

Faculty Profile: Larry Karp



Larry Karp -
Professor and Department Chair -
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Larry Karp earned his Ph.D. in Agricultural and Resource Economics at UC Davis, where his major fields were resource economics and econometrics. He taught at Texas A&M and Southampton University and joined the UC Berkeley ARE faculty in 1984, where he currently serves as department chair. He has served as associate editor or co-editor for leading journals in environmental economics, agricultural economics, and dynamics.

Larry has made fundamental contributions by applying dynamic methods to the study of agricultural, resource, and environmental problems. He has also made substantial contributions to the fields of industrial organization and international trade and development. He has contributed extensively to both theoretical and empirical literature, maintaining a steady stream of top publications for over twenty years.

Larry co-authored two of the earliest applications of optimal control methods to agricultural problems. This work derived the optimal decision rule for

stocking and improving rangeland, and showed how to calculate the steady state distribution of range quality. It examined the general problem of optimal farm management where there exists the opportunity for multiple harvests within a season, and it quantified the value of better information about weather.

His recent work studies the optimal management of a pollutant that decays slowly over time (a “stock pollutant”), comparing taxes and cap-and-trade policies. This research extends previous results that apply to pollution that decays quickly (“flow pollutants”), and is essential for studying problems related to greenhouse gasses. This research finds that taxes are more efficient than cap-and-trade for the control of greenhouse gasses. An extension of this work takes into account that over time we can expect to have a better understanding of the relation between greenhouse gas stocks and economic/environmental damages. This anticipated learning leads to a small decrease in optimal abatement efforts, and it strengthens the argument for carbon taxes rather than quantity restrictions.

His current work on climate change emphasizes the role of “impatience” (or “time preference”) in modeling climate policies. He has developed a model that takes into account the temptation of policymakers to procrastinate when deciding how to address climate change. One strand of this work considers the situation where the danger of an environmental catastrophe increases as the stock of greenhouse gasses increase. Using a more plausible description of how people really think about distant generations, Larry’s work shows that the threat of catastrophe has significant effects on policy. The conclusion is that society should be willing to make considerable effort to reduce

the risk. This result is controversial, since many economists have developed models that recommend only modest expenditures to address climate change.

Larry has published prolifically in dynamic games. His first paper on this topic examined the international grain trade as a dynamic game. When this paper was written, there was a lively debate about the ability of grain exporters to exercise market power. This paper, which was the first application of dynamic games in agricultural economics, showed how the dynamic supply response constrains the exercise of market power. Following this work, Larry co-authored a series of papers studying the interactions of buyers and sellers with market power in the international oil market. This work culminated in a widely cited Handbook chapter that explains dynamic consistency problems in the context of resource markets.

Larry has also made significant contributions in industrial organization theory, where his major contributions concern the idea that a monopoly producer of a durable good has a very limited ability to exercise market power, because of competition from the second-hand market. He has also written extensively in international trade and development. His work on delegation in customs unions shows that nations may want to delegate authority to set external tariffs to aggressive partners. Recent papers study the relation between property rights to natural resources and comparative advantage.

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