Ten Economic Lessons from *The Treasure* of the Sierra Madre

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Where's an investment tip. Spend a couple hours watching a cinematic classic: John Huston's *The Treasure of the Sierra Madre*. The American Film Institute selected *Sierra Madre* as thirty-eighth on its list of the best one hundred movies from the first century of American cinema because it showcases fine acting and just the right balance of action and dialogue, suspense and intrigue, sentimentality and cold calculation. But critics have missed another fundamental attraction: this engrossing tale is packed with an unparalleled awareness of economic forces at work. The lessons of *Sierra Madre* about entrepreneurship, the importance of property rights, the creation of value, and a range of other economic issues deserve a very close examination.

The film, based on a novel by the enigmatic B. Traven (1935),¹ tells the tale of three prospectors who trek into the mountains, dodge bandits, and laboriously unearth enough gold to make themselves filthy rich—before losing it all. Although

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^{1.} On the book's opening page, Traven puts economic considerations up front: "The bench on which Dobbs was sitting was not so good . . . [but] Dobbs was too much occupied with other thoughts to take any account of how he was sitting. Just then he was looking for a solution to that age-old problem which makes so many people forget all other thoughts and things. He worked his mind to answer the question: How can I get some money right now?" (1935, 1). For all of his insights, Traven also expresses a number of notions that most economists will instantly reject, and many readers will recoil at his fulminations on noneconomic subjects.

it didn't do particularly well at the box office (perhaps because of a bitter streak, the lack of a traditional Hollywood ending, and an absence of women in the cast), contemporary critics lauded the movie, which garnered John Huston the 1948 Academy Award for direction and screenplay adaptation and earned his father, Walter Huston, the Oscar for Best Supporting Actor. In addition, the New York Film Critics picked it as the year's best picture, and it won the Golden Globe.

The film is set in Mexico in 1925, first in Tampico (the hub of an oil-drilling boom) and later in the isolated Sierra Madre of the interior. Fred C. Dobbs (played by Humphrey Bogart) and Bob Curtin (played by Tim Holt) are having trouble finding good work in Tampico. The two naively think about prospecting for gold after an employer tries to stiff them and after hearing the stories of a seemingly broken-down old prospector, Howard (played by Walter Huston). After Dobbs wins the lottery, the three pool their resources, form a partnership, buy supplies, and head for the mountains to seek their fortune. Howard discovers gold and teaches the mining trade to the others. After months of backbreaking labor in a secret, isolated location, the trio's wealth begins to grow, but so does mistrust-especially on the part of Dobbs. The three fend off an attack by bandits and must decide how to deal with an interloper, Jim Cody (played by Bruce Bennett), before the mine's output runs down and they make the dangerous trek with their fortune back to civilization. After Howard saves a boy's life, the local Indians insist that he must stay with them, so he agrees to meet up with the others later. Spoiler alert: at this point, Dobbs gives in to greed and paranoia and attempts to kill Curtin and take the treasure for himself. Traveling alone, he is overcome by exhaustion and killed by highway robbers, who think the gold dust is ordinary dirt and dump it out on the ground. A storm arises and blows away all the gold dust just before Howard and the injured Curtin arrive on the scene to see the trick that fate and nature have played on them.

Not only is there gold in these hills, but also a slew of economic insights.

Lesson 1: Entrepreneurs Need Not Be Omniscient to Be Successful

When Dobbs and Curtin first encounter Howard in a flophouse, he is expounding on the reasons that gold sells for \$20 an ounce. Most economists would consider Howard's variant of the labor theory of value way off the mark: "A thousand men, say, go searching for gold. After six months, one of 'em is lucky—one out of the thousand. His find represents not only his own labor but that of nine hundred and ninety-nine others to boot. That's, uh, six thousand months or five hundred years scrabbling over mountains, going hungry and thirsty. An ounce of gold . . . is worth what it is because of the human labor that went into the finding and the gettin' of it." This analysis, of course, leaves out the demand side and isn't too accurate on the supply side either. By the late 1800s, most gold production came from very *capital*-intensive mines using methods much more advanced than those envisioned by Howard and shown in the movie. By the early twentieth century, massive earth-moving equipment and chemical processes were the state of the art (Gaggio 2003).²

