

## The Economic Valuation Of Patents Methods And Applications New Horizons In Intellectual Property Series By Federico Munari Raffaele Oriani 2011 Hardcover

Identifying the optimal price for a transaction involving an intellectual property (IP) asset necessarily involves a thorough, well-reasoned, and well-supported IP valuation analysis. This matchless book draws on decades of experience from the world's most renowned IP valuation experts, patent office chief economists, finance and accounting professors, and top-tier legal professionals to provide clear guidance and immediately actionable knowledge on how to value IP assets in a multitude of scenarios. The contributors explore all major facets of IP valuation, ranging from the basics of value to technical economic methods in an approachable manner. The book examines the valuation of brands, copyright, trade secrets, patents, and other forms of IP from a multidisciplinary viewpoint with worked examples, draft contract language, case law analysis, and up-to-date theoretical considerations. Issues and topics considered in depth include the following: fair, reasonable, and non-discriminatory terms; determining reasonable royalty rates; standard essential patents; profit apportionment; discount rates; role of the IP asset manager and multi-functional teams; IP management in collaborative research and development; financial methods and economic considerations; and operationalization of IP valuation in practice. The handbook is the result of five years of dedication and hard work by the advisors and a growing network of researchers, supporters, and end-users involved in the Asia-Pacific Research and Training Network on Trade. As IP becomes ever more indispensable in so many activities and industries that cross national borders, the need to overcome the lack of shared understanding of how to approach the valuation of IP becomes more urgent. This book will facilitate consistent approaches to the valuation of IP as an indispensable component of trade, investment, and sustainable economic development. It will provide IP asset managers and transactional attorneys, both seasoned experts and newcomers, with up-to-date methods on how to value IP assets and apply them in practice.

Comprehensive coverage of the issues, methods, and art of valuing and pricing early-stage technologies To develop or not to develop; to license or not to license; what price will be a true reflection of the product's value from both the buyer's and seller's point of view? These questions are crucial to companies dependent on intellectual property—particularly technology companies, universities, and biotech companies. The risks associated with early-stage technology are high, and decisions must often be made years before any potential product will reach the market. In *Early-Stage Technologies: Valuation and Pricing*, Richard Razgaitis presents TR-R-A-DE(TM), a comprehensive approach to determining the future of new technologies based on technology rights, risk assignment, the art of deal-making, and deal economics. He considers the key components involved in a licensing transaction, offers a detailed presentation of six valuation methods for intellectual property, examines risk in both quantitative and qualitative terms, and explores the negotiation strategy and structuring of agreements that are the keys to the art of technology rights deal-making. *Early-Stage Technologies* is an indispensable tool for anyone involved in the development, valuation, and licensing of intellectual property, the most valuable resource and driving force of the information age.

Drawing on the full range of available resources, this book clearly and systematically presents a detailed overview of current knowledge about patent valuation. In the course of the presentation the authors cover such elements of the subject as the follow

This book provides a better understanding of how intellectual property can improve economic and business performance. It focuses on three particular issues: the valuation of patents, the transfer of knowledge, and the management of innovation and intellectual property. Scholars from leading worldwide institutions use quantitative methods and advanced survey techniques to explore the complex relationship between patents, innovation, venture capital and scientific research. The book focuses on three broad issues: the valuation of patents, the transfer of knowledge, and the management of innovation and intellectual property.

