MIT Sloan Educational Services
Massachusetts Institute of Technology
MIT Sloan School of Management
Academic Year 2012-2013

Thesis Handbook

2012 - 2013

This Handbook is available online, in the Documents section of the Stellar Course Management System (http://stellar.mit.edu/) under 15.THG. Relevant forms may be downloaded there as well.

Thesis Schedule – Important Dates

DATES	Action Item
September 4, Tuesday	Registration for thesis units (typically 3 units; amount varies by program)
September to November	Select topic and faculty advisor Develop a plan
November 21, Wednesday	**Submit Thesis Proposal**
November to April	Research, analysis, and writing
January (IAP)	Add up to 12 units of thesis (optional) if you plan to work on your thesis over IAP. Those completing G-Lab may not add thesis units over IAP. 12 units is the total maximum number of units allowed over IAP.
February 4, Monday	Registration for balance of thesis units (typically 21 units; amount varies by program). Application for Advanced Degree, including Thesis Title (to be completed online at http://student.mit.edu/cgi-docs/student.html)
February 2c,Tuesday	**Submit Progress Report**
April 5, Friday	Last day to submit a thesis title. Thesis title must be updated online (http://student.mit.edu/cgi-docs/student/html) exactly as it will appear on the final version. Submitting your title after this date is subject to a late fee of $85.
April 5, Friday	Submit complete draft to thesis advisor
April 25, Thursday	Submit final version to thesis advisor for evaluation and approval
April 25, Thursday	Last day to add/drop thesis units
May 10, Friday	**Submit original copies of final, approved version to SES in E52-101**

I. Introduction

This guide is meant as a "road map" for Sloan students who are writing a thesis for any of our master's degree programs (MBA, LGO, MFIN, MSMS and SF). It explains the thesis process in enough detail so that you can get started and take advantage of all available resources.

The guide will focus on developing a thesis topic and finding a faculty advisor. These are the earliest and most important steps in the process. At MIT Sloan, faculty advisors are not assigned. It is entirely up to you to develop a topic and find an advisor.

Although there is no one style, approach, or methodology to the actual presentation of a thesis, the guide does present the most popular genres for thesis in Section III, "Thesis Options". However, the final vision of the thesis should be your own and your imagination is the limit.

We would appreciate your feedback (both positive and negative) on the guide in general and/or any section in particular. We hope that the thesis process will open many doors and enable you to enjoy the satisfaction of in-depth, goal–oriented research in a business-related area.

II. Why Write a Thesis?

A Thesis…

Provides an opportunity to explore a topic in depth.

- The thesis serves as a vehicle for you to focus on a topic of your choice, to integrate what you have learned in courses at MIT Sloan, and to apply insights with a greater degree of detail and depth than coursework.

Encourages a rigorous, logical, systematic, and scholarly approach to problem-solving.

- The thesis utilizes research skills (e.g., interviewing techniques, survey design, literature review, etc.), managerial skills (planning and executing a project with a deadline), and analytic skills practiced at MIT Sloan through coursework and faculty interaction. The thesis encourages an independent, individually-oriented approach to problem-solving useful skills to develop for work situations with changing environments or those that lack structure.

Fulfills a requirement for Master of Science (S.M.)

- This is a requirement for all Master of Science degrees at the Massachusetts Institute of Technology, including the S.M. in Management (degree option for Master's Program, LGO, Sloan Fellows and MFIN). This requirement for a top management school is unique to MIT Sloan, differentiating our students from those at other universities.

Additional Benefits

Career Development

- You can develop job-oriented skills, learn more about a particular field, company or industry and may even find useful job contacts via research, interviews, or surveys. A number of MIT Sloan graduates have been offered exciting career opportunities based in part on the content and quality of their theses.

Personal fulfillment

- A thesis is best when it tackles a topic of great interest to the writer. Find something that inspires you. For the mathematically-inclined students, you gain an enjoyable excuse for tinkering with a model. For outgoing students, research allows you contact with a variety of interesting professionals. Analysis and writing provide an exciting academic dialogue among faculty collaborators, fellow students, and professionals in the business world.

Real World Productivity

- Sponsored students (such as those in the LGO or Sloan Fellows Programs) have often used their theses to make a meaningful contribution to their organizations while continuing their own education. They often have interacted with different aspects or components of their organizations than their regular careers allowed.

- Sometimes, theses written at MIT Sloan yield model methods or plans that are ultimately sold to a company. A start-up company grew to approximately 15 employees in the first year after graduation, thanks, in part, to thesis research. A high-tech company in the Boston area uses a computer model developed by an MIT Sloan thesis writer for its strategic product decisions. The ability to positively affect the very topic, field, or company that engaged you certainly exists.

III. Thesis Options

Approaches

Thesis writers at Sloan must make choices concerning form, approach, and type of collaboration for the thesis. It is not always clear what is the best way to proceed. Therefore, we have provided the following examples of methodologies and genres for theses. You may also get some ideas from the sample abstracts in Appendix E. However, you should not feel limited by the list. Feel free to combine multiple approaches (or even invent your own) to best serve your particular topic.

Business Plan: A business plan or feasibility study can include an industry analysis, a market assessment, and plans for product development, marketing, financing, and staffing.

Micronotes, LLC – Business Plan (Kinkead, 2008) determines if Micronotes, a startup company based on an electronic bill-pay service that enables customers to prepay and discount their bills, is a viable business proposition.