Howard brushes off the demand for gold: "Gold itself ain't good for nothing, except for making jewelry with and gold teeth."³ Saying that "gold itself ain't good for nothing, except . . . " isn't much different than saying that chairs or haircuts or dogs or DVD players aren't good for anything except. . . . Yet gold, chairs, haircuts, dogs, and DVD players have value to humans beyond our biological need for enough food and shelter to survive. They all have value because they are things that help make civilized life worth living.

So, Howard is zero for two—his understanding of the nature of both the demand for and the supply of the product is lacking. Or maybe he's zero for three in that the determination of the price of a durable natural resource, such as gold, is especially complex because the current demand interacts with both the stock in existence and the flow of newly discovered production—as well as with expectations about the future supply and demand.

Zero for one, zero for two, zero for a million—it doesn't really matter whether Howard's theories about the value of gold are refined or unrefined. As Friedrich Hayek (1945) explained so well, an entrepreneur doesn't need to know *why* the price is high or low; he merely needs to know *that* the price is higher than his expected costs for it to signal him to enter a business. And costs are a subject that Howard knows quite well due to a lifetime of experience. He turns out to be a very savvy entrepreneur: the lesson is that he needs to know his part of the business; he doesn't need to know everything.

Lesson 2: Economic Value Arises from Voluntary Cooperation

As if following a page out of Ronald Coase's insightful essay "The Nature of the Firm" (1937), Dobbs, Curtin, and Howard form a partnership when it becomes obvious that they will be more productive working together than separately. There are clear gains to be had from teamwork. Howard has knowledge about how to organize production and plenty of experience; Dobbs and Curtin have strong backs; Dobbs has more capital than the others. Teamwork is physically important in several tasks, such as putting the timbers in place in the mine. There are also

^{2.} The development of these processes allowed worldwide gold output to rise substantially throughout the twentieth century, rising from about 500 tons per year at the outset to more than 2,500 tons per year at the end of the century (U.S. Geological Survey 2007). The best estimates available suggest that the total volume of gold ever mined up to the end of 2011 was approximately 171,300 metric tons, of which around 59 percent has been mined since 1950 (World Gold Council 2013).

^{3.} Howard also oddly omits the demand that arose from the fact that gold was the basis of most of the world's money supply in the 1920s.

economies of scale in teamwork, especially in the ability to guard and protect the treasure from bandits. Finally, teamwork overcomes the immense loneliness of going it alone far from civilization.

Dobbs initially dismisses Howard as a potential liability. Fortunately, Curtin realizes that they "might have real use for an experienced guy like that old-timer." The greenhorns initially assume that that it's a matter of hiking into the wilderness, spotting an outcropping of gold, digging it up, and heading home. Dobbs naively describes Mexico as a "country where the nuggets of gold are just crying for you to take 'em out of the ground." Once they've reached the mountains, however, Howard demonstrates that it takes a sharp eye to find a profitable gold deposit. He teaches them that "gold ain't like a stone in a river bed. It don't cry out to be picked up. No, you gotta know how to recognize it, and finding it ain't all—not by a long shot. You gotta know how to tickle it, so she'll come out laughing." In other words, you've got to know how to get gold at the least possible cost.

The three agree on an even one-third split of the output of their joint enterprise. It's not obvious what the equilibrium division of profits will be in negotiations that involve such a small number of players, each with unique talents and alternatives, each uncertain of how the enterprise will pan out. What is the value of Howard's knowledge and organizational ability versus the capital each invests versus the labor that each will put in at the worksite? These variables are very hard to measure and predict. A disinterested analysis might suggest that Howard's is probably the greatest contribution, but he wisely doesn't bargain for a larger share. Moreover, their productivity depends on one another's productivity due to economies of scale and teamwork. The one-third split seems fair because the labor input was ultimately much more costly than the capital input—and each supplies about one-third of the labor. In addition, Howard isn't in a good position to bargain for a larger share because the others don't initially know the value of his skills, and he had already announced his eagerness to get into the business again—his eagerness to go on the treasure hunt.