Intellectual Property as a Complex Adaptive System

A Company Perspective

Valuation and Economic Benefit

Leveraging Patents Financially

China's Impending Patent Valuation Crisis

Valuing Intellectual Property in Japan, Britain and the United States

***Stefan M. Wagner analyses problems associated with institutional changes (duration of patent examination and opposition mechanisms), the expansion of the patentable subject matter and organizational challenges for industrial patentees. The study is based on the empirical analysis of large scale datasets on European patents and employs advanced multivariate methods such as semi-parametric and panel-data regression methods.***

***The development of patent markets should allow for better circulation of knowledge and more efficient allocation of technologies at a global level. However, the beneficial role of patents has recently come under scrutiny by those favouring 'open' innovation, and important questions have been asked, namely: How can we estimate the value of patents? How do we ensure matching between supply and demand for such specific goods? Can these markets be competitive? Can we create a financial market for intellectual property rights? In this edited book, a team of authors addresses these key questions to bring readers up to date with current debates about the role of patents in a global economy. They draw on recent developments in economic analysis but also ground the discussion with the basics of patent and knowledge economics. Striking a balance between institutional analysis, theory and empirical evidence, the book will appeal to a broad readership of academics, students and practitioners.***

**Master's Thesis from the year 2005 in the subject Business economics - Banking, Stock Exchanges, Insurance, Accounting, grade: B, University of Applied Sciences Berlin, 26 entries in the bibliography, language: English, abstract: The change in the economy in the 20th century is more towards an economy based on ideas, away from the matter based economy of earlier times. The emphasis has shifted from natural resources to thought, ideas, design and organization<sup>11</sup> Services replaced the importance of manufacturing. Contractor 2001, names this overall change as a de-materialization of the economy and quantifies the significance of the change by pointing out that by the end of the twentieth century 79 percent of jobs and 76 percent of the GNP in the United States were in the service sector. This change wasn't visible only in the US. European and Emerging nations did also portray similar trends. In 1969 Tobin introduced a new ratio called Tobin's q Ratio<sup>12</sup>, which have been a great influence on the valuation/measure of intangible components of enterprises. Having a look at the example of Microsoft's ratio between its market value and its book value, which in 1999 25 to 1 was, reveals the fact that most of the value is in the form of knowledge capital, in its employees, organization, patents, copyrights, brand value, etc. This ratio is bound to increase as the importance of intangible assets rises over the course of years. Though this increase is certain and expected, the valuation of these assets is still not clarified nor agreed upon. The value of the intangible assets is of importance to different audiences such as academicians, scholars, accountants, consultants, etc. and they haven't been able to come up with one single approach to solving the problem. This thesis will focus on a particular subset of intangible assets, namely patents, and demonstrate how to value them.**

**This book provides new insights into the economic impacts, strategic objectives and legal structures of an emerging branch of government incentives conditioned on meeting intellectual property-related requirements. Despite becoming more common in recent years, such incentives - ranging from patent fee subsidies and patent box tax deductions to inventor remuneration schemes - are still under-researched. A diverse range of analytical methods, including econometric analyses, case studies and comparative legal analysis, are used to study these incentives in countries in Europe and China. Scholars, policymakers and practitioners can benefit from the conceptual and practical insights as well as policy recommendations provided.**

**The Strategic and Geographical Dimension**

**Valuation, Exploitation, and Infringement Damages, 2017 Cumulative Supplement**

**Unlocking the Hidden Value of Patents**

**Market Value and Patent Citations**

**Recent Research on the Economics of Patents**

**Technological Innovation, Resource Allocation, and Growth**

Despite the significance of patented university research, it is difficult to measure the economic value of their patented inventions and observe the extent to which universities are able to capture such value through patent licensing. Moving beyond assessing commercialization performance by simple statistics, we propose a new approach to benchmarking university patents and commercialization performance based on comparative corporate patent value. Our procedure involves matching university patents to patents granted to public corporations with similar patent characteristics to estimate the "potential value" of these university patents by the stock market reactions to matched corporate patent grants. We then calibrate an empirical patent valuation model for these estimated values of university patents by employing technology-level licensing data from a leading US research university. In aggregate, we compare the estimated potential values of a university's patent portfolio to its annual licensing income, and find that universities realize on average 5-9% of the estimated potential value through licensing income. Finally, we investigate the correlates of university-level potential patent value and suggest avenues for future research.

