

Economics 496

Midterm Exam

Greg Dow

February 20, 2002

All questions have equal weight. If something is unclear, please ask for clarification.

Chapter 1

- (a) Define capitalism and socialism. What are the main ways in which these economic systems differ?
- (b) In what ways, if any, does a labor-managed firm (LMF) differ from a capitalist firm? From a socialist firm? Does private ownership of productive assets imply that an economy must be capitalist? Why or why not?

Chapter 2

- (a) Some people argue that LMFs would promote greater economic equality. Others argue that a substantial amount of inequality would remain even if all firms were LMFs. Briefly summarize and evaluate the arguments on each side.
- (b) Some people argue that if democracy is good as a system of government, it should also be good in firms. Others argue that the state and the firm are very different institutions, and that the analogy between them is a weak one. Briefly summarize and evaluate the arguments on each side.

Chapter 3

Choose either the plywood cooperatives or the Mondragon cooperatives (not both). For the case you choose, answer the following questions.

- (a) Describe the governance structure used by these firms. Who ultimately controls the firms? How? Be as precise as possible.
- (b) How do these firms gain access to capital? How do they gain access to labor?

Chapter 4

- (a) Firms with employee stock ownership plans (ESOPs) require workers to invest capital but frequently do not grant them significant control rights. Explain how this occurs, and briefly say what problems may arise as a result.
- (b) Firms with codetermination (as in Germany) give workers some control rights but do not require them to invest any capital. Explain how this occurs, and briefly say what problems may arise as a result.

Chapter 5

- (a) According to one possible definition, the firm includes its employees, but according to another definition it does not. Explain the nature of each definition and say why they have different implications for the role of employees.
- (b) How would you distinguish between a capital-managed firm (KMF) and a labor-managed firm (LMF)? Give two examples of firms for which it might be difficult to say whether the firm is a KMF or LMF, and explain why an ambiguity arises.

Chapter 6

- (a) What is the symmetry principle? What is the replication principle? Outline some hypothesis about why LMFs are rare, and then discuss whether the hypothesis is consistent or inconsistent with these two principles.
- (b) Some people argue that modern economies consist mostly of KMFs because this is the most efficient way to organize a firm. Others say that KMFs are the dominant type of firm mainly for reasons of history, not efficiency. A third group says that KMFs are dominant mainly for cultural reasons. Summarize a typical argument of each type, say whether you find it convincing, and briefly explain why.

Economics 496

Final Exam

Greg Dow

April 16, 2002

All questions have equal weight. If something is unclear, please ask for clarification. You should answer both parts of each question.

Chapter 7

- (a) One popular theory of LMF behavior is the Illyrian model. Explain what this model is and what its main predictions are. Also, give a short verbal explanation for why the theoretical model generates these predictions.
- (b) An alternative theory of LMF behavior involves membership markets. Explain how this model works, what its main predictions are, and why it differs from the Illyrian model. Is there any empirical evidence that enables us to evaluate the predictions of the two models? Explain.

Chapter 8

- (a) In order to say why LMFs are rare, it is necessary to say why physical assets often cannot be leased. Why is this issue important? What are some of the major reasons why it might be costlier for a firm to lease rather than own physical assets?
- (b) Some economists have argued that LMFs are rare because they do not give workers strong effort incentives. Others disagree. Sketch the theoretical arguments on each side. Then comment on the empirical evidence relevant to this issue.

Chapter 9

- (a) A common story about the rarity of LMFs is that workers can't afford to start firms, and that workers wanting to start an LMF are at a disadvantage in borrowing money from banks. What are the arguments for and against this idea? After summarizing the views on each side, give your own opinion about the importance of this factor, and justify your answer.
- (b) Another story about the rarity of LMFs is that workers have more difficulty making collective decisions than investors. Describe the theoretical basis for this idea, and sketch the evidence for and against it. Then give your opinion about the importance of this factor, and justify your answer.