This division of the spoils works because even though Dobbs or Howard might be able to argue that his cut should be bigger, the equal shares immediately elicit cooperation among the trio. It's also obvious to Howard that the other two won't need him as much after he's taught them the trade, so if he angles for a larger share, they'll probably try to recontract later at a more favorable rate.

During their months of toil, the ultimate payoff is always in the future. An equal share seems to be a natural equilibrium for maximizing trust and cooperation, although it clearly isn't a panacea—as the look on Howard's face seems to imply when Dobbs and Curtin shake hands to seal the negotiations. The project is plagued by mistrust because the gains from the partnership will come only after the gold is sold and the proceeds are divided, and there's room for strategic behavior at every step along the way.

Lesson 3: Big Bills Aren't Left on the Sidewalk and Lesson 4: Wise Decisions Compare Marginal Costs and Marginal Benefits

In a well-known joke, two economists are walking down the street. One spots a \$100 bill lying on the sidewalk and remarks, "Wow! There's a \$100 bill." The other assures him, "That can't be a \$100 bill. If it were, somebody would have already picked it up." The point is that you are rarely the first one to walk down the sidewalk, rarely the first to enter a market. If so, profit opportunities that are obvious to everyone will quickly be seized and eliminated. Successful entrepreneurs must search for \$100 bills in places others wouldn't look—down in the storm drain rather than on the sidewalk—and then try to figure out ways to pick up the hard-to-get bills. They don't simply *find* \$100 bills, they painstakingly, insightfully *make* them and get others to collaborate with them in making them.

Why do so few people prospect today in comparison to, say, the days of the California (1840s), Australia (1850s), South Africa (1880s), and Klondike (1890s) gold rushes ("Gold Rushes" 2013)? Why was prospecting so rare even by the 1920s? Simple economic logic suggests that in a field such as gold mining the most accessible sites will be hit first. Those who come later will have a higher marginal cost of finding ore. By the 1920s, virtually any area with the potential for gold had been identified and scoured clean of the easy pickings. (The only major subsequent gold rushes have been in the very inaccessible Amazon region.)

Howard knows this. In laying out their business strategy, he uses this economic logic to argue that they have to explore an area far from railroad tracks and civilization, where no construction engineer, surveyor, or prospector had yet explored. They have to go where the map shows nothing (neither mountain nor swamp nor desert) because this means that no outsider is sure what's there and because explored places will have already been scoured clean. The economic logic is compelling: maps are made by people on salary, and they have no incentive to risk their hides going to places far from railroad routes and civilization. As a shrewd entrepreneur, Howard is *happy* to hear tall tales about tigers so big and strong they can climb trees with burros in their mouths. These tales act as barriers to entry, keeping the faint of heart away from the three men's destination and increasing the likelihood that there is still some gold to be found. The prospectors must look in a high-cost area, and after they've hacked their way through the jungle and braved a dust storm, their climb up into the mountains is a metaphorical climb up the marginal cost curve.

After making this exhausting trek, Curtin ruefully says, "If I'd known what prospecting meant, I'd 've stayed in Tampico." However, he and Dobbs don't turn back. Their struggles in getting to the gold-bearing area are a sunk cost. They can't be unspent. Their decision to forge onward must examine the *marginal* costs versus the *marginal* benefits.