Developing a Private Equity Business in China (Gui, 2007) suggests three key investment strategies for creating a Chinese private equity business; a business that is a good complement to the public equity market and the debt market. As an art, rather than a science, there is no universal formula for doing this business.

InVivo Therapeutics Corporation (Reynolds, 2006) presents the first business plan to commercialize this innovative treatment option. Key components of the plan are: Introduction to InVivo Therapeutics, InVivo's business model, critical strategic analysis, functional strategies, financial analysis, and an integrative strategic framework.

Case Study: A case study uses a specific example to illuminate a theoretical approach, a general trend, or a variety of managerial problems

Activist Hedge Funds (Brecailo, 2008) discusses the attributes of activist hedge funds and how they differ from corporate raiders and private equity firms. The case study then maps the activist's most common mechanisms for accomplishing their goals

Challenges Faced by a Global Team: The Case of the Tool Reuse Program at Intel (Communal, 2008) analyzes the challenges faced by the 6D Working Group (a global team) to influence and standardize local practices.

Overcoming the Challenges of Implementing Sustainability with an Eye on Innovation: Lessons from the Case Study of SAIN (Sustainable Agriculture Initiative Nestle) (Marmier, 2008) explores the complexity of adapting current operations in the direct sourcing of agricultural raw materials to more sustainable practices.

Comparative Analysis: A comparative analysis can clarify the behavior or distinguishing characteristics of some phenomenon. It can be applied in a variety of contexts (e.g., comparing models or methods or trends at the national or corporate level, etc.)

Innovation among Japanese Telecoms in the Internet Era: A Comparison Based on Analysis of Successful U.S. Companies (Takei, 2008) compares the successfully implemented innovations of IBM, GE, 3M, and Procter & Gamble versus the need for innovation in NTT, Japan's leading Telecom Company in order to create a competitive breakthrough service.

Early stage Innovation in Large Companies: Look for Opportunities, Not Ideas (Bardon, 2008) is a comparative analysis of the interactions between business opportunities and inventions in four different organizations: The Langer Lab at MIT, The MIT Innovation Ecosystem and LargeCo (name disguised).

Improving Producibility in Aerospace Engine Manufacturing: Process Automation vs. Process Reengineering (Hoopes, 2008) discusses two methods of process improvement, process automation, and process reengineering. It focuses on manufacturing process improvement as a solution to producibility issues.

Historical Study: An historical study describes and/or analyzes the history of a trend, industry, organization, etc.

Is There a Future? An Analysis of the Music Industry (Kejner, 2007) aims to introduce readers to the history of the so-called "music industry," analyze its growth and expansion throughout the 20th century, its crisis in the late 1990s as new technologies changed the playing field, and its struggle for survival in the new century.

The Human Element – The Impact of Mergers and Acquisitions on Organization and People (Faber, 2007) examines the difficulties of integration of one entity into another. The extremely high failure rate of more than 50 percent for mergers and acquisitions is a result of the negligence of a formal cultural and human due-diligence process.

The Transformation of the Japanese Commercial Code and its Impact on the Japanese Economy (Yoshida, 2007) discusses the history of fundamental Japanese laws, the steps and players in the legislative process, and presents details about the introduction of the share exchange system, which stimulated many more mergers and acquisitions in Japan.

Hypothesis Testing/Theory Development: This approach typically involves developing and/or testing a hypothesis with a set of data.

Leading for Learning: Behavioral, Educational, and Methodological Perspectives on Multicultural Team Learning Processes (Kanehira, 2008) identify three team learning strategies: Inoculation, time out, and structure it away. The study involves the experimental setting of a 10-day intensive leadership workshop and applies wearable sensors that capture nonlinguistic social signals and visualize group interaction patterns.

Achieving Six Sigma Printed Circuit Board Yields by Improving Incoming Component Quality and Using a PCBA Prioritization Algorithm (Davis, 2008) develops a hypothesis using the Six Sigma DMAIC method and the TOPSIS algorithm to improve PCBA yields by optimally prioritizing manufacturing resources on the most important PCBAs first.

Investigating Late Stage Biopharmaceutical Product Loss Using Novel Analytical and Process Technology (Hunnicutt, 2008) designs and completes an experiment to jointly examine changes to manufacturing processes using novel filtration applications intended to reduce or remove protein particles from solution and analytical tools for improved characterization.

Industry/Competitive Analysis: An industry/competitive analysis can include an examination of industry structure, economics, market trends, and the positions of companies within the industry. Analyses can also focus on aspects of an industry, such as research and development, regulation, and labor.

Achieving Business and Operational Excellence in the Pharmaceutical Industry (Coffey, 2008) provides a deep analysis of the current state of the pharmaceutical industry and the operational inefficiencies inherent in regulated drug production. As a result of this analysis, a prioritized list of improvement ideas was generated and incorporated into a future vision.

Valuing the Premium in Chinese Stock Markets Using Exchange Options (Curley, 2008) examines the stock prices of Chinese companies dual-listed in the A and H share markets between January 2006 and March 2008. The current prices of dual-listed securities in Shanghai reflect both a fundamental value for the security and the expected value of arbitrage profits available by trading in Hong Kong.

Credit Derivatives in Brazil (Ruther, 2007) investigates why a credit derivative market has not developed in one of the largest economies in the world. It is found that the Central Bank of Brazil imposed restrictions to some market participants in the credit derivatives market and allowed only two products to be traded: CDs and total return swaps.