Chapter 10

- (a) According to G. Dow, an important reason why few LMFs are created is something called 'the appropriation problem'. Explain what this means, and why membership markets would have trouble solving the problem.
- (b) People who believe in the Illyrian model often think that LMFs will degenerate into KMFs over time, especially if the firm is profitable. However, people who believe that membership markets work well usually do not think this is a serious problem. Explain why this disagreement arises, and comment on the empirical evidence.

Chapter 11

- (a) One fundamental difference between capital and labor is that capital is alienable, but labor is not. How might this difference explain why KMFs are common and LMFs are rare? If there are several possible reasons, describe each one and give your own opinion about which of them is most important. Justify your answer.
- (b) What do you think are the most important causes for the rarity of LMFs which are not accounted for by the differences in the alienability of capital and labor? Which factors are left out of this framework? Justify your answer.

Chapter 12

- (a) Describe the proposal offered in chapter 12 to increase the number of LMFs. What are the main elements of the proposal? How do these elements work?
- (b) Assume you are a critic arguing against this proposal. What are its greatest flaws or weaknesses? What problems would be the most difficult to solve in practice? What could the author of the proposal say in response to your criticisms?

BONUS QUESTION: worth an additional 5% (a few sentences are enough).

What is the most important thing you learned in this course? Why?

Economics 484

Midterm Exam

Greg Dow

February 18, 2003

All questions have equal weight. If something is unclear, please ask for clarification. Be sure to answer both parts of each question.

1. In KMFs, workers are often represented by labor unions that bargain collectively with management. In LMFs, workers usually elect the board of directors.
 - (a) Do you think it makes any difference whether workers' interests are represented in one way or the other? Explain.
 - (b) How would you explain the fact that LMFs are rare but labor unions are common?

2. Normative arguments in favor of LMFs frequently involve ideas about equality, democracy, property, dignity, and community.
 - (a) Suppose KMFs and LMFs were equally efficient in an economic sense. Rank the various normative arguments for LMFs from most persuasive to least persuasive, and justify your answer.
 - (b) Suppose LMFs are slightly less efficient than KMFs, and this is why they are rare. Do you think any of the arguments in (a) would be strong enough to justify a public policy of encouraging the creation of more LMFs anyway? Why or why not?

3. A common hypothesis about the rarity of LMFs is that most workers have trouble financing a firm, due to their limited wealth and the difficulty of borrowing money.
 - (a) Is this hypothesis consistent or inconsistent with what we know about the plywood cooperatives? Explain.
 - (b) Is it consistent or inconsistent with what we know about the Mondragon and Lega cooperatives? Explain.

4. Sometimes it is easy to say whether a firm is an LMF, but sometimes it is not.
 - (a) Consider a firm with an employee stock ownership plan (ESOP). Is such a firm always, sometimes, or never an LMF? Does it matter whether the ESOP has 20%, 51%, or 100% of the firm's shares? Does the answer depend on other things?
 - (b) Consider a German firm with codetermination. Is such a firm always, sometimes, or never an LMF? Would you need to have more information before answering? If so, what would you need to know?

5. The text defines a firm as "a set of agents supplying inputs to a common production process, where the productive activities of the agents are coordinated through an authority structure and the resulting outputs are sold on a market".
- (a) Why is it important to have a set of agents? A common production process? An authority structure? Sale of outputs on a market?
 - (b) Describe an alternative definition of the firm and speculate about why the author did not want to use that definition for the purposes of this book.
6. One way of explaining the rarity of LMFs or their distribution across industries is to use concepts from economic theory: transaction costs, optimal contracting, adverse selection, and repeated games for example. A very different strategy is to construct historical or cultural explanations.
- (a) What facts about LMFs appear to be well explained by economic ideas? What facts appear to be well explained by ideas about history or culture? Give some examples from the book in each case.
 - (b) Discuss the general strengths and weaknesses of the two approaches (economic vs. historical/cultural). Can they be reconciled somehow? Or are they incompatible?