As patent data become more available in machine-readable form, an increasing number of researchers have begun to use measures based on patents and their citations as indicators of technological output and information flow. This paper explores the economic meaning of these citation-based patent measures using the financial market valuation of the firms that own the patents. Using a new and comprehensive dataset containing over 4800 U. S. Manufacturing firms and their patenting activity for the past 30 years, we explore the contributions of R&D spending, patents, and citation-weighted patents to measures of Tobin's Q for the firms. We find that citation-weighted patent stocks are more highly correlated with market value than patent stocks themselves and that this fact is due mainly to the high valuation placed on firms that hold very highly cited patents

We propose a new measure of the economic importance of each innovation. Our measure uses newly collected data on patents issued to US firms in the 1926 to 2010 period, combined with the stock market response to news about patents. Our patent-level estimates of private economic value are positively related to the scientific value of these patents, as measured by the number of citations that the patent receives in the future. Our new measure is associated with substantial growth, reallocation and creative destruction, consistent with the predictions of Schumpeterian growth models. Aggregating our measure suggests that technological innovation accounts for significant medium-run fluctuations in aggregate economic growth and TFP. Our measure contains additional information relative to citation-weighted patent counts; the relation between our measure and firm growth is considerably stronger. Importantly, the degree of creative destruction that is associated with our measure is higher than previous estimates, confirming that it is a useful proxy for the private valuation of patents.

This book fills an important gap in the literature and will be very useful both to students of intellectual property and practitioners confronted by the problem of valuing their patent portfolios. An excellent overview of an evolving and challenging area, it provides the necessary background to thinking about the problem of valuation and describes all the major

methods in use, including the real options approach. Bronwyn H. Hall, University of California, Berkeley, US In depth knowledge and scientific approach are used to improve patent valuation techniques. . . a dream book for both researchers and practitioners interested in identifying the value of creative minds. Bruno van Pottelsberghe, Solvay Brussels School of Economics and Management, ULB, Belgium The Economic Valuation of Patents provides an original and essential analysis of patent valuation, presenting the main methodologies to value patents in different contexts. Starting with an analysis of the relevance of patent valuation from a strategic, economic and legal perspective, the book undertakes a thorough review of the existing financial and qualitative valuation methodologies. The contributing authors, IP experts from academia and business, discuss the application of valuation issues in various contexts such as patent portfolio management, licensing agreements, IP litigation, IP-backed finance and accounting. For each topic, an introductory theoretical background is provided and specific application contexts are then investigated. This multidisciplinary book bridges theory and practice in a unique and novel way that will be appreciated by graduate students, scholars and practitioners alike.

Valuation, Exploitation, and Infringement Damages

A Primer for Identifying and Determining Value

OECD Science, Technology and Industry Outlook 2006

The Economics and Econometrics of Innovation

An Exploration of Patent and Trademark Portfolios

Innovation and IPRs in China and India

A comprehensive reference for valuation of intangible assets Intellectual Property, Valuation, Exploitation, and Infringement Damages provides in-depth, up-to-date guidance about the valuation of intangible assets. Covering patents, trademarks, copyrights, trade secrets, and more, this book describes the standards, best practices, and case law relating to valuation, licensing, and infringement damages. Intellectual property strategies are examined from a business economic standpoint, and analytical models are provided to streamline the calculation of valuations, licensing royalty rates, and fair equity splits in joint venture arrangements. Designed to ease the task of attaching monetary value to intangible assets, this invaluable reference includes extensive practical guidance including sample royalty rate information, diffusion sales forecasting models, detailed treatment of investment rate of return, and the valuation of early-stage technology. Intellectual property is rapidly becoming a major profit center for an increasing number of companies, who may invest billions of dollars in development of an irreplaceable asset. This book provides an authoritative reference for exploiting this property to its fullest extent, and quantifying its actual economic value. Now that intangible assets are becoming the cornerstones of corporations, applying a logical, analytical approach to valuation has become more important than ever. Intellectual Property, Valuation, Exploitation, and Infringement Damages provides expert guidance for each stage of the asset's life cycle, with recommended procedures and strategies grounded in case law and real-world practice.