Marketing Study: A marketing study may involve a complete marketing plan, or it may focus on a particular aspect, such as product characteristics.

Targeting Online Advertising: Persuasion in an Era of Massless Communication (Baird, 2008) reviews past an current practices in targeted advertising, understands consumer motivations and attitudes about privacy and ubiquity of ads, and projects future trends and directions for designing and targeting personalized advertising content.

Improving Customer Experience through Advocacy and Morphing: A Web Application for Suruga Bank (Tokoro, 2008) explores two ideas to improve customer experience through a website – one is the "Customer Advocacy" and the other is the "Morphing Website". This research is a useful reference for companies who need effective web communication with customers.

Customer Research, Customer-Driven Design, and Business Strategy in Massively Multiplayer Online Games (Andrivet, 2007) gains a fine understanding of customer needs and the tools necessary to organize communication with, and among, customers. MMOGs combine aspects of particularly tough online community management, online customer service, and game design/content creation.

Method Design: This approach involves designing an analytic framework, a procedure or a process to address a problem.

Improving Leadership Capabilities for Young Employees at Kirin (Onuki, 2008) researches the concept of "leadership" using the MIT Leadership Model and examines the leader development system at General Electric. It is found that using Kirin's subsidiaries as a leadership platform for young employees at Kirin is one way to improve their leadership abilities.

In Vivo Research Scheduling and Coordination in the Pharmaceutical Industry (Hill, 2008) provides the framework for developing a centralized scheduling system. Based on research workflows, the proposed tool coordinates input from scientists and uses this information to schedule required resources.

A Study of Organizational Alignment at a Boston Area Hospital and Its Effects on Patient Throughput in the Peri-Operatives Area (Campbell, 2007) shows that applying a congruence model in evaluating the alignment of objectives, resources, critical tasks, and vision is useful in identifying potential areas of disconnect in the system.

Model Design: This approach involves creating a mathematical model or computer program to analyze or address a problem.

Development of a Total Landed Cost and Risk Analysis Model for Global Strategic Sourcing (Feller, 2008) develops a dynamic model that allows multi-variable scenarios to be assessed simultaneously, thus increasing the overall analysis efficiency for PerkinElmer, Inc. (PKI).

Demand Forecasting for Aircraft Engine Aftermarket (Ho, 2008) focuses on exploring alternative and innovative approaches to providing more accurate demand forecasts based on limited information. Approaches include application of fundamental sampling theorems, random walk simulations based on Markov Chain simplification, and a software tool based on sensitive analysis.

0 + 0 = 1: The Appliance Model of Selling Software Bundled with Hardware (Hein, 2007) analyzes the economic drivers and barriers for the appliance model for both the consumer and enterprise software industry segments. The possible implementation paths for software companies transitioning to the appliance model are proposed and the virtual appliance model as a next step is discussed.

Policy Study: A policy study involves defining a problem, analyzing why it is a problem, searching for and discussing a range of alternative solutions and recommending or describing the implementation of a specific solution. Policy studies are often applied to problems in the public or government domain, although they may be applied to problems in the corporate world or to those problems facing a specific organization.

Alternative fuels: How can Aviation Cross the "Valley of Death" (Harrison, 2008) explores the barriers and risks associated with the technology adoption life cycle for alternative aviation fuels as viewed through the lenses of the technology developer, the early adopter, the early majority user, and the financial community.

Implementation of the New FDA Quality by Design Guidance in the Pharmaceutical Production (Tozer, 2008) provides a background of the QbD/PAT (quality by design/process analytical technology) initiative and benchmarks the progress other pharmaceutical companies have made. It concludes with an analysis of barriers of implementation and provides recommendations for future implementations.

License to Change: The First Ninety Days as Head of an Organization (Liot, 2008) considers what decisions must a new CEO make to build a strategy that achieves the goal(s) set by the governance of the company. What will those first 90 days at the top of the organization be like? What is his or her "License to Change"?

Strategy Study: A strategy study can involve a complete strategic plan for a firm, or it can focus on other aspects, such as strategic planning trends in a particular sector.

NTT DoCoMo's Competition Strategy (before and) after the Introduction of the Flat Rate (Yajima, 2008) analyzes NTT DoCoMo's strategy for dealing with the flat rate. NTT DoCoMo is trying to establish new business models within, as well as outside, the mobile telecommunications industry. In particular, the credit card business appears to hold considerable promise for the mobile telecom industry.

Developing a Global Strategy for a Brazilian Engineering Services Provider (Lima de Oliveira, 2008) uses the Delta Model framework to assess an engineering service provider's current and desired level of customer bonding and define a strategic plan towards a global operation.

Collective Innovation (Rivera and Slawsby, 2007) poses that an innovation strategy embracing the concepts of collective intelligence and openness may enable organizations to surmount psychological, structural, and procedural hurdles. Collective innovation is defined as a connected, open, and collaborative process that generates, develops, prioritizes, and executes new ideas.

Technology Study: A technology study can focus on the economics, strategy, development, engineering, and/or diffusion of a particular technology.

Consumer Internet in South Korea: An American's Perspective (Byun, 2008) explores the consumer internet identity in South Korea from the perspective of an American with Western values and sensibilities. The path to success for Internet firms in South Korea is often quite different than it is in the West, and foreign firms looking to establish a Korean presence need to adjust their strategies accordingly.