Next Howard uses compelling economic logic in selecting the precise site for their dig. While Dobbs and Curtin celebrate the discovery of fool's gold (iron pyrite), Howard explains that they've already walked over four or five locations with gold. One looked like rich diggings, but the cost of bringing water to the site would have been too high; the other sites weren't promising enough to justify the effort ("there wasn't enough gold to pay us a good day's wages"). Howard is clearly bent on maximizing profits, selecting the site with the highest expected rate of return by using the common sense of cost-benefit analysis. Finally, he directs them to pitch their camp down the mountain, away from their mine. Again, the economic logic is clear. The extra cost of commuting between the camp and the mine is outweighed by the likely benefit of keeping their mine's location secret if strangers shows up.

Lesson 5: Property Rights Are Only as Good as the Property-Rights Enforcer

As usual, Howard's decision whether to file a claim or not is grounded in profitmaximizing logic. Curtin asks, "Wouldn't it be easier to file a claim" than to sneak into the wilderness and run the risks of digging without any legal authority? Howard replies, "Easier, maybe, but not so profitable. Wouldn't be no time till an emissary of a big mining company would be up here with papers showing we have no right to be here."

Why doesn't the team file a claim on the land? Perhaps the most important reason is that in such a location one would file a claim only if one already knew there was gold to be found. The filing would alert others to the gold's location, making the claim worthless and insecure in such a lawless, remote location. When property rights are difficult or costly to enforce, people will have little incentive to claim them; they instead will try to hide the property. Perhaps Howard, Curtin, and Dobbs *are* squatting on someone else's claim. More likely Howard's worry is that if the land's value becomes known, someone more powerful will take the claim away from them legitimately—someone who controls the government and court system. (Traven's book is full of tales in which those with a legitimate claim to gold are cheated by representatives of the state.) A property right is only as secure as the integrity and power of the right-granting government, and the Mexican government in this period wasn't known for its integrity.

Gavin Wright (1990) argues persuasively that the rapid economic development of the United States in the late 1800s and early 1900s was driven by the ability to develop its natural-resource base. By the eve of World War I, the United States was the world's number one producer of petroleum, natural gas, copper, phosphate, coal, zinc, iron ore, lead, silver, and tungsten and was the number two producer of bauxite (the raw material for aluminum) and gold. In fact, it produced an astounding 95 percent of the natural gas, 65 percent of the oil, and 56 percent of the copper. As the twentieth century unfolded, however, it was learned that massive valuable reserves of these natural resources were scattered all over the globe. The United States had simply discovered the immensity of its resources first and systematically harnessed them. Wright argues that industries such as iron, steel, machinery, and later automobiles bloomed first in the United States because of institutions with long roots in American history. These institutions included the world's largest free trade zone, which encompassed much of a continent, and a process whereby the government impartially aided entrepreneurs and growing multinationals (not just political cronies) in the often-risky process of finding natural resources (for example, systematic surveys by the U.S. Geological Survey), building infrastructure (like railroads) to reach them, mobilizing a labor force (via open borders) to work them and tapping into the rising wealth of investors (many from overseas) with sensible, impartially applied legal rules that allowed funds to be creatively and efficiently pooled to launch these projects—and thereby fuel a virtuous cycle of economic growth.

It's fitting that this movie's title is *The Treasure of the Sierra Madre* and not, say, *The Treasure of the Sierra Nevada*. A story about inefficient property-rights rules and enforcement makes much more sense south of the border. The economic inefficiencies in the story (especially the negative-sum predation) arise because property rights can't be securely and fairly enforced in the Sierra Madre.

Lesson 6: Trust Isn't Simply a Matter of Moral Character

Once the miners' pile of gold reaches the equivalent of \$5,000,⁴ they decide to divide it up each day and let each man be responsible for his own goods. If the men completely trusted each other, this decision might not have been made. Can any set of three strangers trust each other enough in such a situation? Are there surer ways of aligning incentives so that they don't rob each other?

Howard makes some compelling points about the economics of trust. Trustworthiness isn't tied only to one's moral character, but also to the constraints faced. He argues that the most "trustworthy" is the one with the highest opportunity cost of being dishonest and that he is the most trustworthy because he would pay the greatest price if it was learned that he cheated—he's not "quick on his feet any longer," so he can't elude the others' vengeance.