Economics 484

Final Exam

Greg Dow
WMX 2260

April 17, 2003
12:00 - 15:00

All questions have equal weight. You should answer both parts of each question. Use the full three hours if you like, but two hours should be sufficient.

1. A key concept in the theory of the LMF is the idea of a membership market.
 - (a) What problems would arise if an LMF lacked a membership market, or this market was imperfect? Why might it be more difficult to establish an efficient membership market for an LMF than an efficient stock market for a KMF? Explain carefully.
 - (b) Do you think imperfections in membership markets are important in determining the behavior or performance of LMFs? Or do real LMFs have effective ways of getting around such problems? Cite some evidence to justify your answer.

2. A major debate in the literature on LMFs is whether on average they tend to have higher, lower, or the same level of productivity as similar KMFs.
 - (a) Describe several types of evidence that have been utilized by researchers interested in this question, explain why each type of evidence might be relevant, and comment on the difficulties that arise in trying to interpret this evidence.
 - (b) A 'productivity pessimist' believes that LMFs are rare because their productivity is inferior to that of otherwise identical KMFs. A 'productivity optimist' believes that LMFs would have greater productivity, at least in many cases, but are rare for other reasons. Which comes closer to describing your own view? Why?

3. Many people say that the rarity of LMFs and their distribution across industries can be explained by the fact that poor workers have trouble gaining access to capital.
 - (a) This argument may explain why poor workers don't start LMFs (or KMFs either), but it doesn't explain why wealthy investors choose not to start LMFs (instead of KMFs). What factors could account for this?
 - (b) One reason for the rarity of LMFs is that they are rarely created, but another is that LMFs are sometimes transformed into KMFs. Why might this happen? Why is it more common for LMFs to be converted into KMFs than for KMFs to be converted into LMFs?

4. Many people say that the rarity of LMFs and their distribution across industries can be explained by the fact that workers are risk averse and want diversified portfolios.
 - (a) Present a story about how risk aversion and diversification help to explain the rarity of LMFs and their cross-industry distribution. Is the empirical evidence consistent with this story? Why or why not?
 - (b) Is there some reason why the same story does not apply to KMFs? Does the story about risk aversion violate the symmetry or replication principles? Does it have any connection with the alienability of capital and the inalienability of labor? Explain.

5. In chapter 11 the author maintains that there is an asymmetry between the ability of KMFs to make credible commitments to labor suppliers, and the ability of LMFs to make credible commitments to capital suppliers.
 - (a) Give some examples of situations where (i) KMFs might have difficulty convincing labor suppliers to believe the promises made by the firm's control group; and where (ii) LMFs might have difficulty convincing capital suppliers to believe the promises made by the firm's control group.
 - (b) Why is the problem of credible commitment harder for LMFs to solve? How does this help explain the rarity of LMFs? What, if anything, does this have to do with the alienability of capital and the inalienability of labor?

6. In chapter 12 the author offers a proposal to promote employee buyouts of KMFs.
 - (a) Is this proposal likely to improve economic efficiency, or is it more likely to reduce efficiency? Present some arguments on both sides, explicitly describe any relevant market failures, and give an overall prediction about the probable efficiency results.
 - (b) The author provides some calculations to illustrate how long it might take to achieve 50% workers' control, 67% control, or 100% control. What are the crucial factors influencing the speed with which a firm can be changed from a KMF into an LMF? Briefly explain why each of these factors is important.

BONUS QUESTION: worth an additional 5% (a few sentences are enough).

What is the most important thing you learned in this course? Why?

Economics 483

Midterm Exam

Greg Dow

February 19, 2004

Please answer one of the following two questions (not both).