Evaluation of Drying Technologies for Storage and Shipment of Recombinant Protein Drug Substance (Vaudant, 2008) presents an evaluation of drying technologies as an alternative to cryo-preservation for recombinant protein drug substance storage and shipment and discusses implications for future process innovation.

Accelerating Time-to-Market in the Global Electronics Industry (Folgo, 2008) identifies process and organizational improvements that will eliminate product development waste in support of accelerating TTM (time-to-market) and TTP (time-to-profit) using an enterprise perspective.

Collaboration

Independent Collaboration means you work alone with a faculty member. Responsibility falls entirely on you to select a topic and arrange a schedule with your advisor.

Joint Collaboration means you work in conjunction with another student together with a faculty member. This occurs only in certain circumstances when, for example, the amount of work is clearly larger than normal, or when the two authors possess very different skills and/or backgrounds. Normally, a thesis should contain the original contributions of a single student and it is often difficult to receive approval for joint collaborations**. Potential collaborators for a single thesis must submit a "request for Joint Thesis" petition with their thesis proposal**, which is available in the Stellar Course Management System under 15.THG:

http://stellar.mit.edu/s/course/15/fa12/15.THG

Petition forms must accompany your joint thesis request proposal form. All forms will be forwarded to the Dean of the Graduate School at MIT for approval. Petition forms are available upon request in SES, E52-101.

Credit

Students who complete a master's thesis receive a total of 24 units of academic credit. Typically, students register as follows:

- Fall term – 3 units
- Spring Term – 21 Units

Thesis units can be written onto your registration form. Pre-registration through MIT Sloan's bidding system is not required.

IV. Thesis Procedure

Specific deadlines and administrative requirements can be found in Section VI, "Administrative Matters." In this section, however, you will find a general, step-by-step description of the thesis process and advice on a number of issues you will definitely want to think about throughout the process.

Select a Topic

Obviously, the best topic is one which interests you and allows you to utilize your knowledge and analytical skills to the fullest. Some writers automatically know what they want to study. Most need some spark of inspiration first. For those looking for such insight, we recommend the following avenues of reflection:

- **Your classes at MIT Sloan**
  Not all questions are fully covered in the course of classroom study. Within your classes, you may find yourself disagreeing with accepted principles on the grounds of logic and available evidence. Perhaps you learned a tentative hypothesis or a suggested procedure which you want to test. These may be the sparks of a great thesis. Not all topics need to be entirely creative and original. Certainly, where human activities are concerned, the processes of critical review, analysis, measurement, and testing can never be completed. Even replication of the work of others, if it is done with appropriate skepticism and accompanied by original analysis, need not be redundant.

- **Past Thesis**
  Certainly reviewing what others have done for their theses can help inspire you with your own. You can also get a feel for the range of frequency of past topics, approaches, types of data, methods of analysis and writing styles. The Dewey Library keeps copies of Sloan theses. MIT theses from 1963 to the present can be searched for using Barton, MIT Libraries' Online Catalog.
  http://libraries.mit.edu/barton
  After reading a recent thesis, you may wish to contact the author. Authors of Sloan theses obviously are knowledgeable on the topic, will probably be delighted to help you with your thesis topic, yielding up-to-date insights or suggestions.

- **Interests Outside of Academia**
  You may also consider extending a project that you have worked on (e.g., over the summer or prior to coming to MIT Sloan) with previous or current employers. Many company-sponsored students find it advantageous to choose a thesis topic related to their organization.

- **Recent Events**
  You may want to consider how recent events influence some aspect of management. The world is constantly changing, and even the daily newspaper could springboard you onto an engaging topic.

- **Company Projects through MIT Faculty Liaisons**
  A faculty member may have company contacts that offer projects. The projects may not, however, warrant formal structured thesis project status; the faculty member may merely serve as a liaison between the company and the student. Students might even seek a faculty advisor

from the initial faculty liaison. The types of company projects may, in some cases, be similar to those offered to students in project-oriented courses such as "Entrepreneurship Lab" and "Issues in Corporate Governance"

The Institute does not permit a student to embark on a thesis likely to be classified as "confidential" or "secret" for reasons of national security, or restricted for proprietary or other reasons. Additional information on this subject can be found in the Policies and Procedures pages of the Graduate Students Office website:

http://web.mit.edu/gso/gpp/degrees/thesis.html

Find an Advisor

With topic in hand, the next step is to select an MIT Sloan School faculty member who will agree to serve as your thesis advisor. Some faculty may have time for only a limited number of theses, so be sure to make arrangements as soon as possible. Remember, even after an initial consultation with a faculty member, there is no commitment on either end. You do not need to stick with the first faculty member you speak to, nor does discussion about your topic lock in a faculty member as your advisor. You must make a clear, definitive arrangement with your advisor. It is up to you to make this arrangement.

If you are still unsure of your topic, you might talk to a faculty member and ask for suggestions. However, it tends to be more useful to have a list of possible topics to discuss with a potential advisor.

When looking for a faculty member who will help guide the thesis process and with whom you will be working closely for six months or more, consider the following:

- **Mutual Interest**
  Ideally your advisor should share your interest in your topic or field. The faculty research summary (available on the Sloan website, in the faculty profile section, at http://sloancf.mit.edu/vpf/d-main.cfm) can be especially useful in making your selection.