In the definitive reference to draw credible and defensible IP value conclusions, leading expert Pellegrino delivers real-world case studies of IP valuation analyses from start to finish in each of the primary IP categories. This practical, hands-on guide presents an objective framework for conducting due diligence of IP rights, performing the legal analysis, and correlating the impacts of IP rights on value.

During the past few decades, the interest of economists in the sources of long-term economic growth has led an increasing number of them to focus on the role of innovation in creating that growth. Although some researchers have always been interested in this topic, the groundbreaking work of Solow (1957), Nelson (1959) and Arrow (1962) made many other economists recognize the central role played by innovation in almost all spheres of economic activity. The Economics and Econometrics of Innovation presents a valuable overview of the work of the world's most renowned experts in the field of innovation and technical change. It collects 22 outstanding contributions that reflect the results of the vast, worldwide research efforts and remind us of the importance of economic incentives in shaping and directing innovative activities. The volume presents an edited selection of papers that were first presented at the 10th International ADRES conference. One particular goal of this book is to bring out the complementary nature of the various approaches to innovation, and to facilitate in-depth dialogues both between microeconomists and macroeconomists, and between theoreticians and econometricians. General topics that are considered range from the economy-wide effects of innovation on growth and employment to the variation of individual firm innovative performance; from the analysis of networks and standardization to the role of intellectual property rights and the assessment of knowledge spillovers. Besides the wealth of information presented in the chapters, readers of this volume will also appreciate the value of examining a single question from different angles and by using different methods.

Drawing on the full range of available resources, this book clearly and systematically presents a detailed overview of current knowledge about patent valuation. In the course of the presentation the authors cover such elements of the subject as the following: business implications of the dematerialization of economic life; importance of intellectual property in a knowledge economy; forms of value creation by intangible assets in general and by patents in particular; value proposition of different ways of patent exploitation; patent value affecting environmental factors and factors inherent to the patent portfolio; structure of current instruments of patent valuation. The authors provide a detailed step-by-step account of how to set up a valuation model, with specifications of all the instruments required and attention to any empirical findings that have appeared. In addition, detailed case studies demonstrate the practical execution of major varieties of patent valuation, an appendix describes the mathematics used to compute present value and net value, and a glossary defines technical terms. In addition to its contribution to legal scholarship on patent law, the book is unmatched as a procedural manual for setting up a valuation model before a concrete valuation task. There is no clearer discussion of patent valuation as a crucial element of corporate strategy in the knowledge economy, and as

such the book will prove of great practical assistance to business managers and their counsel in any jurisdiction.

The Economics of Intellectual Property. Suggestions for Further Research in Developing Countries and Countries with Economies in Transition

Industry Effects and Appropriability Measures in the Stock Market's Valuation of R & D and Patents

Technology, Marketing and Internet

Early-Stage Technologies

Patent Markets in the Global Knowledge Economy

The role of IP in the Innovation Society

Long regarded as an essential underpinning of technological innovation in successful capitalist economies, the beneficial role of patents has recently been brought into question by those favouring 'open' innovation. This rigorous book surveys the theory, empirical evidence and public-policy related to the role of patents in a global knowledge economy.

The OECD Science, Technology and Industry Outlook 2006 offers a comprehensive review of key trends in science, technology and innovation policy, and an examination of recent policy developments in OECD countries.

Both law and economics and intellectual property law have expanded dramatically in tandem over recent decades. This field-defining two-volume Handbook, featuring the leading legal, empirical, and law and economics scholars studying intellectual property rights, provides wide-ranging and in-depth analysis both of the economic theory underpinning intellectual property law, and the use of analytical methods to study it.

