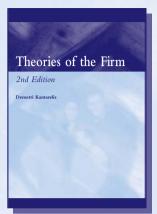
Theories of the Firm

2nd Edition

Demetri Kantarelis



Introduction



A business firm is a needs-satisfying machine; it is an entity invented and employed by society to better satisfy the society's interests. A society is better off when properly regulated business firms are allowed to carry the bulk of economic activity than when they are not allowed to exist or are severely regulated by the state. And, as history has documented, societies fare better when they are dependent on such business firms than when they are dependent on central planning.

The business firm generates consumer satisfaction in return for income that gets distributed to its owners, employees, suppliers and public goods recipients. Any firm of any size is in existence because:

- it identifies a consumer need and develops/invents a recipe on how to satisfy that need
- it makes the right decisions with respect to making or buying inputs so that it delivers its recipe at the lowest possible cost
- it provides the best incentives to its stakeholders and because
- it constantly and deliberately evolves through the relentless pursuit of competitive, organisation and strategic advantage.

This book describes four theories about the firm that have emerged since Adam Smith's *An Inquiry Into the Nature and Causes of the Wealth of Nations*. These theories are: The Neoclassical Theory, The Transactions Cost Theory, The Principal–Agent Theory and The Evolutionary Theory.

The Neoclassical Theory of the Firm, in its basic form, views the firm as a black box rational entity. The theory is built on imaginary but plausible production and demand functions and it establishes the principal of profit maximisation according to which profit is maximised when marginal revenue is equal to marginal cost. The theory may be used to describe, among many other things, various market structures, regulation issues, strategic pricing, barriers to entry, economies of scale and scope and even optimum portfolio selection of risky assets. The main weakness of the theory is that it assumes complete information and, as a result, there is no agency problem or concern for transaction costs due to conflict between owners and suppliers of inputs (even specific to whatever the firm produces) in the market system. Another weakness of the theory is that it does not allow for firm evolution.

The Transactions Cost Theory of the Firm focuses on problems of asymmetric information involved in transactions. The firm, according to this theory, comes into existence because it successfully minimises 'make' inputs costs (through vertical integration) and 'buy' inputs costs (using available markets). The more specific the inputs that the firm needs are the more likely it is that it would produce them internally and/or

acquire them through joint ventures and alliances. The weakness of this theory is that it does not take into consideration agency costs or firm evolution, neither does it explain how vertical integration should take place in the face of investments in human assets, with unobservable value, that cannot be transferred.

The Principal–Agent Theory of the Firm extends the neoclassical theory by adding agents to the firm. The theory is concerned with friction due to asymmetric information between owners of firms and their stakeholders or managers and employees; the friction between agent and principal, requires precise measurement of agent performance and the engineering of incentive mechanisms. The weaknesses of the theory are many: it is difficult to engineer incentive mechanisms, it relies on complicated incomplete contracts (borderline unenforceable), it ignores transaction costs (both external and internal), and it does not allow for firm evolution.

The Evolutionary Theory of the Firm places emphasis on production capabilities and process as well as product innovation. The firm, according to this theory, possesses unique resources, tied semi-permanently to the firm, and capabilities; the firm's resources can be classified into four categories: financial, physical, human and organisational. The theory sees the firm as a reactor to change and a creator of change for competitive advantage. The firm, as a creator of change, may cause creative destruction, which in turn may give birth to new industries and enable sectors of, or entire, economies to grow. Although many countries have established architectures to support entrepreneurial endeavours, a weakness of the theory remains: process and product innovation (especially the latter) are mostly due to serendipity and as a result 'entrepreneurship' is a very expensive factor of production; in the pursuit of profit and general wellbeing, it cannot be easily programmed within a firm or a nation.

The book consists of nine chapters followed by an epilogue:

- Chapters 1 and 2 describe the external environment of the firm and the firm's
 decision-making process with emphasis on strengths and weaknesses of the
 following models: rational, satisficing, probabilistic (inclusive of Bayesian) and
 behavioural.
- Chapters 3–6 are devoted to the Neoclassical Theory of the Firm and some of its applications, ranging from market structures to managing a portfolio of risky assets and from free pricing to regulation.
- Chapter 7 describes the Transactions Cost Theory of the Firm and its variants as well as hybrids (structures between the extremes of markets and hierarchies).
- Chapter 8 focuses on the Principal–Agent Theory of the Firm, the central problem
 of which is how to induce the agent to act in the best interests of the principal
 when the agent has an informational advantage over, and different interests from,
 the principal.
- Chapter 9 deals with the Evolutionary Theory of the Firm, built around the concepts of creative destruction, competitive advantage, entrepreneurial styles and habitat, strategy and firm structure as well as entrepreneurial architecture.

