that the danger to the economic system can come from a small number of regional property markets. In the United States, after the 2007 real estate decline, just 35 counties in 4 states (out of 50 states and more than 3,000 counties nationally) accounted for 50% of the foreclosures in 2008.[16] That is why national statistics about housing prices can be misleading. Local real estate bubbles in population centers can have national and even global consequences. In the 1930s, the failure of a single bank holding company in Detroit, which had been weakened by lending on real estate speculation, was the proximate cause of the 1933 "bank holiday," the temporary suspension of all banking operations in the U.S. to prevent a national panic.[17] In the same manner, a few bank failures in Shanghai and Beijing, caused by lending on real estate, could cause severe problems for China's national economy.

Chinese Efforts to Avoid Disaster

Although the Chinese government allowed urban land speculation to drive up prices in 2008 and 2009, China's leaders finally took notice in early 2010. Unfortunately, the actions taken by the central government have not changed the incentives of the major real estate investors (state-owned enterprises).[18] But at least the foresight shown by a few economic advisers in China far surpassed the quality of economic advice at a similar stage of the crisis in the U.S.

In March 2010, the State Council (*Guówùyuàn*) imposed various regulations in an attempt to prevent banks from lending for real estate speculation. But most regulations can be circumvented. The most effective way to prevent a speculative price bubble is to impose a tax on land. Like a high interest rate, a tax of even 2% or 3% raises holding costs, making it difficult to hold land that is vacant or used for a low-value purpose. The new 1% property tax (wùyèshuì) that the State Council has considered introducing in Beijing, Shanghai, Tianjin, and Qongqing to slow the growth of real estate prices would apply not only to buildings, but also to the leased land on which the buildings sit.[19] In July 2010, the Ministry of Finance reported that it would introduce a property tax in several cities starting in 2012.[20] The delay in implementing the new tax may be based on resistance from provincial and local officials, whose enterprises are financed by the sale of land.

Debate over the Property Tax

The property tax issue has been intensely debated in China. Some Chinese economists recognized that real estate bubbles are the source of economic disorder, a principle ignored by most Western economists. (Harvard University Professor Kenneth Rogoff is one of the few American economists to recognize that a collapse of real estate prices, starting in May 2010, will cause havoc in the Chinese economy.) Among the economists in China who have tried to warn of the impending crisis and the need for a new property tax are 1) the Chinese Academy of Social Sciences (in its Blue Book), 2) Liu Weixin (vice director of the Chinese Association of Urban Economics), 3) real estate developer Pan Shiyi (chair of SOHO), 4) economist Fan Gang (People's Bank of China), 5) Ye Tan, a financial commentator, and 6) Jia Kang, director of the Institute of Fiscal Science (a Ministry of Finance think tank).[21] Jia Kang made the interesting point that a property tax, by raising holding costs, would reduce the amount of vacant properties in cities. There are around 200 million urban households in China with permits, and millions more who would like to live in cities. Yet about 66 million housing units appear to be standing vacant.[22] Presumably many are held by owners for speculative purposes, and some might sell those units if they were required to pay a holding cost for them.

A key issue in the debate over the property tax is whether it will succeed in curbing speculative demand or not. Critics of the property tax argue that a tax of 2% or 3% will not deter the speculators who buy property and quickly resell it for a profit. What the critics fail to understand is that the tax, particularly the part of the tax that falls on the value of location, exerts tremendous downward pressure on prices, just as interest rates do. Speculative booms tend to take place when interest rates are low. A tax rate on land of 2%-3% would offset low interest rates and keep housing prices low—in a range in which people buy housing to live, not to resell.[23] In the U.S., the states with highest rate of failed housing loans were the states that have limited the property tax.[24] States with higher taxes on property were less prone to destabilizing extremes in the housing market.

Another concern that has been expressed some Chinese economists is the possibility that government interference in the real estate market might reduce the phenomenal growth rate of the Chinese economy. In fact, the opposite effect is more likely. Every yuan invested in land is a yuan not invested in productive equipment or labor. In addition, the spatially expansive construction boom that has been a major engine of growth is sowing the seeds of future disaster in China because it has led to overdevelopment of economically marginal locations that will require ongoing subsidies in the future to survive. Since local governments have relied heavily on land transfer fees, they have had an incentive to enourage development of any kind, regardless of long-range consequences. The central government has begun to realize that this sort of scattered development is not as beneficial as more balanced development.

