B8254
The Digital Economy: Regulatory Conflicts and Opportunities
Course Syllabus
Prof Eli Noam
Spring 2017

I. Overview
This half-course covers a subject that is crucial for management success in the future: how government policy and regulation affect the online-based industry and its users, and how the industry in turn can affect government action. The skill to navigate this interaction is critical to management in the emerging information economy, as well as to forward-looking policy making. The course takes an innovative approach, bringing together several strands of the MBA program, together with public policy and technology management, and applies them to the media and information sector. It aims to give students the MBA tools to run or use digital and online businesses in an environment full of government initiatives and restrictions. The course is valuable for future entrepreneurs, investors, creators, marketers, advertisers, users, and public officials.
Lecture Topics and Schedule

January 25th, 2017

1. Who owns the world’s media?

February 1st, 2017

2. Is digital regulation different from analog regulation?

February 8th, 2017

3. How should we deal with privacy and security threats?

February 15th, 2017

4. How do you protect and monetize your intellectual property?

February 22nd, 2017

5. How do we handle the challenges of financial transactions on line?

March 1st, 2017

6. How do governments approach the problems of the digital economy and what are the implications for digital managers?

II. People

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Eli Noam is Professor of Economics and Finance at the Columbia Business School and its Garrett Professor of Public Policy and Business Responsibility. He served for three years as a Commissioner for Public Services of New York State, and was appointed by the White House to the President’s IT Advisory Committee. He is the Director of the Columbia Institute for Tele-Information, a research center focusing on management and policy issues in communications, internet, and media. He has also taught at Columbia Law School, Princeton University’s Economics Department and Woodrow Wilson School, the Swiss universities of St. Gallen and Fribourg, and the University of Pennsylvania, and is active in the development of electronic distance education. Noam has published 30 books and over 300 articles in economics journals, law reviews, and interdisciplinary journals, and served as a regular columnist for the Financial Times online edition. His recent books and projects include: Who Owns the World’s Media? (Oxford) Media Ownership and Concentration in America (Oxford); Peer-to-Peer Video (Springer); Media Management (2-volumes, forthcoming); and the project: A National Initiative for Next Generation Video.
Noam has been a member of advisory boards for the Federal government’s telecommunications network, and of the IRS computer system, of the National Computer Systems Laboratory, the National Commission on the Status of Women in Computing, the Governor’s Task Force on New Media, and of the Intek Corporation. His academic, advisory, and non-profit board and trustee memberships include the Nexus Mundi Foundation (Chairman), Oxford Internet Institute, Jones International University (the first accredited online university), the Electronic Privacy Information Center, the Minority Media Council, and several committees of the National Research Council. He served on advisory boards for the governments of Ireland and Sweden, and is a member of the Council on Foreign Relations. He is a commercially rated pilot, served in the Israel Air Force in the 1967 and 1973 wars, and is currently a search and rescue pilot with the Civil Air Patrol (1st Lt.). He is married to Nadine Strossen, a law professor and national president of the American Civil Liberties Union for 18 years. He received the degrees of BA, MA, Ph.D (Economics) and JD from Harvard University, and honorary doctorates from the University of Munich (2006) and the University of Marseilles/Aix-en-Provence (2008).

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III. Course Websites

1. The primary administrative access point to the course is the B-School’s Canvas site. Go to canvas.gsb.columbia.edu and select the course. On that site you can find the Required Readings and the non-required Background Readings.

IV. Lectures

Lectures are presented in class and are available online soon thereafter in Powerpoint

V. Cases

The cases are required reading in advance of classes 2-6, with class case discussion tracking the lectures.
<table>
<thead>
<tr>
<th>Lecture</th>
<th>Case Discussion</th>
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</thead>
<tbody>
<tr>
<td>Who owns the world’s media?</td>
<td>Rupert Murdoch</td>
</tr>
<tr>
<td>Is digital regulation different from analog regulation?</td>
<td>Comcast vs. Google</td>
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<tr>
<td>How should we deal with privacy and security threats?</td>
<td>Amazon.com</td>
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<tr>
<td>How do you protect and monetize your intellectual property?</td>
<td>GE manages its Intellectual Assets</td>
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<td>How do we handle the challenges of financial transactions on-line?</td>
<td>Bitcoin and M-Pesa</td>
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<tr>
<td>How do governments approach the problems of the digital economy and what are the implications for digital managers?</td>
<td>Vivendi’s Canal Plus</td>
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**VI. Course Readings**

- Readings are located on Canvas.
- Supplementary Readings are provided on Canvas for the use of students who want to study topics in greater detail.