As the plot unfolds, the economic value of trust becomes more and more obvious. Knowledge and trust are two of the most valuable economic resources. When people don't trust each other, they become much less productive, using their resources to protect their property rather than using it productively. Amoral

^{4.} The Consumer Price Index suggests that 1925 dollar values should be multiplied by about thirteen to convert into year 2013 dollars, but it is believed to overstate inflation (see Costa 2001).

people (such as Dobbs) are especially difficult to do business with, which makes fewer people want to do business with them and harms them economically.

Lesson 7: Costs and Benefits Dictate When It's Time to Quit

After earning "upwards of \$35,000 a piece" (roughly \$460,000 at today's prices), the miners decide it's time to close down the operation. They don't appear to be target earners (despite earlier musings and a supposed goal of \$40,000 each); instead, the decision is made when the value of the daily haul has dwindled lower than the cost of additional labor. Before Curtin and Dobbs had set off to the mountains, this economic logic wasn't so obvious to them. Rather, the novices speculated on how much gold a prospector would be "satisfied with." The logic of marginal analysis ultimately prevails over these speculations as the three prospectors conclude their operations when the output of the mine dwindles so that the opportunity cost of a day's labor exceeds the expected benefits.

Then Howard does something surprising. Sounding a bit like a modern environmentalist, he says, "We've wounded this mountain. It's our duty to close her wounds. It's the least we can do to show our gratitude for all the wealth she's given us." He announces that he'll do it alone if the others won't help. Can this announcement be explained in economic terms? The costs of "closing her wounds" are clear—an extra week of labor—but all the benefits are apparently nonmaterial. One partial explanation for Howard's view is that the miners are wealthy now and can more easily afford such generosity—charitable giving is a normal good. More sensible is the logic in Traven's book—a logic that the film unfortunately ignores. By repairing the mountain, Traven explains, the miners are covering up their own tracks—keeping any remaining gold safe in case they ever run out of money and feel the need to return.⁵

This abundance of riches might also explain why Howard and Curtin (but not Dobbs, whose utility function seems to include only his own material wellbeing) are willing to give a one-fourth share to the widow of the interloper Cody, who died helping the trio defend themselves from bandits. Dobbs, a parody of "economic man," cannot comprehend such altruism.

Lesson 8: The Value of Trust Disappears If Others Don't Trust You

The journey from the mountain back to civilization in Durango (where they can sell their gold) progresses uneventfully until a group of Indians implore Howard

^{5. &}quot;Howard had a good reason for doing everything so carefully, 'Suppose one of you guys gambles his earnings away or loses them some other way, he may return, and he can still make his living here. So let's hide the place as well as we can to keep it safe for any one of us who might be in need'" (Traven 1935, 182).

to help them. After Howard resuscitates the half-drowned Indian boy, the natives virtually force him to stay with him as their guest. Theirs is clearly an economic calculation, although it also involves a supernatural component. They believe that they are in debt and that the saints in heaven will punish them if they don't pay off the debt. And the debt seems to be collective: Howard receives gifts (fruit, tobacco, alcohol, a bird, a piglet, friendly service) from many people in the village.

This brings us to a potential (and perhaps subtle) plot hole—a hole that may be big enough to drive a string of burros through. When the natives insist that Howard stay with them, the partners quickly decide, with virtually no deliberation, that Dobbs and Curtin should go on ahead. Howard will catch up to them later. But if the miners were willing to spend a week fixing the mountain (after so long away from civilization), why aren't they willing to wait a week and enjoy the Indians' hospitality? The Indians clearly believe they are in Howard's debt. Isn't it likely that they will treat his friends well and may be even willing to escort the trio back to Durango? This plot device is obviously necessary to complete the action of the movie, which wouldn't be a classic without its denouement. However, Howard admits the plot hole later: "The big mistake was leaving you two fellers out there in the depths of the wilderness with more than a hundred thousand between you."