- **Degree of Interest**
  It is common sense that if a student chooses a topic directly in line with the faculty member's research interests, the faculty member is more likely to contribute a generous amount of their time, expertise, and knowledge to the thesis. This is not to say that a faculty member would be inadequate for a thesis project tangentially related to their field, but the amount of overlap is worthy of your consideration

- **Working Styles**
  Given the magnitude of your interaction with your advisor, you definitely should come to terms on working styles and availability. In a sense, the writer and advisor should function as a team and avoid conflict. How much feedback should the advisor give? How often? How thorough? How much direction should the advisor give? How much free reign? All of these questions should be discussed in order to make sure both of your working styles mesh.

  You can contact recent Sloan graduates for perspective on the style and helpfulness of prospective faculty advisors. Appendix F lists recent thesis writers, titles, and their advisors.

- **Thesis Reader**
  You may also wish to choose a second member of the faculty to serve as a thesis reader. This choice is optional. Readers provide additional expertise in complementary fields and may possess complementary skills to those of your main advisor. You can also benefit from asking faculty members at other schools and/or members from the professional management community to be informal thesis readers. In addition, you can seek general advice on the thesis process and, potentially, individual assistance from your academic advisor and program director.

Decide on the style and Form

With both topic and advisor ready, begin a preliminary analysis of the project and get your initial thoughts on paper. Start by reviewing information or literature on your topic. Formulate a problem statement and list some questions or hypotheses to return to again and again during the process. These are your initial ideas and they will trigger more questions or more avenues of research. You may even want to decide on the format or style of your approach, either from our list of suggested methodologies in Section III, "Thesis Options," or from your own logical and systematic insight. Your method and sketched-out framework may lead to even more possibilities for questions and hypothesis. You may even decide to follow the initial steps of an applied problem-solving technique, like the K-J method (used in quality improvement) or system dynamics.

After these initial meditations and conversations with your advisor, make sure that the scope of the topic is manageable. You need to ensure the topic can be covered in the time that you have. You also need to make sure that you can reach well-researched, well-explained, and defensible conclusions at the end of the thesis and the process. Reformulate your topic to avoid vagaries and clarify the focus of your study and argument.

When narrowing your topic and your format, read relevant past theses, consider your course schedules for the fall and spring terms, and talk to fellow students.

Write the Thesis Proposal

The thesis proposal is essentially a blueprint for the entire thesis project. The proposal should include a brief description of the topic, an explanation of why it is important, and a statement of the reason for undertaking the research. The proposal should also include a brief outline of the final form of the document, in addition to a description of data collection methods and analytical approaches. Appendix B contains sample thesis proposal forms.

Consult with your advisors heavily while devising your proposal. Advisors can help focus your proposal, which will ultimately yield a focused thesis.

Proposals are due at Sloan Educational Services no later than November 21, 2012

More information on the proposal can be found in Section V, "Administrative Matters." The proposal form is available online in Stellar under the Materials section and the "Request for Joint Thesis" form is available at the same site:

http://stellar.mit.edu/s/course/15/fa12/15.THG

Develop a Plan

With your proposal submitted and accepted, you should set a schedule with your advisor. You should also keep communication flowing between you and your advisor by scheduling regular checkpoints and milestones. Plan out the end of your research and data collection, the deadline for your initial analysis, due dates for each chapter or section and the scheduled completion for the final document. You can subdivide your tasks even further in order to plan your time best. Above all, make sure your advisor is available to offer feedback well in advance. Your plan may be rigid, or flexible and compatible with revision, but without it you risk lack of communication with your advisor and disorganization in terms of available time and resources.

An important note regarding COUHES and research involving human subjects

Federal mandate (The Common Rule 45 CFR 46) and longstanding MIT policy requires that the Committee on the Use of Humans as Experimental Subjects (COUHES) review and approve ALL research involving human subjects that is performed under the auspices of MIT.

Types of research that must be reviewed by COUHES include investigation of new drugs and medical, radiological, engineering, physiological, behavioral, sociological, and nutritional studies. This includes projects involving human tissues, blood, or images, and questionnaires, interviews, and other procedures.

Some categories of research are exempted from review by federal regulation. Regardless of this, ALL projects involving human subjects at MIT must be reviewed and approved by COUHES.

COUHES approval must be obtained BEFORE any human studies are begun. For research involving minimal risk, approval is granted for one year and must be renewed annually. For research involving more than minimal risk, renewal frequency will be determined by the Committee upon approval.

Ethical and legal guidelines for conducting studies involving human subjects are explained in a training course. All personnel who participate in any way in studies involving human subjects must take and pass this course.

From the MIT COUHES website http://web.mit.edu/committees/couhes/

Does your research require COUHES approval? Check here:
http://web.mit.edu/committees/couhes/quickguide.shtml

Do the Thesis!

Easier said than done, right? Nonetheless, if well-scheduled and taken in bits rather than chunks, a thesis can be the apex of scholarly and practical achievement, as well as an exciting and engaging process. Having clear communication with your advisor, gusto in your studies, and proper time management, your thesis will surely be a success. Keep the following pointers in mind:

- **Pace Yourself**

  A common practice for successful writers is to schedule daily writing time, five to seven days a week, from two to four hours. Devoting regular and consistent blocks of time leads to an effective and relatively pain-free path to completion. A common theme among thesis disaster stories is a marked irregularity in production, culminating in a nightmarish burst of stressful productivity. Theses involving outside companies or organizations can be more challenging to complete on schedule. Not everyone is as flexible or as motivated as you!

- **Be Systematic With Your Research**

  Data and research is the backbone of your thesis and they will take two forms: 1) information gathered by others, and 2) information collected directly by you from subjects and sample.

