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## CASE STUDIES

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“Case Studies” presents a case pertinent to contemporary issues and events in investment management. Insightful and provocative questions are posed at the end of each case to challenge the reader. Each case is an invitation to the critical thinking and pragmatic problem solving that are so fundamental to the practice of investment management.

*Jack L. Treynor, Senior Editor*



### **COBB-DOUGLAS**

Chronic unemployment creates a group who can't compete because the people with the jobs get experience, training, contacts. The last thing the White House needed was a group of angry voters. Because the White House understood the political damage that prolonged unemployment could cause, it assigned the problem to Tom Turner.

Tom would leave business cycles to the Fed. But some countries had permanent problems that their economists didn't seem to be able to solve. Were they starting with the wrong assumptions?

To understand where the demand for workers came from, Tom referred to his textbooks: most of them cited the famous Cobb-Douglas model of how labor and capital combined. A popular example was fishermen on a lake: add more fishermen and you increased the catch—from the same old lake.

But Tom was interested in unemployment: increasing the number of fishermen would surely reduce each fisherman's productivity, but where was the limit to the number of fishermen? As long as you could substitute labor for capital there was no limit to the number of jobs—hence no possibility of unemployment.

How did labor and capital combine in industrial countries? Tom considered the obvious example of a truck and driver: would adding another pair of hands to the steering wheel make the truck more productive? Would adding a second operator to a machine tool make it more productive?

If workers and machines were complements, rather than substitutes, the number of machines would limit the number of workers. Chronic unemployment could arise from an excess of babies (as in Pakistan and Afghanistan), or a shortage of savings and investment (as in Eastern Europe).

**Questions**

Hunters in a forest is another example of labor and capital as substitutes. Can unemployment arise with hunters in a forest?

How can unemployment arise when labor can substitute for capital?

Isn't unemployment confined to economies whose labor and capital are complements—where each machine requires a certain number of workers?

If a rolling mill or an oil refinery requires a certain number of workers, will doubling the required number of workers increase output?

In such economies won't more machines mean more jobs?

Will economists who think that, in industry, labor and capital are substitutes, understand?

Do economists who admire the Cobb-Douglas model think that labor and capital are substitutes?

Can such economists understand unemployment?

If the capital in an undeveloped country is lakes and forests, wouldn't Cobb-Douglas be appropriate for its textbooks?