Finally, a deadly economic game plays out after Howard leaves Dobbs and Curtin alone. The cooperative solution to the game of how to bring the gold to market seems to be jointly optimal, but cooperation doesn't arise. Dobbs simply doesn't trust Curtin. The disinterested viewer trusts Curtin—after all, earlier in the movie Curtin had saved Dobbs's life after the mine collapsed. But Dobbs projects his own set of values onto Curtin. He knows that Curtin shouldn't trust him, so he doesn't trust Curtin. In his paranoid state, he misreads all of Curtin's benign actions and forces Curtin to forego the trust option. Instead, Curtin and Dobbs—natural allies in a hostile wilderness—turn into enemies because they are in a classic prisoners' dilemma where the dominant strategy of the one-shot game is to mistrust the other. And, in classic prisoners' dilemma fashion, the outcome of the game is abysmally suboptimal.

Lessons 5 (Again) and 9, the Most Important Lessons: Property Rights and Recognizing Value

Dobbs learns the value of trust and a partner too late, when he is alone and waylaid by bandits. Clutching for straws, he asks if the bandits would like to work for him, bringing the burros to market. Gold Hat (played by Alfonso Bedoya)—who earlier in the movie delivers the iconic but often misquoted line "I don't have to show you any stinkin' badges"—thinks the question is funny, eventually claiming in broken English: "We can sell those burros for just as good as price as you can." It turns out, however, that he is *wrong*. The identity of the seller can affect the sales price of many goods, even donkeys. When the bandits come into town with the stolen burros, they find that they *can't* sell them. Because they are dressed in rags (except for the boots and other garments they have obviously stolen) and don't look or act as if they are the goods' rightful owners, the people in the town know that the burros are stolen and won't buy them. The lesson is that the value of a good is explained by more than the physical characteristics of the good itself, but also includes the legal rights surrounding it. Hot goods aren't as valuable because the title to them isn't as secure. Even though the dialogue between the bandits and the townsfolk is in Spanish, the economic logic of the situation let's non–Spanish speakers know exactly what's going on.⁶

At the climatic end of the movie, all the gold blows away, *but* the prospectors get their burros back. To me, this is the most profound lesson of the movie—a powerful demonstration of the importance of property rights. The prospectors' property right to the burros is very clear and relatively easy to enforce. Everyone knows the burros are theirs because the "vehicle identification number"—the brand mark—has been registered with the local authorities. Proving and enforcing ownership of the gold is virtually impossible. There is simply no way they can register their ownership of it or secure their rights to it in this dangerous region—although a powerful or politically connected business would probably have found a way to protect its property right if it owned the gold. I know of few other cases that can as dramatically and effectively demonstrate the value of property rights—an institution that is crucial to understanding why some societies are rich, but others aren't.

Moreover, everyone immediately recognizes the value of the burros. At the key moment, however, the bandits don't recognize the value of the gold; mistaking it for mere dirt, they dump it on the ground.⁷ This act drives home the point that wealth is wealth in an economy only if it is recognized as valuable. There are many resources that historically haven't been recognized as valuable, but that became valuable after people made discoveries about their usefulness—such as petroleum and bauxite. In the film, the wealth is dissipated because it isn't obvious as wealth to the untrained eye.⁸ Finally, the last half-hour of the movie makes clear the economic lesson that wealth is wealth only if it is in the right location. The gold is virtually worthless on the mountain and gains value when it is brought securely to the market.

^{6.} Price can also send a signal about the "quality" of goods. In Traven's book, a potential buyer of the burros says, "The price is not high. We only wonder how it is possible that you men can sell burros of this good quality for so little money" (1935, 284).

^{7.} Traven describes the gold as "small grains, dirty-looking sand, gray dust, wrapped in old rags" (1935, 212).

^{8.} One might ask how the bandits can be this stupid. Would anyone really think that this "sand" is being transported to add weight to the hides? The fact that it is being transported should have tipped them off to its value. But the bandits' decrepit condition is a clue that they aren't too bright. If they were to realize the identity of the gold, which of them would eventually have ended up in possession of it?