  Data produced by others can be found in books and articles, published reports, published surveys, census results, electronic databases (e.g., Compustat), etc. Data which you provide will come from surveys, interviews, responses to experimental situations (e.g., performance in a simulated game), etc. You must give full credit for the data you analyze and are expected to display integrity, candor, courtesy, and generosity when crediting sources of information.

  Your advisor can recommend what types of data or information would best support your proposition or hypothesis, especially in regard to what approaches would fit within your limited time. Your advisor can also give practical advice on the mechanics of data collection (e.g., how best to design a survey or a simulation.)

  Dewey Library offers ample resources for your research. Librarians and reference assistants are available at the Reference Desk to answer questions. You can also get advice or answers to brief research questions via email. Go to the MIT Libraries homepage at http://libraries.mit.edu/ and find the Research Help block (second column) and click on “Ask us!” Meeting with a librarian can be of greater assistance by providing more in-depth advice on research and database searches. The Dewey Library is located on the first floor of building E53. The telephone number for Reference and Information is 617-253-5677.

- **What Analysis Serves You Best?**

  When interpreting data, you will use either descriptive or statistical methods. A descriptive method opts for a logical, written interpretation based on your reading of patterns in the data (e.g., interpreting a trend by reading a graph, table or written accounts; developing a method or

framework through your own synthesis of data). Statistical methods, on the other hand, involve the use of mathematical tools to help determine patterns in the data and the significance of factors. Talk with your advisor about a variety of methods and choose the method that works best and most convincingly.

- **Writing Expectations**

  Your thesis should be self-contained. A reader should be able to follow any references to other literature on the topic or information on a company or field without referencing material outside your work. Don't assume your readers have in-depth knowledge of the academic or managerial concepts behind your work.

- **Structuring You Thesis**

  When reading through theses note their overall structure and organization. Pay particular attention to chapters and subdivisions. Introductions with background, and a description of the problem, proposition, or hypothesis, in addition to a brief overview of the approach used to address the problem, are standard. You may also wish to devote a section to a description of your methods for collecting data, with a justification for those methods. In your results and analysis, you should include a description and interpretation of findings, as well as the analytical method or framework. Finally, make sure your conclusion contains a summary of findings, a critique of the methods used in the study, suggestions for further research, and recommendations for action or some insightful final words to end the project on a satisfactory note.

V. Navigating Through the Process

1. Roles, Responsibilities and Finding Help

Role/Resource	Specific Individual	Responsibilities/Description
Thesis Writer	Student	Selects thesis topic. Finds Faculty advisor and arranges meetings for guidance and consultation. Researches and writes thesis. Holds ultimate responsibility for thesis.
Faculty Advisor	Chosen by student	**Must be a member of the MIT Sloan Faculty.** Provides help and guidance to the student for formulating and executing the thesis research. Assigns the thesis grade.
Thesis Reader (Optional)	Chosen by student with help from advisor	Provides advice and counsel based on particular experience.
Dewey Library	Any Librarian	Offers individual consultation and group information sessions on library resources for research at MIT and in the Boston area.
Educational Services	Heather Dill Petithory	Member of SES who can answer questions about requirements, specifications, formatting, and policies.

Suggested library books include:

- *How to Complete and Survive a Doctoral Dissertation* by David Sternberg. There are many parallels between a dissertation and a thesis. This book elaborates on issues discussed in this thesis guide.
- *MBA Field Studies: A Guide for Students and Faculty* edited by E. Raymond Corey contains sections on project management, working with faculty advisors, and conducting interviews.

2. Pitfalls, Setbacks, and the Unexpected

The only things certain in life are death and taxes. A trouble-free thesis, sadly, doesn't fit into either category. Most snags and problems can be avoided through both good planning and contingency planning. In any problematic situation, asking for help and/or keeping yourself open-minded, realistic, creative, flexible, and persistent will usually steer you through.

The following are the three most vexing and typical problems:

I'm having difficulty finding a faculty advisor.

- Before you panic, consider the perspective of the faculty. Your intended advisor may already be advising five other thesis writers. More particularly, maybe your topic does not exactly match their research interests. If so, you may consider changing the focus of your topic to better appeal to a certain faculty member. Otherwise, you should get referrals from the faculty members who reject you. Just because they can't work on your thesis doesn't mean they can't provide valuable advice and/or direct you to a faculty member whose interests best parallel your own.

Research for my thesis is going to keep me busy full time for at least two months; I won't have another chance to socialize with my fellow students until graduation.

- In the spring term, you have the thesis, classes, job interviews, international field trips, etc. A social calendar may seem impossible. However, this might serve as an incentive to start and finish the thesis early, thereby taking one big pressure off your final two months at Sloan!

The deadline is approaching and there's no way I'll finish by then.

- The worst that can happen is that you will not finish and will have to pay extra tuition to complete the thesis over the summer term or drop thesis to a 12 unit independent study project if a thesis is not part of your degree requirements. However, this situation can be avoided by setting realistic goals and planning ahead.

Be sure to refer frequently to the schedule on the following page, especially early in the year, to avoid unpleasant surprises. Note how soon after spring vacation comes the April deadline to submit a complete draft to your advisor.

The deadline for submitting final copies of your thesis to your advisor is April 25, 2013. The deadline for submitting final copies to Sloan Educational Services is May 10, 2013.