Contents

Chapter 1: The business environment in the first decade of the 21st century

Pages 1 - 23

1 Globalisation

1.1 Legal restrictions

1.2 Global concentration

1.3 Excess capacity and profit

2 The increasing relevance of auctions

2.1 Bidders (or buyers)

2.2 Auctioneers (or sellers)

2.2.1 Risk preference

2.2.2 Information structure

2.3 Other auctions

2.4 Ethical issues

3 Ethical constraints

3.1 Teleological ethics

3.2 Deontological ethics

3.3 Virtue ethics

3.4 System development ethics

3.5 Ethics theories as foundations of other theories that affect business

4 Summary

Chapter 2: The firm as a decisionmaker

Pages 24 - 41

1 Rationality

2 Satisficing

3 Additional factors that affect decisions

3.1 Groups

3.2 Variety of evaluative frameworks

3.3 Bayesian decision making

4 Fairness, gaming and risk preference

4.1 The risk-averse firm

4.2 The risk-loving firm

5 Uncertainty

6 Behavioural decisions

7 Summary

Chapter 3: The neoclassical theory of the firm

Pages 42 - 69

1 The skeletal features of the neoclassical monopoly firm and the principle of profit maximisation

2 A formal model of the neoclassical theory of the monopoly firm

3 The firm in various market structures

3.1 Competitive advantage, market segmentation, contestability and relevant competitors

3.2 The perfectly competitive firm

3.2.1 The perfectly competitive firm in the short-run

3.2.2 The perfectly competitive firm in the long-run

3.3 The monopolistically competitive firm

3.3.1 Monopolistic competition in the short-run

3.3.2 Monopolistic competition in the long-run

3.4 The Hotelling-type (spatially differentiated) firm

3.4.1 The spatial firm

3.4.2 The spatially differentiated industry in the short-run

3.4.3 Entry and the industry in the longrun

3.4.4 Efficient distance

4 Summary

Chapter 4: The strategic firm

Pages 70 - 100

1 Kinked-demand mentality

2 Reversed-kinked-demand mentality

3 Dominant strategy

4 Nash equilibrium

5 Cartel solution

6 Games with mixed strategies

7 Incomplete information games

7.1 Pure-strategy Bayes-Nash equilibria

7.2 Mixed-strategy Bayes-Nash equilibria

8 Evolutionary games

9 The Cournot model

9.1 N-firm Cournot model

9.2 Industry concentration measures

9.3 Cournot duopolists

10 Stackelberg duopolists

11 Live and let live philosophy

12 Stochastic duopoly

13 A case for more competition and higher prices

14 Entry deterrence

14.1 The Sylos-Labini postulate

14.2 The Dixit model of entry deterrence

15 Summary

Chapter 5: The price-discriminating firm and the regulated firm

Pages 101 - 140

- 1 The price-discriminating firm
 - 1.1 Two-part tariff
 - 1.2 First-degree price discrimination
 - 1.3 Second-degree price discrimination
 - 1.4 Third-degree price discrimination
- 2 The regulated firm
 - 2.1 Natural monopoly
 - 2.2 Natural monopoly and subaddivity
 - 2.3 Regulation
 - 2.4 Ramsey prices
 - 2.5 Peak-load pricing and capacity-based subsidy
 - 2.6 Rate-of-return constraint regulation
 - 2.7 Regulators' motives
 - 2.8 Alternatives to regulation
 - 2.9 Safety
 - 2.10 Environment
 - Internalisation of costs, liability and negligence
 - 2.12 FDA and product screening regulation
- 3 Summary

Chapter 6: The money-managing firm

Pages 141 - 151

- 1 The capital asset pricing model
- 2 The impact of a risk-free asset and the Sharpe Ratio
- 3 The relationship between a security's risk and its expected rate of return
- 4 Summary

Chapter 7: The transaction cost theory of the firm

Pages 152 - 184

- 1 Model I: the firm according to Coase
 - 1.1 The answer to question (b)
- 2 Model II: the firm as a minimiser of transaction costs subject to a given output level
- 3 Critical dimensions of transacting
 - 3.1 Bounded rationality
 - 3.2 Opportunism
- 4 Model II: modified
- 5 Model III: the firm according to Williamson
- 6 Model IV: vertical integration and asset ownership
- 7 The firm as a function of deals