Praise for Intangible Assets "In Intangible Assets, Jeffrey Cohen presents an informative, thought-provoking and practical look at an increasingly important component of every business's worth. He describes the art and science of identifying assets that have clear economic benefit, but are typically not found on the balance sheet, and he provides an invaluable framework within which the reader can value these assets, despite their elusive nature." --Rick Westervelt, President, Skylist, Inc. "Jeffrey Cohen's integrative approach to conceptual issues of intangible assets is creative and a refreshing contribution. He brings law, economics, finance, and accounting to the same table, which results in a comprehensive framework for understanding how value is created and sustained. His construct of 'proto-assets' and 'portfolio of intangible economic benefits' is key. Written in an easy-to-read style with many practical examples, this book will be useful for both novice and experienced professionals." --W. Dana Northcut, PhD, Adjunct Associate Professor of Accounting Graduate School of Business, University of Chicago Principal, Chicago Partners, LLC "This volume is the perfect resource for newcomers to IP valuation. Through lucid explanations and well-chosen illustrations, it does for the reader exactly what a valuation expert should do for a client--it makes the abstract concrete. But this volume is not just for the novice; it holds insights that will be useful to IP experts in law, accounting, and economics." --Edward F. Malone, Partner, Jenner & Block LLP

Intellectual Property

Intangible assets in business valuation, with emphasis on real options approach

Economic Analyses of the European Patent System

Vol 1: Theory Vol 2: Analytical Methods

Patent Management and Valuation

The Economic Valuation of Patents

***This book examines the two most populous nations on earth – India and China – in an effort to demystify the interaction between intellectual property rights (IPR) regimes, innovation and economic growth by critically looking at the economic and legal realities. In addition, it analyzes the question of how innovation can best be transformed into IPR, and how IPR can best be exploited to encourage innovation. Comparing and contrasting these two giant nations can be highly beneficial as China and India were the two fastest-growing economies in the last three decades, and together their populations make up one third of the world's total population; as such, exploring how to sustain their growth via innovation and commercialization of IPR could have a tremendous positive impact on global well-being. While a study of these two mega countries with such diverse dimensions and magnitudes can never be truly comprehensive, this joint effort by scholars from law, business management and economics disciplines that pursues an empirical approach makes a valuable contribution. Divided into three parts, the first offers an in-depth doctrinal and empirical analysis. The second part exclusively focuses on India, while the last is dedicated to China.***

***Recent research on the economics of patents is surveyed. The topics covered include theoretical and empirical evidence on patents as an incentive for innovation, the effectiveness of patents for***

*invention disclosure, patent valuation, and what we know about the design of patent systems. We also look at what is known about some current policy areas, including software and business method patents, university patenting, and the growth in patent litigation.*

*"Rembrandts in the Attic" provides the first practical and strategic guide that shows CEOs and other managers how to unlock the enormous financial and competitive power hidden in their patent portfolios. The authors show how some of the world's most successful firms have used patents to capture and defend markets, outflank rivals, boost bottom-line revenues and shareholder return, and enhance the commercial success of their enterprises.*

*As over half the assets of many major companies are now intangible assets, there is an increasing need to assess more accurately the value of intellectual property (IP) from a wider interdisciplinary perspective. Re-evaluating risk and understanding the true value of intellectual property is a major problem, particularly important for business practitioners, including business analysts and investors, venture capitalists, accountants, insurance experts, intellectual property lawyers and also for those who hold intellectual property assets, such as media, publishing and pharmaceutical companies, and universities and other research bodies. Written by the foremost authorities in the field from Britain, Japan and the US, this book considers the latest developments and puts forward much new thinking. The book includes thorough coverage of developments in Japan, which is reviewing the value of IP at a much quicker pace than any other country and is registering ever-increasing numbers of patents in the course of inventing its way out of economic inertia.*

*Research Handbook on the Economics of Intellectual Property Law*

*Valuation of Patents*

*A New Approach*

*Rembrandts in the Attic*

*Valuation of Scandinavian Patent Rights Across Industries, Nationalities, and Time*

*Methods and Applications*

Intangible assets such as knowledge or brands are increasingly important to companies. Such assets are essentially needed to develop new innovative products and to introduce them to the market. Philipp Sandner is one of the first researchers to approach the valuation of both technology- and market-based intangibles simultaneously by relying on portfolios of intellectual property (IP) derived from patents and trademarks.