What is particularly promising about the response by the central government is that top officials are taking the problem of rising land prices as a serious threat to the economy. In April 2010, the newspaper Caixin reported that "a report submitted to Deputy Premier Li Keqiang said surging prices for housing price posed a threat to social stability."[25] It is hard to imagine any such report being prepared for a high-ranking official in the West. American economists are almost uniform in praising land price booms as a sign of a

healthy economy. Until the bubble burst in the U.S., those who questioned the price surge were regarded as "doom-sayers."

Until now, Chinese economists have largely followed the guidance of economics departments at prestigious American universities. But the prestige of those American economists derives more from their political connections than from their original insights or correct policy prescriptions. (Consider the bad advice given by economist Jeffrey Sachs to Russia in the 1990s. Although his advice damaged the Russian economy, it did not harm his reputation.) American economists have generally ignored the role of real estate as a factor in macroeconomic models, so there is no reason to expect Chinese economists to do anything differently. Keynesian and monetarist models still dominate economic thinking, so government policy is mostly designed to sustain aggregate demand and to prevent explosive growth of the money supply. (The first policy was the basis of the "fiscal stimulus" implemented by China in 2007.)

Chinese economists need to develop an independent outlook on economic policy by learning from experience and by questioning models that fail according to scientific standards. Although it is already (August 2010) too late for the Chinese government to prevent a serious contraction caused by real estate speculation, it can learn from this mistake by integrating the role of real estate into its macroeconomic models.

Conclusion

Economic theory has been burdened with a serious methodological flaw that has subverted efforts to apply theory to practical problems. Most explanations of macro-economic phenomena are "ex post" stories that are plausible in themselves, but which are not genuine theories. That is, they do not provide the basis for generating testable hypotheses.

One might imagine that there are several competing theories of economic crisis. Yet, as I have argued, the best-known explanations are "ex post" explanations. Monetarism and Keynesianism are more accurately described as policy prescriptions. Neither is an "ex ante" theory. Since the policies they prescribe are of limited effectiveness, there is reason to doubt their credibility. Marx's theory of the decline of capitalism may be of value in understanding the long-term problems of capitalism, but it was not designed to deal with cyclical phenomena. Thus, Marxism is not really relevant to these conditions.

Thus, there appears to be only one "ex ante" explanation for the current economic malaise: a theory which posits a connection between land speculation, the leveraging of bank loans, and periodic instability in financial markets. This theory is still quite limited, because it offers no "ex ante" explanation for the period between crises. Based on the historic record in a number of countries, the cycle appears to be approximately 18 years in length.[26] But thus far, no one has offered an explanation for that periodicity.

Nevertheless, a model of crisis based on land speculation is the only "ex ante" model that offers a general theory of periodic crises of capitalism. Without such a model, one is left

with the depressing notion that such crises are unexplained flaws of capitalism. If the flaws cannot be diagnosed, they cannot be corrected. Small wonder that the periodic contractions of the economy are followed by periods of doubt about whether free markets can work.

Free markets can work, and without periodic collapse as has been the fate of market economies until now. The choice is available to Chinese leaders if they will only recognize that Sun Zhong Shan was wise in his choice of Western thinkers to guide him. In addition to Sun's study of Karl Marx, he favored the work of Henry George, who offered a different way of organizing economic life—different from both socialism and capitalism. Henry George's insights continue to offer the means by which the Chinese economy can bypass all of the problems associated with capitalism as leaders search for new ways to combine the best features of socialism and capitalism. All that is necessary is an open mind.

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[1] One can always make predictions of continuity from a story: "It rained yesterday, and it rained today, so I predict it will rain tomorrow." But that is not a predictive theory unless one posits some variable (such as a low pressure cell) that is present all three days.

[2] I am aware of unpublished material that transforms Keynes's story into a full-fledged theory by introducing changes in the short-run marginal propensity to consume as a variable that distinguishes between growth and decline. However, that theory is not part of the standard Keynesian model, which consists entirely of "ex post" stories.

[3] Friedman's understanding of economic crises is dominated by his ideological view that government involvement in any aspect of an economy almost invariably makes any problem worse. Friedman considered business cycles to be a natural phenomenon, beyond prediction and control. Thus, he proposed that governments increase the money supply by a steady amount each year, not attempting to respond to short-term changes. He opposed policies to bring down the unemployment rate on the grounds that efforts to reduce the "natural rate" would only increase inflation. In this regard, he mirrors the "rational expectations" school of thought in modern economics (Thomas Sargent, Robert Lucas, Stanley Fischer, and others) that posits almost perfect foresight by markets. When crises occur, which necessarily contradict the optimism of the "rational expectations" story, the advocates simply remain silent. They do not even attempt an "ex post" explanation of severe contractions. For that reason, I do not include the "rational expectations" school as one of the possible explanations of the boom-bust cycle.