FAILURE TO MEET THE MAY 10, 2013 DEADLINE

This deadline is set by the Institute and is ***NOT*** subject to change. A student who fails to complete and submit a thesis on time is required to register for thesis again (one unit) in a subsequent term in order to receive a grade and the degree. Full tuition must initially be paid in the subsequent term regardless of the number of units of registration. For an explanation of the conditions under which a partial abatement of tuition is made, please refer to the Graduate Students Office website at:

http://web.mit.edu/gso/faq/tuition.html

DATES	Action Item
September 4, Tuesday	Registration for thesis units (typically 3 units; amount varies by program)
September to November	Select topic and faculty advisor Develop a plan
November 21, Wednesday	Submit Thesis Proposal
November to April	Research, analysis, and writing
January (IAP)	Add up to 12 units of thesis (optional) if you plan to work on your thesis over the IAP. Those completing G-Lab may not add thesis units over IAP. 12 units is the total maximum number of units allowed over IAP.
February 4, Monday	Registration for balance of thesis units (typically 21 units; amount varies by program). Application for Advanced Degree, including Thesis Title (to be completed online at http://student.mit.edu/cgi-docs/student.html)
February 26, Tuesday	Submit Progress Report
April 5, Friday	Last day to submit a thesis title. Thesis title must be updated online (http://student.mit.edu/cgi-docs/student/html) exactly as it will appear on the final version. Submitting your title after this date is subject to a late fee of $85.
April 5, Friday	Submit complete draft to thesis advisor
April 25, Thursday	Submit final version to thesis advisor for evaluation and approval
April 25, Thursday	Last day to add/drop thesis units
May 10, Friday	Submit original copies of final, approved version to SES in E52-101

VI. Administrative Matters

While writing your thesis, you must follow all of the policies and rules for the procedure. Some of these policies are set by Sloan but most (including deadlines and format requirements) are set by MIT and enforced on an Institute-wide basis.

Schedule

The typical schedule has been developed by the MIT Sloan School. ***The final due date does not change!*** However, your thesis advisor has the option of moving some of the other deadlines to *earlier* dates. In the past, students have failed to graduate with their class due to not submitting their thesis on time, so **plan ahead.**

The deadlines listed are required by Sloan Educational Services or by MIT. Unlike the personal milestones and "checkpoints" arranged by you and your advisor, deadlines exist for administrative purposes. Therefore, it is to your benefit to schedule your milestones for drafts at least several days before the administrative deadline.

Administrative Procedure and Forms

Registration and grading

- Register for a total of 24 units of credit distributed between fall, IAP and spring terms (typically 3 in the fall, up to 12 over IAP and the remainder in spring)
- Thesis receives a letter grade assigned by the thesis supervisor.
- Grades for the first term are based on the approved thesis proposal:
  - J – progress has been satisfactory on a thesis that is not yet complete
  - U – Progress has been unsatisfactory
- Grade for completed thesis supersedes the "J" or "U" in the first term and is worth *24 units in the student's cumulative grade-point average.*

Submit Thesis Proposal to Sloan Educational Services (SES) by November 21, 2012

- Proposal forms available in the documents section of Stellar: http://stellar.mit.edu/s/course/15/fa12/15.THG
- Obtain the signature of your thesis advisor
- Keep copies for yourself and your advisor
- Turn in signed Proposal form to Sloan Educational Services
- Proposals for joint collaboration must also have the "Request for Joint Thesis" form: obtain from http://stellar.mit.edu/s/course/15/fa12/15.THG accompanied by petition form
- Sample thesis proposals are in Appendix B

Submit Progress Report (by February 26, 2013)

- Include a description of thesis methodology, a list of thesis accomplishments to-date and a plan for completion.
- Progress Report forms available in Stellar under 15.THG
- Obtain the signature of your thesis advisor
- Keep copies for yourself and your advisor
- Turn in Progress Report form to Sloan Educational Services (SES)
- Sample Progress Reports are in Appendix C

Submit Complete Draft to Thesis Advisor (by April 25, 2013)

- If you have been regularly submitting drafts and follow-ups to your advisor and incorporating feedback, this will be merely a formality. This will also give you three weeks to get your thesis into its final form.

Submit Final Version to Thesis Advisor (by April 25, 2013)

- *Your advisor **is not obligated** to read theses submitted after this date*
- Follow format specifications: see Appendix A and the MIT Archives Specifications for Thesis Preparation online at http://libraries.mit.edu/archives/thesis-specs/
- Your advisor should read your thesis, approve it, and sign **at least one copy** of the Title Page on the appropriate paper.

Thesis and Forms Checked by Sloan Educational Services

- It is strongly recommended that you bring your thesis to SES prior to the final deadline to have your formatting checked page by page for conformity to specifications.
- Specifications are set by MIT (in particular, the MIT Archives Department) and are strictly enforced by the MIT Sloan School of Management (see Appendix A and the Archives Specifications).
- To ensure all specifications have been met, check in with SES before printing the final version and obtaining your thesis advisor's signature. Theses that do not meet institute formatting standards will not be accepted until corrections have been made.