A practical resource for valuing patents that is accessible to the complete spectrum of decision makers in the patent process In today's economy, patents tend to be the most important of the intellectual property (IP) assets. It is often the ability to create, manage, defend, and extract value from patents that can distinguish competitive success and significant wealth creation from competitive failure and economic waste. Patent Valuation enhances the utility and value of patents by providing IP managers, IP creators, attorneys, and government officials with a useable resource that allows them to use actual or implied valuations when making patent-related decisions. Involves a combination of techniques for describing patent valuation Includes descriptions of various topics, illustrative cases, step-by-step valuation techniques, user-friendly procedures and checklists, and examples Serves as a useable resource that allows IP managers to use actual or implied valuations when making patent-related decisions One of the most fundamental premises of the book is that these valuation skills can be made accessible to each of the various decision makers in the patent process. Patent Valuation involves narrative descriptions of the various topics, illustrative cases, step-by-step valuation techniques, user-friendly procedures and checklists, and an abundance of examples to demonstrate the more complex concepts.

Research on patent valuation has become increasingly important in academic and policy circles in the last few decades. In part, this is the outcome of the wide consensus that innovation is a crucial ingredient for growth at various levels. On the other hand, there has also been an overcoming of growth models unilaterally focused on technological-oriented approaches. This book presents novel and original research on patent value determinants, which are intrinsic or extrinsic to the innovator's business model. Grid Thoma has undertaken a long study on the strategic factors affecting patent valuation, bringing extensive quantitative evidences across various geographical and institutional contexts. Beforehand, the valuation of the patent real options is appraised when the innovator can postpone the additional investment required for the patent's successful exploitation. Then, he analyses what other complementary IP strategies are combined with patenting that in turn directly affect the value of patents. Moreover, the book scrutinizes the so-called 'strategic patenting' hypothesis according to which innovators obtain patents for other reasons beyond gaining IP protection. A second order of strategic factors affecting the value of patents resides at the outset of the invention process. These are constituted by knowledge spillovers, which are typically mediated by the local geographical context where the invention process takes place. The analysis shows that the contribution of knowledge spillovers from business and nonbusiness organizations to the value of the patented R&D constitutes a relevant aspect for an innovator's decision making. This thoughtful, cutting-edge research book is vital reading for researchers, academics, and policy decision makers in the area of in market

valuation, management of technology, innovation management, and economic geography.

"In this book, we attempt to cover some frequently asked questions on intellectual property and intangible assets and to engage in brief discussions on the subject of identifying value. We identify many of the main types of intellectual property and intangible assets. We also look at the primary, traditional, and not-so-traditional methods of valuing these assets and include case studies and various situations in which the valuation of these assets is required." -- from the Introduction, p. 3.

**Patent Value and Citations**

**On the Valuation of Patents as Real Options**

**Benchmarking U.S. University Patent Value and Commercialization Efforts**

**The Valuation of Digital Intangibles**

**Intangible Assets**

**Economic and Management Perspectives on Intellectual Property Rights**

Patent institutions and governments believe patents are fundamental to the growth of domestic innovation. China above all else has chosen a strategic patent regime as a talisman for economic change; a national solution to moving away from reliance on manufacturing and low-cost consumer products to high-yield technology. As such, the CCP has over the past 5 years instituted nationwide policies dedicated to expanding its patent office (the Sino Intellectual Property Office, or "SIPO"), and enacting a robust reward system for patent filers. This has resulted in a massive patent filing movement in China, characterized by expedited rubber-stamping of new applications and culminating in the fastest growing patent filing numbers any patent office has ever experienced. However, the long-term effect of China's planned economic approach to patent filing may have unintended consequences. The current system awards filers for meeting the lowest filing standards. This could lead to a widespread misunderstanding and distrust of the Chinese patent system when patent holders realize their filings lack the same value of patents filed outside of China, or foreigners become frustrated by unreliable Chinese patent law. In a country long criticized for poor IP protection, future disillusionment with the national patent system may exacerbate the situation.