[4] Mason Gaffney. 2009. *After the Crash: Designing a Depression-Free Economy*. Edited by Clifford W. Cobb. Malden, Mass.: Wiley-Blackwell.

[5] Mason Gaffney, supra note 4, chapter 1. In the absence of such a theory, Paul Krugman has difficulty assimilating the obvious importance of land speculation in the current crisis. In "An Irish Mirror," (*New York Times*, March 8, 2010, http://www.nytimes.com/2010/03/08/opinion/08krugman.html), Krugman reviews a paper by Gregory Connor, Thomas Flavin, and Brian O'Kelly ("The U.S. and Irish Credit Crises: Their Distinctive Differences and Common Features." 2010. http://ssrn.com/abstract=1566844), which notes the similar land price bubble in the U.S. and Ireland. Krugman quickly passes over that crucial piece of evidence and concludes that the cause of the crisis in both countries was "free market fundamentalism" and deregulation in the financial markets. How is it possible that derivatives and other new financial instruments were responsible for the crisis in the U.S. if they were not present in the similar Irish crisis? This flawed reasoning strongly suggests that Krugman (and all other economists) are more tied to their "ex post" stories because they cannot imagine an "ex ante" explanation that real estate speculation is the underlying and primary cause of the U.S., Irish, and other crises, and all other factors are secondary.

[6] Gabriel Palma. 2000. *The Three Routes to Financial Crises: The Need for Capital Controls*. CEPA Working Paper Series III, Working Paper No. 18. New York: New School for Social Research (November). www.newschool.edu/cepa/publications/workingpapers/archive/cepa0318.pdf. CEPA refers to Center for Economic Policy Analysis.

[7] Ichiro Muto, Miyuki Matsunaga, Satoko Ueyama, and Tomoyuki Fukumoto. 2010. On the Recent Rise in China's Real Estate Prices. *Bank of Japan Review*. April. (based on data gathered by the National Bureau

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[14] The 9 trillion figure is from World Bank blog, "China's local government debt—what is the problem?" http://blogs.worldbank.org/eastasiapacific/china-s-local-government-debt-what-is-the-problem. Its source is is the China Banking Regulatory Commission (CBRC). The 11.4 trillion estimate comes from a study by Victor Shih, a professor at Northwestern University in Illinois, cited in an article in *Asia Times* (http://www.atimes.com/atimes/China_Business/LG14Cb02.html). Prof. Shih says that existing credit lines could balloon the local debt to 24 trillion yuan by 2012.

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[18] David Barboza. 2010 State-Owned Bidders Fuel China's Land Boom. New York Times. August 2. http://www.nytimes.com/2010/08/02/business/global/02chinareal.html?_r=1&emc=eta1

[19] There are two taxes with similar-sounding names in English. The real estate tax (or property ownership tax) already exists. It is an annual tax on commercial buildings. One proposed reform would extend it to residential dwellings (buildings only). Expanding the tax in that way (from commercial to residential) would require only the approval of the State Council. The second proposed reform would involve transforming the current "land use fee" that is currently charged up front for a seventy-year lease into an annual fee. In combination with the existing building tax, this would make the new tax more like an American-style property tax—on both the value of land as well as the value of buildings. This "property tax" (wuyeshui) would add an entirely new provision to tax land (which is leased by the state). Doing that would require the approval of the National People's Congress, which could take several years.

[20] China Daily, July 23, 2010. http://www.chinadaily.com.cn/bizchina/2010-07/23/content_11042059.htm

[21] An article discussing the view of CASS is http://blogs.wsj.com/chinarealtime/2010/05/05/a-counterintuitive-proposal-on-china-property-taxes/ Among the opponents have been Guang-Yuan Mar (Civil and Commercial Law Institute of Renmin University of China, China Consumer Association, and

vice president of Judicial Conciliation) . He argues that it will hurt potential homebuyers to have to pay an additional tax.

[22] Chen Zhe, Jia Huajie. 2010. Shanghai, Chongqing to Pilot Property Tax. *Economic Observer*. April 16. http://www.eeo.com.cn/ens/Industry/2010/04/16/167788.shtml

[23] A 3% tax on land lowers the price of land by about 50%.

[24] Mason Gaffney. 2009. *After the Crash: Designing a Depression-Free Economy*. Edited by Clifford W. Cobb. Malden, Mass.: Wiley-Blackwell, page 54.

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