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# economic approaches to Intellectual Property

Nicola Searle  
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# ECONOMIC APPROACHES TO INTELLECTUAL PROPERTY

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## PREFACE

Intellectual property (IP) is big business. It permeates all aspects of modern commercial practice. It is transforming, and being transformed by, the digital age. The way in which companies use it, enforce it, and locate it have become hotly debated topics.

Traditionally, IP rights have been interpreted mainly from a legal standpoint; after all, they are legal constructs. However, the growth of IP prompted by technological and social change and recognition of its importance for innovation require this approach to be reconsidered. Since economics can provide insights into the evolving role of IP and question traditional approaches, it is time IP debates and practice shifted to economics.

In the past, economists have largely developed analysis for other economists. This book adopts an interdisciplinary perspective and seeks to bridge the gap between policy, economics, law and IP. It aims to provide the reader with the foundations to critically analyse economics arguments, especially in terms of the impact and value IP delivers.

This book details key economic approaches to IP, breaks down the economics of each IP right and details the theory and practice of determining the value contribution IP makes to today's markets. From the fascinating role of status in counterfeiting, to the strategic use of intellectual assets in company valuation, the reader will derive a comprehensive understanding of the economics of IP.

This book is intended to be useful for lawyers, decision makers, and scholars, not only to inform and educate but also to be used as a point of reference and a set of inter-related arguments. The book covers a wide array of topics in IP and economics. Where readers are interested in learning more, further reading is suggested in the footnotes. Every discipline has its own lexicon and, given the interdisciplinary nature of this work, readers may find familiar terms used in unfamiliar ways. We ask that the reader keep an open mind to the language of economics.

We wrote this book because we saw that economics has something valuable to offer IP, but that important dimensions were being lost in translation between economists, lawyers, companies, and policy decision makers. We want readers to be able to tie together their understanding of IP and view it through the lens of economics by examining what creates value and why. It is our hope that this approach will

provoke further debate on IP and its role in innovation, and allow firms to better understand the context in which they operate and the (often hidden) sources of the true value they own and control.

The co-authors of this book each bring a key piece of economics and IP to the reader. Dr Nicola Searle applies her academic, government, and investment banking background to explain the basics of economics and then take the reader through key economic understandings of IP theory and policy. Martin Brassell combines his knowledge of business support, corporate finance, IP identification, and valuation to detail the ways in which IP value can be realized now, and to anticipate the development of future IP markets. Collectively, we develop an all-round approach to economics and IP.

## Overview

Economics is a fascinating combination of theory and application. As a social science, economics borrows from and contributes to other disciplines. However, the meeting of economics and other disciplines is not always congenial.

The crux of economics can be found in the analysis of choice. Markets operate under constraints, as resources are limited. Economics examines how these choices are made, what the outcomes are, and how to influence them.

In the past few decades, the political focus has been on innovation-enabled economic growth. Economics fundamentally views IP as an incentive to innovate. Under this view, IP is a policy that grants innovators rights over their innovation for the benefit of the greater good, namely long-term economic benefit.

However, as this book details, things are not that simple. Competing viewpoints suggest that the economic standpoint may neglect the intrinsic right of innovators to own the fruits of their labour. There is also a growing movement questioning both the process of innovation and the need for rights over knowledge. As markets and IP develop, so does the economic understanding of IP and innovation.

Further complicating the picture is economic dependency on good data. Robust economic analysis, particularly for use in the development of evidence-based policy, is hard to come by. IP's intangible nature, the unregistered status of a number of rights and the proprietary nature of some data mean that good empirical analysis of IP is rare. However, as IP offices publish more data and their abilities to collect data in digital environments improves, so too will empirical analysis.

The heterogeneity of economic analysis of the various IP rights also highlights some of the challenges a one-size-fits-all approach to IP rightly faces. While patents, copyrights, and design rights suggest relatively straightforward incentives to innovate,

the picture is murkier when trade marks, trade secrets, and *sui generis* rights are considered. These differences highlight the strengths and weaknesses in understanding IP's economics in general, and the process of innovation in particular.

The chapter on competition addresses the economics of competition and its application to IP. The depth and detail of this chapter is a response to readers' feedback that competition is an area of interest. *Prima facie*, IP introduces a monopoly and therefore is bad for markets. However, this chapter details how a combination of market structure, the behaviour of firms and the performance of the market determine where IP, or any anti-competitive behaviour, is problematic.

Combining practice and theory, the last five chapters of the book move to a consideration of how IP creates value. Lifting the lid on the otherwise hidden world of IP valuation, these chapters explain how registered and unregistered rights deliver value for business. Taking the reader through the case for associating value with IP, the ways in which value gets created and key valuation practices, the section concludes with the practical accounting aspects that have led to IP value often remaining well hidden.