This book offers a primer on the valuation of digital intangibles, a trending class of immaterial assets. Startups like successful unicorns, as well as consolidated firms desperately working to re-engineer their business models, are now trying to go digital and to reap higher returns by exploiting new intangibles. This book is innovative in its design and concept since it tackles a frontier topic with an original methodology, combining academic rigor with practical insights. Digital intangibles range from digitized versions of traditional immaterial assets (brands, patents, know-how, etc.) to more trendy applications like big data, Internet of Things, interoperable databases, artificial intelligence, digital newspapers, social networks, blockchains, FinTech applications, etc. This book comprehensively addresses related valuation issues, and demonstrates how best practices can be applied to specific asset appraisals, making it of interest to researchers, students, and practitioners alike.

This invaluable book provides a comprehensive overview of twenty years of research on the economics of innovation and patent policies. Edited by Bruno van Pottelsberghe de la Potterie, the papers in this volume witness twenty years of advanced empirical research — triggered by intensive collaboration and inspired by his own professional experience at the OECD, METI and the European Patent Office. The Editor's publications in these fields have greatly contributed to better understand how innovation can be stimulated, how it can be measured, through which channels it contributes to growth, with a particular emphasis on the role of patent systems. In the introductory chapter, the Editor provides an overview of each subfield of investigation, by explaining the genesis of the research projects and adding some personal history. The book first displays major empirical findings on the effectiveness of science and technology policies in stimulating R&D, on how these policies affect the contribution of R&D to economic growth, and how to measure international R&D spillovers and what are their most effective channels. The policies that aim at stimulating innovation include R&D subsidies, public R&D, and R&D tax credits. The chapters that follow present foundational work on patent count methodologies aiming at improving innovation metrics, as well as creative contributions on patent valuation models. The book then presents pioneering contributions on the design of patent systems, including a thorough work on the role of fees, far-reaching analyses on quality, and critical contributions on the governance of patent systems in general and the European patent system in particular.

The series of papers in this publication were commissioned from renowned international economists from all regions. They review the existing empirical literature on six selected themes relating to the economics of intellectual property, identify the key research questions, point out research gaps and explore possible avenues for future research.

Theory, Empirics and Public Policy Implications

Intellectual Property Valuation

Valuation and Pricing

Patent Valuation

How the CCP's IP Talisman Dilutes Patent Value

Growth, R&D Spillovers and the Role of Patent Systems

A new edition of the trusted book on intellectual property Intellectual Property simplifies the process of attaching a dollar amount to intellectual property and intangible assets, be it for licensing, mergers and acquisitions, loan collateral, investment purposes, and determining infringement damages. Written by Russell L. Parr, an expert in the valuation/intellectual property field, this book comprehensively addresses IP Valuation, the Exploitation Strategies of Licensing and Joint Ventures, and determination of Infringement Damages. The author explains commonly used strategies for determining the value of intellectual property, as well as methods used to set royalty rates based on investment rates of returns. This book examines the business economics of strategies involving intellectual property licensing and joint ventures, provides analytical models that can be used to determine reasonable royalty rates for licensing and for determining fair equity splits in joint venture arrangements. Key concepts in this book are brought to life by presenting real-world examples of exploitation strategies being used by major corporations. Provides practical tools for and examines the business economics for determining the value intellectual property in licensing and joint venture decisions Presents analytical models for determining reasonable royalty rates for licensing and for determining fair equity splits in joint venture arrangements Provides a detailed discussion about determining intellectual property infringement damages focusing on lost profits and reasonable royalties.