1. Suppose someone says: "The normative arguments for workers' control in chapter 2 are irrelevant because if workers cared enough about having control over firms, either they would start LMFs themselves or entrepreneurs would find it profitable to create LMFs instead of KMFs." Evaluate this statement. Do you think this is true for all of the normative arguments in chapter 2, for some but not others, or for none? Carefully explain your reasoning.
2. Suppose someone says: "Investors take risks and the people who take risks must control the firm. Therefore most firms are KMFs." Evaluate this statement. Does it seem mostly true, mostly false, or somewhere in between? Carefully explain your reasoning.

Please answer one of the following two questions (not both).

3. At this point in the course, what do you think are the two best explanations for the rarity of LMFs? Why? Are these explanations consistent with the case studies of the plywood coops, Mondragon, and the Lega in chapters 3-4? Or do these success stories contradict your hypotheses about why LMFs are generally rare? Discuss.
4. A key problem for LMFs is how to obtain capital without giving control of the firm to capital suppliers. What are some strategies that real LMFs have used to solve this problem? In general, do you think this problem is more serious or difficult to solve than the problem of how KMFs can obtain labor without giving control of the firm to labor suppliers? Are the two problems symmetric? Discuss.

Please answer one of the following two questions (not both).

5. Some economists attempt to compare the productivity of KMFs and LMFs. Define total factor productivity and explain why this is a better measure of productivity than dividing output by labor input. Then define a Cobb-Douglas production function, and say what TFP would be in this case (you don't need a mathematical proof, but you should state any necessary assumptions). Finally, explain how one might try to determine empirically whether KMFs or LMFs have higher TFP.
6. Describe a model of adverse selection in the labor market using one or more graphs. Clearly state the assumptions of the model and why each is important. Then explain the main conclusions of the model. Assuming there are multiple equilibria, explain why it is possible to rank the equilibria in terms of their economic efficiency.

Economics 483

Final Exam

Greg Dow

April 16, 2004

Answer one of the following two questions.

1. Explain why a perfect LMF membership market eliminates (a) the horizon problem; (b) the appropriation problem; (c) the degeneration problem. In each case, say what would happen if an LMF had an imperfect membership market, and comment on whether each problem is important in the real world. Justify your answers carefully.
2. In class the instructor described an adverse selection model where an entrepreneur decides whether to reveal a new production technology to workers. Summarize the main assumptions, the main conclusions, and explain why the conclusions follow from the assumptions (you don't need a lot of math). Then explain why the model is relevant to the appropriation issues discussed in chapter 10.

Answer one of the following two questions.

3. LMFs could be rare for any of the following reasons: (a) they are created less often than KMFs; (b) they are converted into KMFs more often than KMFs are converted into LMFs; or (c) they go out of business more often than KMFs. What does the evidence indicate about the relative importance of these factors? Given this evidence, which of the theoretical explanations for the rarity of LMFs seem most convincing? Can you rule out any hypotheses because they are not consistent with this evidence? Justify your answers carefully.
4. In class the instructor described a game theory model where KMFs pay employees a wage in exchange for labor, while LMFs pay investors interest or dividends in exchange for capital. Summarize the main assumptions of the model, the main conclusions, and explain why the conclusions follow from the assumptions (you don't need a lot of math). Then explain why the model is relevant to the credible commitment issues discussed in chapter 11.

Answer one of the following two questions.

5. Chapter 12 proposed a policy to encourage more employee buyouts of KMFs. The proposal dealt with three concerns: credible commitment to shareholders, collective choice within the firm, and creation of a market for labor shares. Explain the nature of each concern and how the proposal tried to deal with it. Then say whether or not the recommended solutions would work well in practice and explain your reasoning.
6. Chapter 12 provided sample calculations involving the conversion of a KMF into an LMF. Explain the nature of these calculations and the main results. Do the results seem consistent with evidence about the conditions under which LMFs have arisen in the past? Do you think the policy proposal from chapter 12 would make LMFs significantly more common, or would they continue to be relatively rare? Explain.

BONUS QUESTION: worth an additional 5% (a few sentences are enough).

What is the most important thing you learned in this course? Why?

