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The role of risk versus the role of uncertainty in economic systems

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Abstract

Frank Knight made an important distinction between risk and uncertainty—a distinction that continues to be blurred in economists' writings to this day. At one extreme is pure risk where probabilities can be numerically assigned exactly from objective, physical data. This is actuarial risk. At the other extreme is pure uncertainty, which Knight claimed is unanalyzeable. Random variables for many economic problems appear to fall somewhere between these two extremes, but in the rapidly changing global economic system, random variables appear to be characterized by more and more uncertainty. Yet, methods and methodology typically employed in theoretical and empirical analyses of economic systems were developed for the case of pure risk then imposed on problems characterized by uncertainty. Systems modelers need to better recognize the uncertainty dimension of many problems, including the role of uncertainty in the potential instability of market systems and in Knightian welfare economics. New methods and methodology may be required to properly model uncertainty.

Keywords: Risk; Uncertainty; Market systems; Welfare economics; Global economy

> If we are to understand the workings of the economic system we must examine the meaning and significance of uncertainty, and to this end some inquiry into the nature and function of knowledge itself is necessary.
> Frank H. Knight 1921

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1. Introduction

Frank H. Knight is widely known for his classical 1921 book "*Risk*, *Uncertainty and Profit*," in which he made an important distinction between risk and uncertainty. This book and subsequent writings are much more significant than this distinction alone, however, because they reflect an evolving social and economic theory embracing not just risk and uncertainty, but imperfect competition and welfare economics.

The economic milieu in which Knight's ideas were formed was one in which a few firms dominated some markets, particularly oil and meat packing. Out of this environment came our existing Antitrust Laws and, in the same year that his book was published, the Packers and Stockyards (P&S) Act. These antitrust laws led to divestiture in some highly concentrated markets. As we enter the 21st century, however, we have witnessed an unprecedented wave of mergers, acquisitions and joint ventures leading to horizontal concentration, to vertical integration, and to a web of interlocked firms[1] that is considerably more intense than during Knight's era.

The permissive attitude behind approval of recent mergers, acquisitions and joint ventures appears to be based on the single-minded pursuit of economic efficiency. Legislation including GATT, NAFTA, and Freedom to Farm also reflect the pursuit of economic efficiency, as does the teaching of many professional economists.

While national and global policy has a recurring theme of economic efficiency, and giant corporations continue to justify growth on the unsubstantiated claims of economic efficiency, it seems to this writer that recent corporate developments are more about economic power—raw economic power—than about economic efficiency. Historically—perhaps even through the mid-l990s—firm growth, mergers, acquisitions and joint ventures were about economic efficiency. Food consumers have enjoyed unquestionable gains from this consolidation and the resulting gains in efficiency. In the last few years, however, the efficiency gains are arguably negligible, yet the constant flux of reorganization and consolidation continues. What is now occurring in global agribusiness generally appears to be more of a street fight over economic power, than an effort to capture efficiencies.

Global organizations such as the WTO, IMF and World Bank claim purview over global economic rules. However, Thurow (1999) maintains that global organizations like these are nothing more than imposing facades with no structure behind them. The evolving global economy has been likened to "Cowboy capitalism" of the American west in the 19th century (Thurow, 1999). In the global economy, as in the Cowboy economy, there are no rules for making markets work properly, no rules for preventing a market system from naturally evolving to monopoly, no antitrust laws, no antitrust police, and no antitrust enforcement agencies. Raw economic power may be the 21st century equivalent of the fastest gun in the 19th century.

The outcome of this global street fight is highly uncertain. There appear to be tremendous uncertainties about the future of United States agriculture, uncertainty about whether an individual producer can get a contract, especially a preferential contract,

[1] Firms can be interlocked through joint ventures, strategic alliances, interlocking directorates, and partial ownership of other agribusiness firms.