This incisive book examines the role of Intellectual Property (IP) as a complex adaptive system in innovation and the lifecycle of IP intensive assets. Discussing recent innovation trends, it places emphasis on how different forms of intellectual property law can facilitate these trends. Inventors and entrepreneurs are guided through the lifecycle of IP intensive assets that commercialise human creativity. Utilising a range of sector specific, interdisciplinary and actor-focused approaches, each contribution offers suggestions on how Europe ' s capacity to foster innovation-based sustainable economic growth can be enhanced on a global scale.

Based on expert interviews and a large-scale survey, Dominic de Vries provides one of the first in-depth empirical studies into how patents contribute to companies ' access to external financial sources. He identifies and analyses the actual extent and influence factors of financial patent utilization across company size clusters and patent-intensive industry sectors in Germany.

As patent data become more available in machine-readable form, an increasing number of researchers have begun to use measures based on patents and their citations as indicators of technological output and information flow. This paper explores the economic meaning of these citation-based patent measures using the financial market valuation of the firms that own the patents. Using a new and comprehensive dataset containing over 4800 U. S. Manufacturing firms and their patenting activity for the past 30 years, we explore the contributions of Ramp;D spending, patents, and citation-weighted patents to measures of Tobin's Q for the firms. We find that citation-weighted patent stocks are more highly correlated with market value than patent stocks themselves and that this fact is due mainly to the high valuation placed on firms that hold very highly cited patents.

Economic Impacts of Intellectual Property-Conditioned Government Incentives

A First Look

Practical Guide to Successful Intellectual Property Valuation and Transactions

Creative Destruction Or Strategic Disruption?

Improving Decision Making through Analysis

A Compendium of 20 Years of Research on Innovation Economics

**Prior work suggests that more valuable patents are cited more and this view has become standard in the empirical innovation literature. Using an NPE-derived dataset with patent-specific revenues we find that the relationship of citations to value in fact forms an inverted-U, with fewer citations at the high end of value than in the middle. Since the value of patents is concentrated in those at the high end, this is a challenge to both the empirical literature and the intuition behind it. We attempt to explain this relationship with a simple model of innovation, allowing for both productive and strategic patents. We find evidence of greater use of strategic patents where it would be most expected: among corporations, in fields of rapid development, in more recent patents and where divisional and continuation applications are employed. These findings have important implications for our basic understanding of growth, innovation, and intellectual property policy.**

This paper examines the stock market's valuation of a firm's innovative activity. We estimate the market's relative valuation of firms' tangible and intangible assets, focusing on knowledge capital in the form of accumulated "stocks" of R&D and patents. We tried to improve upon our estimates of the stock market's valuation of knowledge capital embodied in such "stocks" by bringing in measures of the appropriability environment facing a firm from the Yale Survey on Industrial Research and Development. The responses to Survey questions about the effectiveness of patents as a mechanism for protecting the returns from innovation turn out to be of some use: there is evidence of an interaction between industry level measures of the effectiveness of patents and the market's valuation of a firm's past R&D and patenting performance, as well as its current R&D moves. We find no evidence, however, that other appropriability mechanisms differ enough across industries to leave measurable traces in our data. The structure of the Yale Survey makes it possible to estimate the sampling error in the appropriability measures derived from it. This information was used by us in an errors-in-variables context, but with little success. In the absence of R&D variables, our estimates imply that a two standard deviation increase in our index of patent effectiveness would raise the value of a patent held by our average firm from \$0.4 million to \$1.0 million. When R&D variables are introduced into the equations, the patents variables become insignificant - R&D expenditures are a better measure of input to the innovative function of firms than patents are of its output - but we estimate that the same experiment would induce changes in  $q$  of between 10 and 27 percent for the average firm, approximately doubling the market's valuation of this kind of capital

BVR's Guide to Intellectual Property Valuation

The Valuation of Intangible Assets

Myths, Realities and Opportunities

Analysis, Estimates, and Applications