Economics 483

Final Exam

Greg Dow
WMX 2532

April 11, 2005
15:30 – 18:30

All questions have equal weight. If something is unclear, please ask.

Answer ONE of the following two questions. Do not answer both.

- 1A. The theoretical synthesis from chapter 11 says that LMFs are rare because capital is alienable and labor is inalienable. Briefly summarize the main points of this theory. Does it obey the symmetry principle? The replication principle? Why or why not?
- 1B. “LMFs have trouble making credible commitments to capital suppliers and thus find it difficult to obtain capital inputs. But KMFs also have trouble making credible commitments to labor suppliers and thus find it difficult to obtain labor inputs.” Explain why each of these statements could be true. Are the two problems of equal importance in the real world? Why or why not?

Answer ONE of the following two questions. Do not answer both.

- 2A. A recent paper examines the rate of creation of new LMFs in the U.K. during 1980-85. The authors find that the lowest rates of LMF entry were in industries that had high capital intensity and high variance in industry profit. Provide a complete and detailed explanation for these observations. If you need to use particular theoretical assumptions, say what they are and why they are necessary or important.
- 2B. Professional partnerships such as law firms, medical firms, and accounting firms are sometimes regarded as LMFs. Based on the textbook and the class discussions, why might you expect firms in this sector to be organized as LMFs? Can you think of any way to test your hypothesis?

Answer ONE of the following two questions. Do not answer both.

- 3A. Several economists claim that LMFs will suffer from the horizon problem and the degeneration problem. Explain what each problem is, and then discuss why the Mondragon cooperatives don't appear to have either of these problems.
- 3B. Some people believe that the use of membership markets by LMFs violates one or more of the normative principles from chapter 2 (equality, democracy, property, dignity, community). In each case, discuss whether there is a conflict with the use of membership markets. What are the practical advantages of membership markets? Do these advantages outweigh any normative problems you identified? Explain.

Answer ONE of the following two questions. Do not answer both.

- 4A. Craig and Pencavel estimate that the plywood coops had a productivity advantage of 6-15% over their KMF competitors. Assuming this is true, can you explain how KMFs continued to survive in this industry even though they had to compete with LMFs? Or does KMF survival automatically imply that Craig and Pencavel must be wrong? Justify your answer carefully.
- 4B. Hansmann has argued that one reason for the rarity of LMFs is that workers have a variety of different goals, while investors have only one goal (profit). Why could this make LMFs rare? Is there any empirical evidence that supports Hansmann's view? Do you find his hypothesis persuasive? Why or why not?

Answer ONE of the following two questions. Do not answer both.

- 5A. Why is it important to distinguish between LMFs with ‘unbundled’ input supply (K and L supplied by separate people) and LMFs with ‘bundled’ input supply (K and L supplied by the same people)? What factors are likely to affect whether an LMF takes one form or the other? Explain.
- 5B. Consider the following statement: “Each worker benefits a little bit from the creation of an LMF. But a wealthy entrepreneur benefits a lot from creating a KMF. Since firms are created by entrepreneurs, KMFs are common and LMFs are rare”. Is this statement mostly true, mostly false, or somewhere in between? Would it be true if some additional assumptions were used? Justify your answer carefully.

Answer ONE of the following two questions. Do not answer both.

- 6A. Does the policy proposal in chapter 12 ensure that employee buyouts will occur if and only if they result in a Pareto improvement (that is, making some people better off and no one worse off)? If not, does it come reasonably close to achieving this goal? Why is it difficult to achieve a Pareto improvement in the real world? Would it be sensible to require that a policy proposal pass this test? Why or why not?
- 6B. “In many firms, both shareholders and employees could gain by having employees buy out the firm, because employees are better able to monitor and discipline the managers. However, such buyouts are rare because shareholders and employees both face large free rider problems and managers are in a position to block transactions of this kind.” Do you think this statement is mostly true, mostly false, or somewhere in between? Is there any way to test this hypothesis? Justify your answer carefully.