**VII. Exams**

- No final exam, but Final Paper Project

**VIII. Final Paper Project**

- The paper’s theme should be either:
  1. Plan for a startup online company. What are the regulatory constraints on it, how does one comply with them, and what are the opportunities to shape them?
  2. Plan for a retailer’s use of a Blockchain payment system such as Bitcoin. What are the regulatory issues and obstacles, and how does one comply with them?

Expected length: 10 pages or more.
IX. Grading Composition
Grades will be determined as follows:

- Paper 60%
- Class Participation 40%

X. Course Culture
As is the case for all courses at the Columbia Business School, the School’s stated principles of its educational culture are the following:

**Attendance:** To be in the class, you must be present, on time, and arrive prepared. Given that the discussions are central to the learning, missing any of the sessions without an excuse will lower your grade

**Participation:** We expect you to contribute to the learning of your classmates, both through class discussion and feedback during the breakout sessions. Expect cold calling. Good participation is defined as:
Actively participate in class discussions, pulling in insights from readings.
When guests are present, be respectful and prepared with thoughtful questions.
Device usage (phones, laptops) will take away from your participation grade.

XI. Relation to the Core and Prerequisites
There are no prerequisites to the course. The course is multi-disciplinary in approach and exposition, deriving materials and concepts and refreshing them from core courses including Marketing, Strategy Formulation, Global Economic Environment, Managerial Economics, and People Leadership.
XII. Outline of Classes

1. Who owns the world's media? Digital M&A: drivers, concentration trends, government responses, and the impact on expansion strategies

   I. Introduction: The Information Society and Digital Economy
   II. The Economics of the Digital Economy
   III. Policy Challenges of the Digital Economy
   IV. Governmental Approaches to Market Power in the Media and Online Sector
       1. US and EU Regulations and Antitrust Actions
          A. Laws, regulations, and enforcement
          B. Major digital cases—US, EU, Mexico
       2. Case Discussion: Rupert Murdoch in the Crossfire
   V. Trends
       1. Drivers of M&As and of spin-offs
       2. Opposition to media mergers
       3. Business track record of digital M&A deals
       4. Trends of media concentration in different countries and industries.
       5. Does the transition to Internet-based digital media reduce concentration?
       6. Who are the major media owners? Who are the institutional owners?
       7. Problem Areas in Online Media Concentration: Google, BRICS, China
       8. Regulatory approaches and their track record
       9. Case Discussion: Rupert Murdoch in the crossfire

   VI. Conclusions, Outlook, and Management Takeaways
       1. Impacts on M&A Strategy
          A. Company Strategies to Deal with Governmental Ownership Restrictions
       2. Case Discussion Summary: Rupert Murdoch in the Crossfire
       3. The emerging digital market structure
2. Is Digital Regulation Different From Analog Regulation?

   A. The Process of Digital Regulation and how to deal with it.

      I. The Regulatory Process
         1. Managing the Self-Regulation Process
         2. Strategic Use of the Regulatory Process

      II. Case Discussion: How Much Should Comcast Invest in the Regulatory Process?

      III. The Legal and Public Affairs Functions in Digital Firms
           1. Organizing the Public Affairs Function

      IV. Case Discussion: Comcast vs. Google

      V. The Litigation Process and Optimal Compliance

      VI. Influencing Government and the Public
           1. Organizing the Lobbying Function and Strategy
           2. Public Relations Management

   B. Substantive policies: Speech and Net Neutrality in the digital environment
      and the business implications.

      VII. The Net Neutrality debate.
           1. The issue, the history, the parties
              A. Prioritization/ network management
              B. Content neutrality
              C. Usage caps
           2. How the regulators proceeded
              A. USA
              B. Other countries
3. How the battles are fought. Non-market competition
4. The next round of net neutrality battles
   A. In Congress and the FCC
   B. In the courts
   C. Competitive responses
5. Implications for networks and for applications
6. Non-discrimination, its definition, and its enforcement
7. The emerging information activism

VIII. The Regulation of Digital Marketing and Advertising
IX. Content Restrictions
X. Conclusions, Outlook, and Management Takeaways
   1. Case Discussion Summary: Comcast vs. Google: the Net Neutrality Battles
   2. How is Digital Regulation different From Analog Regulation?
   3. Management Implications and Strategies of Dealing with the New Regulation