Lesson 10: Greed Is Bad

The crux of economics and of Sierra Madre's plot is the first lesson of "Intro to Econ": scarcity exists because our wants exceed our resources. Unfortunately, human wants seem never to be satisfied-especially when it comes to gold. As Howard puts it before they start their trip, "I know what gold does to men's souls." Rarely has the human compulsion to want too much been depicted as effectively as in Bogart's portrait of Dobbs's paranoid avarice. At root, the final lesson of the movie is that greed—we don't lack a better word in this case—is bad. Greed is best defined as the *excessive* desire for earthly goods or success. Taking prudent risks is wise, so the risks and hardships that Dobbs, Curtin, and Howard take in pursuit of the gold isn't greed. Howard plans to use his newfound wealth to buy a small retail business, perhaps a hardware or grocery store. This goal has a prudent economic logic. Such a business is capital intensive and doesn't demand much physical labor. Howard will soon have the money to make this investment and is getting old and wants to retire on the job. A store would be a relatively safe pension. Curtin wants to buy land with his wealth-another prudent investment. Dobbs speaks only of consuming his pile (spending it on fine clothes, good food, and women). Greed arises when these desires get out of control, consume the man, and lead him to trade what's truly valuable (leading a meaningful life, treating others with the respect and dignity they deserve, giving more than you take, finding a good wife) for something less valuable—as Dobbs does in the end.

Conclusion

I hope that I've shown that The Treasure of the Sierra Madre demonstrates a canny grasp of economic principles and whetted your appetite to watch (or rewatch) the movie in these terms. In the scenes described and others, the film examines altruism; bargaining and negotiation; barriers to entry; creation of capital; capital constraints; compensating wage differentials; contract enforcement; corruption; cost-benefit analysis; credence goods; debt payment; deferred compensation; economies of scale; efficiency wages; entrepreneurship; exchange rates; externalities; fairness; the nature and organization of the firm; framing effects; game theory; gift exchange; incentives; formal and informal institutions; investment strategies; job search; the value of knowledge; labor market signaling; selection of the optimal location; marginal benefits and costs; the marginal product of labor; naturalresource extraction; opportunity costs; partnerships; price-and-wage determination; property rights and their enforcement; public goods; reputation; risk; scarcity; secrecy; sunk costs; supply-and-demand analysis; teamwork; technology and technological change; the theory of value; trade; trust; unemployment; and the creation and recognition of value and wealth.

Can any other movie offer more?

References

Coase, Ronald. 1937. The Nature of the Firm. Economica 4, no. 16: 386-405.

- Costa, Dora L. 2001. Estimating Real Income in the United States from 1888 to 1994: Correcting CPI Bias Using Engel Curves. *Journal of Political Economy* 109, no. 6: 1288–310.
- Gaggio, Dario 2003. Gold and Silver Industry. In *Oxford Encyclopedia of Economic History*, edited by Joel Mokyr, 2: 423–31. Oxford: Oxford University Press.
- Gold Rushes. 2013. Wikipedia. Available at: http://en.wikipedia.org/wiki/Gold_rush.
- Hayek, Friedrich. 1945. The Use of Knowledge in Society. *American Economic Review* 35, no. 4: 519–30.
- Traven, B. 1935. The Treasure of the Sierra Madre. New York: Knopf.
- U.S. Geological Survey. 2007. Gold Statistics. In *Historical Statistics for Mineral and Material Commodities in the United States. U.S. Geological Survey Data Series 140*, compiled by Thomas D. Kelly and Grecia R. Matos, 1–3. Washington, D.C.: U.S. Geological Survey.
- World Gold Council. 2013. Frequently Asked Questions. Available at: http://www.gold.org/ investment/why_how_and_where/faqs/#q022.
- Wright, Gavin. 1990. The Origins of American Industrial Success, 1879–1940. American Economic Review 80, no. 4: 651–68.

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