- 7.1 Factors that govern the effectiveness and efficiency of deals
- 7.2 Strategic nucleus
- 7.3 Mergers
 - 7.3.1 The vertically integrated firm
 - 7.3.2 The horizontally integrated firm
 - 7.3.3 Conglomerate mergers
- 7.4 Strategic alliances and joint ventures
- 7.5 Summary

Chapter 8: The principal-agent theory of the firm

Pages 185 - 206

- 1 The principal-agent problem
 - 1.1 Private information, opportunism and remedies
- 2 The conflict between the principal and the agent
 - 2.1 Divergence of interests: Model I
 - 2.2 Divergence of interests: Model II
- 3 Incentive compatibility
- 4 The profit share (or bonus) incentive
- 4.1 Risk-sharing between owner and manager
- 5 The firm without employees
- 6 The firm with a monitored employee
- 7 The leisure model
- 8 Partnership
 - 8.1 Non-opportunistic
 - 8.2 Opportunistic
- 9 'Team' and the minimisation of free riding
- 10 Summary

Chapter 9: The evolutionary theory of the firm

Pages 207 - 235

- 1 Introduction
- 2 Creative destruction
- 3 The essence of Schumpeter
- 4 Styles of entrepreneurship
- 5 Entrepreneurial capitalism 6 Habitat for entrepreneurs
- 7 The architecture of the US entrepreneurial economy
- 8 Market structure and innovation
 - 8.1 Schumpeter's assertion
 - 8.2 Process inventio
 - 8.3 Patents, copyrights and trademarks
- 9 Strategy and firm structure
- 10 Summary

The book is the first of its kind and widens the fields of industrial organization and management strategy for students, researchers and practitioners. Utilizing conventional microeconomic tools, it especially suites the needs of business executives by stressing, among other, globalism, ethics, auctions, 'satisficing' decision-making, the importance of transaction costs, deals, principal-agent incentives and evolutionary objectives; it should be a required reading for every upper-level and/or graduate student in economics and business as well as for business executives, legal scholars and public policy critical analysts. Undoubtedly, the reader of this book can claim 'strategist' and 'public policy designer' credit.

Robert Ashford

Professor of Law, Syracuse University College of Law, Syracuse, New York 13244, USA

Theories of the Firm covers much of the current developments on the theory of a firm. A most comprehensive summary of transaction costs, principal-agent, and evolutionary theory of the firm can scarcely be found elsewhere. The book is highly pedagogical in that it is sometimes illustrative, sometimes mathematically challenging, and sometimes very descriptive, depending upon the demands of the subject matter itself. We highly recommend this book for both advanced undergraduate and upper level studies, as well as for practitioners of the ordinary business of life.

Michael Szenberg, Pace University, USA & Lall B. Ramrattan, University of California, USA

Theories of the Firm, second edition is appropriate for upper level undergraduate students in economics, first year graduate students in economics and business, law school students as well as for entrepreneurs and business executives. The book may be used as a textbook in 'Theories of the Firm' courses or seminars and as a supplemental reading in intermediate or first year graduate courses in 'Industrial Organization', 'Microeconomics', 'Managerial Economics' or 'Economics for Managers', 'Contracts', 'Torts', 'Corporations', 'Deals', 'Venture Capital' and other courses.

Demetri Kantarelis completed his Ph.D. studies in Economics at Clark University (USA) in 1983 and afterwards spent two years at Harvard University (USA) as a Post-doctorate Visiting Scholar. He is Professor of Economics at Assumption College where he teaches in both the undergraduate and MBA programs. Professor Kantarelis' research focuses on industrial organization themes and has appeared in the Journal of Economic Behavior and Organization, Quarterly Journal of Business and Economics, Journal of Business & Public Affairs, Journal of the Academy of Business Administration, Studies in Economic Analysis, International Journal of Management Concepts and Philosophy, International Journal of Entrepreneurship and Innovation Management and several others. He has co-authored the text Essentials of Inferential Statistics and co-founded the Business & Economics Society International as well as the International Interdisciplinary Environmental Association. He currently serves as the founding editor of the Global Business & Economics Review, as the co-editor of the Interdisciplinary Environmental Review and on the editorial or advisory boards of several other academic journals.