3. **How should we deal with privacy and security threats?**
   I. Introduction
   II. Privacy and Tradeoffs
   III. Security
   IV. Technologies of Privacy Intrusion
      1. Privacy Threats
      2. Applications
         A. Data Matching and Profiling
         B. Location Tracking and more
   V. Security Threats
      1. Protection strategies
      2. Governmental rules and actions on security
   VI. Economic Analysis of the Cost of Breaches
      1. Case Discussion: Optimizing Privacy and Security Investments – Amazon.com
   VII. Industry Self-regulation
   VIII. Privacy Remedies by Regulation and Legislation
      1. Government Regulation
A. Ad hoc vs. Specialized Agency Approaches
B. Right to be Forgotten
C. Other Privacy Principles
2. US vs. Europe, and Trade Barriers

IX. Private Remedies
   1. Company Protective Actions to Enhance Security
      A. Optimizing Protection Investment – Amazon.com

X. Technological Protection Tools
   A. Firewalls, Filters, Encryption
   B. Applications to E-commerce
   C. Applications to Electronic Cash
   D. Applications to Digital Signatures

XI. Markets in Privacy and Security

XII. Conclusions, Outlook, and Management Takeaways
   A. Case Discussion: Optimizing Privacy and Security Policies – Amazon.com
   B. Company tradeoffs, internal procedures, and optimization

4. **How to protect and monetize intellectual property?** Copyrights, patents, and intellectual assets – a system under fire

I. Intellectual Assets
   1. The Rationale for Government Creation and Protection
   2. How Companies Organize their IA Management
   3. Case Discussion: GE and its Intellectual Assets

II. Copyrights
   1. Copyright Overview and the Digital Challenge
   2. How to Get Domestic and International Copyright Protections
   3. How to deal with Infringement
   4. Case Discussion: GE Copyright Infringements
   5. The Licensing of IP
      A. How to Value a License
      B. Strategic Licensing

III. Patents
   1. The Patent System: Overview and Digital Frontiers
2. Getting a Patent and Dealing with the Governmental Patent Office
4. Case Discussion: GE Patent Infringements

IV. How to Protect Against Piracy and Infringement
   1. Seeking Governmental Protection
   2. Private Litigation
   3. Counter-Attacks
   4. Technology Fixes
   5. Business Responses

V. The Changing Environment
   1. The Open Source Movement
   2. Reform Proposals

VI. Conclusion and Management Takeaways
   1. Case Discussion: GE—Conclusion

5. How do we handle the challenges of financial transactions online?

I. The nature of digital financial services and digital money
   1. Technology options
   2. The new players and their products
   3. Country initiatives
   4. The old players, the old cash
   5. Applications of electronic currencies
   6. Risk and liability
   7. Consumer Protection
   8. Case Discussion: The Bitcoin story

II. Global DFS: differences between developed and developing world
1. Policy Goals: financial inclusion, economic growth

2. Case Discussion: The M-Pesa Story

VII. The Regulators
   1. Central banks, telecommunications regulators, competition authorities
   2. Policy Issues: disruptive nature of DFS on banking system
   3. Policy Issues: money laundering and terrorist financing
   4. The track record of regulation

V. Conclusions and Management Takeaways
   1. MBA tool: risk mitigation strategies in DFS
   2. Case Conclusion: Lessons from Bitcoin and M-Pesa
   3. Outlook of electronic finance

6. How do governments approach the problems of the digital economy and what are the implications for digital managers?

   I. The Impacts of the Internet
      1. Jobs in Advanced Countries

   II. Case Discussion: Vivendi: Can Canal Plus Overcome the Hollywood Advantage through Governmental Support Programs?

   III. Policy Goal #1: Industrial and Technology Upgrade
      1. Tools
      2. Analysis of Success Stories and Failures

   IV. Policy Goal #2: Infrastructure Upgrade
      1. Broadband Policies Around the World

   V. Policy Goal #3: Wireless and Spectrum

   VI. Policy Goal #4: Support of National Culture Industries
      1. Incentives and Subsidies
      2. Case Discussion: Can Canal Plus Overcome the Hollywood Advantage through Governmental Support Programs?
VII. Conclusions, Outlook, and Management Takeaways

1. Case Discussion: Vivendi: Has Government Action Worked?
2. Support Programs Around the World and their Track Record
3. Is the Policy System Able to Keep Up With Accelerating Change? Implications for Digital Firms
4. How can Firms Operate Under Regulation, and How Can They Use It?
5. Conclusions on Government-Business Interaction in the Digital Economy