BONUS QUESTION: worth an additional 5% (a few sentences are enough).

What is the most important thing you learned in this course? Why?

Economics 483

Final Exam

Greg Dow
WMC 3210

April 18, 2006
12:00 – 15:00

All questions have equal weight. If something is unclear, please ask.

Answer ONE of the following two questions. Do not answer both.

- 1A. The Mondragon cooperatives have existed for about 50 years and have been studied intensively by economists and others for about 25 years. Nevertheless, there are few examples of similar cooperative systems. What were the main reasons for Mondragon's success? What are the main reasons why it has been difficult to imitate this system elsewhere? Explain.
- 1B. The proposal in chapter 12 to encourage employee buyouts borrowed ideas from the plywood coops, ESOPs, codetermination, Mondragon, and the Lega. Which ideas were borrowed from which sources? What is the purpose of each of these ideas within the overall proposal of chapter 12? Do they fit together well or not? Explain.

Answer ONE of the following two questions. Do not answer both.

- 2A. Two concepts that arose repeatedly during the course are moral hazard and adverse selection. Carefully define each concept and say how they differ. Do you think these ideas are major factors or minor factors in accounting for the rarity of LMFs? Carefully justify your answer.
- 2B. Author A claims that LMFs are rare because they provide poor work incentives compared to KMFs. Author B claims that this position is not supported by the empirical evidence, and anyway it violates the replication principle. Describe the arguments for each point of view and evaluate them.

Answer ONE of the following two questions. Do not answer both.

- 3A. One observation about LMFs is that they are seldom found in capital-intensive industries. Another is that they are seldom found in industries where physical assets are highly specialized. Give a theoretical explanation for each of these observations. Does your theory also imply that KMFs should seldom arise in labor-intensive industries, or industries where human capital is very specialized? Why or why not?
- 3B. Some people claim that KMFs are more likely to be converted into LMFs when they are in financial trouble, but LMFs are more likely to be converted into KMFs when they are financially successful. What is the theoretical reasoning behind each statement? Do you think both statements are true? Why or why not?

Answer ONE of the following two questions. Do not answer both.

- 4A. What are the main ways in which an LMF membership market is similar to a KMF labor market? How do they differ? What are the main ways in which an LMF membership market is similar to a KMF stock market? How do they differ? Explain carefully in each case.
- 4B. People often say that LMF membership markets are impractical because (a) workers cannot afford the price of membership; or (b) workers are too risk averse to buy a membership right; or (c) existing members prefer to pay new workers a wage rather than admitting them as full members. In each case, explain the reasoning involved and say whether you think it is a good explanation for the rarity of membership markets. If none of these explanations is convincing, give your own explanation for the rarity of such markets.

Answer ONE of the following two questions. Do not answer both.

- 5A. “The rarity of LMFs results from systematic market failures rather than the inefficiency of LMFs as a form of organization.” Do you think this statement is mostly true, mostly false, or somewhere in between? Carefully justify your answer.
- 5B. “KMFs are not common mainly for economic reasons, but rather because history, culture, or institutions tend to favor this form of organization.” Do you think this statement is mostly true, mostly false, or somewhere in between? Carefully justify your answer.

Answer ONE of the following two questions. Do not answer both.

- 6A. Consider the theoretical synthesis in chapter 11. Three key ideas in this chapter were (a) credible commitment by control groups to non-controlling input suppliers; (b) the composition of the control group; and (c) the commodification of membership in a control group. What empirical facts about LMFs can be accounted for by each of these concepts? Can each concept explain things that the other two cannot? Justify your answers.
- 6B. Does the proposal to encourage employee buyouts in chapter 12 help to achieve the normative goals of equality, democracy, property, dignity, and community from chapter 2? Or is it irrelevant to some or all of these goals? Explain carefully in each case.

BONUS QUESTION: worth an additional 5% (a few sentences are enough).

What is the most important thing you learned in this course? Why?