## Guide to the Book

The book is divided into three main Parts. Each of the three Parts begins with a summary.

The first Part, Chapters 1–2, begins with an overview of economics and the economics of IP. Readers comfortable with their understanding may not need to pause for long on the first chapter, or may prefer to refer back to it as needed for explanations of key principles in economics. The second chapter details the innovation focus of economics and anticipates key themes of economic analysis of IP.

The second Part, Chapters 3–7, first delves into the particulars of each IP right. It starts with the more mainstream rights of patents and copyrights and then addresses trade marks, trade secrets, and a number of *sui generis* rights. It then spells out economics of competition and the interaction of competition and IP. These chapters are written independently of each other to accommodate readers' interest in specific topics.

The third Part, Chapters 8–12, brings these theoretical aspects together, giving detailed consideration to when, why, and how IP delivers value. It begins with discussions on the role IP has in generating value at a macro- and micro-economic level, then describes the aspects that determine the value of IP and the contexts in which it most often delivers value. It then details key methodologies and techniques for IP valuation before concluding with the reporting and accounting of IP and intangibles.

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## PART I

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# INTRODUCTION TO THE BOOK

These first two chapters introduce principles of economics and their application to intellectual property (IP). The first chapter examines markets and principles of economics, providing a general introduction for those less familiar with the concepts and terminology involved. The second chapter delves into economic frameworks for IP. **PI.01**

### Summary

Economics is the study of choice. Given that resources are finite, who gets what, when, where, and how shapes economic performance and the economic approach to IP. Economics analysis provides insights into how markets, firms, and individuals choose their consumption and production. **PI.02**

### Markets and Other Considerations

In a world where resources are limited, individuals and organizations must make choices as how to allocate budgets, time, production, etc. Economics examines how these choices are made and how incentives can influence these choices. Key concepts are supply and demand; the preferences of consumers and producers determine the price and quantity of goods in the market. **PI.03**

The structure of markets is key to the performance of the market and the need for government intervention. These structures range from markets with high levels of competition to monopolies. Where markets are dysfunctional (market failures), government and policy may be able to nudge decisions towards a better outcome. IP is one such nudge. Government policy, grants, incentives, disincentives, and regulation may affect choices, costs, and benefits. **PI.04**

- PI.05** A common goal for societies is economic growth. Most government economic policy emphasizes production and money as measures of economic success, although alternate approaches focus on utility (happiness) and environmental resources. Innovation is an important way to increase economic growth without having to use increased resources. Economists combine theory and statistics to create the systematic approach to economic analysis. Innovation and innovation policies are at the heart of the economic approach to IP.
- PI.06** Evidence-based policy, which seeks to develop policy based on objective evidence, relies heavily on the empirical side of economics. The development of evidenced-based IP policy is challenged by the dearth of good IP data. Registered intellectual property rights (IP rights) benefit from the relative richness of data available. However, unregistered IP rights are particularly difficult to study empirically. To account for this, empirical analysis of IP often includes techniques such as surveys.

### **Innovation and the Social Contract Theory**

- PI.07** The classic economic interpretation of IP is as an incentive to innovate. IP introduces a property right over intangible assets. It provides innovators with a means to realize the returns of their investment and supports this process.
- PI.08** One way to consider IP is the social contract theory. This is an agreement between innovators and society. Innovators receive a temporary monopoly (IP rights) for their innovations; the protected innovation then becomes part of the public domain. Under these monopoly conditions, society initially pays higher prices for lower quantities, but eventually receives the long-term benefit of the innovation. The social contract is a balancing act between the interests of innovators, society, and future innovators. It accepts higher costs for society in the short term, in exchange for long-term continued innovation.
- PI.09** This incentives-to-innovate path of economics is in contrast to other approaches. A second, common interpretation of IP is to consider it an intrinsic right. This approach, sometimes called the labour desert theory, ties an individual's ownership of their labour to the fruits of their labour; innovative works are intrinsically the property of the innovator. A third way questions the value of property rights over innovation. Instead, a variety of alternatives range from the outright rejection of property rights to open innovation approaches. This third nexus continues to evolve.
- PI.10** Innovation, which may be defined by economists as an applied invention, can be viewed in different ways. One popular model is creative destruction, which posits that innovation is a series of disruptions of the status quo. Technology is disruptive to existing business models, markets, and firms. Innovations are classified as either process or product innovations. A process innovation typically reduces the costs of production, whereas a product innovation introduces a new product.



## Conclusion

Economics contributes much to IP; however its contributions are targeted towards an innovation-focused approach. This focus is not always consistent with alternative approaches. The empirical analysis, however, provides an objective means to evaluate economical hypotheses. As both the understanding of innovation and the available evidence develop, economics will further contribute to the refinement and optimization of IP.

**PI.11**