Submit Final, Approved Version and Associated Items to SES (by May 10, 2013)

- Submit two copies to Sloan Educational Services (SES), along with an **additional copy of signed title page and abstract.**
- LGO Students: If Sloan is your home department, submit three copies to SES, one of which will be sent to your joint department's library. Otherwise, submit all copies to your home department and none to SES.
- One copy must have original signatures of your thesis advisor(s) and Program Director.
- Submit a signed copy of your thesis grade sheet: Available in Stellar under 15.THG or http://stellar.mit.edu/S/course/15/fa12/15.THG/materials.html

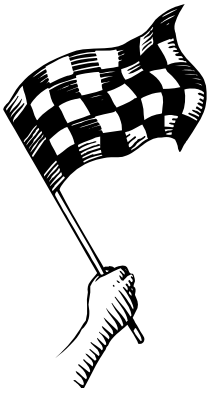
VII. Finale

Once Sloan Educational Services has checked and approved your thesis, your active role in the process is over! SES Sends your thesis copies to the MIT Archives to have a microfiche copy made and to be book-bound. One copy of your thesis is then cataloged and put on the shelves at Dewey Library (and corresponding library for LGO Students' joint departments), where it is available for circulation; the other remains permanently in the Archives. Microfiche copies are also kept both in the Archives and in Dewey (and departmental libraries).

MIT's Library prepares a catalog record of your thesis, which appears in MIT's Barton online catalog. It is accessible on the World Wide Web, and in the OCLC database, a national bibliographic system available to libraries and individuals throughout the world.

Before submitting your thesis to SES, you may also want to make your own personal copy for further academic and/or professional work or for your own personal use. Binding can be purchased at CopyTech or any commercial print shop. After your thesis has reached the library shelves, you may request additional copies from the MIT Libraries' Document services (Building 14-0551, 617-253-5668, docs@mit.edu, http://libararies.mit.edu/docs).

We hope all of your objectives have been met and that, in addition to academic and professional satisfaction, you will have enjoyed the bonds of friendship and camaraderie formed over the process. You can rest easy knowing you have made a valuable contribution to your career, your professional contacts, your academic knowledge, your management skills, your field of research, and the MIT Sloan School as a whole.



Congratulations!

VIII. FAQs

How do I get permission to have my thesis non-disclosed to the public?

Under normal circumstances all theses are open and available for public inspection once they have been received by Archives. When there is good reason for *delaying* the distribution of a thesis (author holds rights to intellectual property contained in the thesis, privacy or safety concerns), the author and the advisor should submit the thesis to the director of the student's program, who will prepare a recommendation for the Dean of Graduate Students. The dean will advise the Institute Archives of the restricted period. In most cases this is no more than 90 days. **No thesis may be permanently withheld.**

Do I have to have an Acknowledgements section? Where should I place acknowledgements?

Acknowledgements are not required, but many students find that they would like to include recognition and thanks for faculty, peers, and family who have supported them through the thesis process. Should you want to include this in your thesis, we recommend that you place the Acknowledgements after your Abstract page (*never before*: remember, the Abstract immediately follows the Title Page and before the Table of Contents).

Do I have to have a Table of Contents?

While not required, we recommend that all theses include a Table of Contents. This will make your thesis easier to navigate. It should be placed after all prefatory material (Title Page, Abstract, Acknowledgement and/or Biographical Note) and before the text body. If your thesis contains many charts or figures as appendices, you might want to include a contents page for those as well.

Can I change the title of my thesis?

Yes, within limits. The Thesis Proposal form and Application for Advanced Degree (AAD) requires a preliminary title. The AAD, submitted online at the beginning of the spring term, conveys your title to the Registrar. You have until **April 5, 2013** to submit a thesis title on your online AAD form (http://student.mit.edu/cgi-docs/student.html), after which a $85 fee applies.

How long does it take for my thesis to get put on the library shelf?

Given that the MIT Archivist receives more than 1,000 theses every June, it is not an immediate turnaround for the copy you submit to Sloan Educational Services to be scanned, cataloged and book-bound. Depending on how fast the process goes, it can take from two to three months. NOTE: *It will take longer if your thesis has any problems in regard to the specifications. See the next question about charts and figures.*

What about charts and figures?

Pay particular attention to using clear images and text in charts and figures, keeping in mind that these will be scanned. SES will look for these potential problems and let you know of any found. If the MIT

Archivist is unable to scan your charts and figures because they lack clarity, it will delay the binding, cataloging, and library shelving process. Some pointers:

1. **Print charts and figures as large as possible.**
2. **Try not to use colored ink: although it is more aesthetically pleasing, it does not copy or scan well; you are advised to use only black ink and grey shades.**
3. **Make sure charts and figures are within the one-inch margin requirement.**

Who should I list for the "Accepted by" line on my title page? Do I have to get their signatures before I turn in my thesis to Sloan Educational Services?

- Your thesis is accepted by the people listed below, based on your program. You MUST obtain all signatures before submitting your final copies to SES.
  - **Sloan Fellows:**
    Stephen Sacca, Director
    MIT Sloan Fellows Program in Innovation and Global Leadership
  - **LGO and MBA:**
    Maura Herson, Director
    MIT Sloan MBA Program
  - **MSMS:**
    Michael Cusumano, Faculty Director
    Master of Science in Management Studies Program
  - **MFIN:**
    Heidi Pickett, Program Director
    MIT Sloan Master of Finance Program

Can I print my thesis double-sided?

Theses should be prepared double-sided whenever possible. In a double-sided thesis, both sides of every page must be accounted for in the numbering sequence. Therefore, in a double-sided thesis, odd-numbered pages are always on the right and even-numbered pages on the left. Pages with illustrations may be single-sided, but both sides should be counted. Refer to the Thesis Specifications Checklist, Appendix A, for proper pagination guidelines.

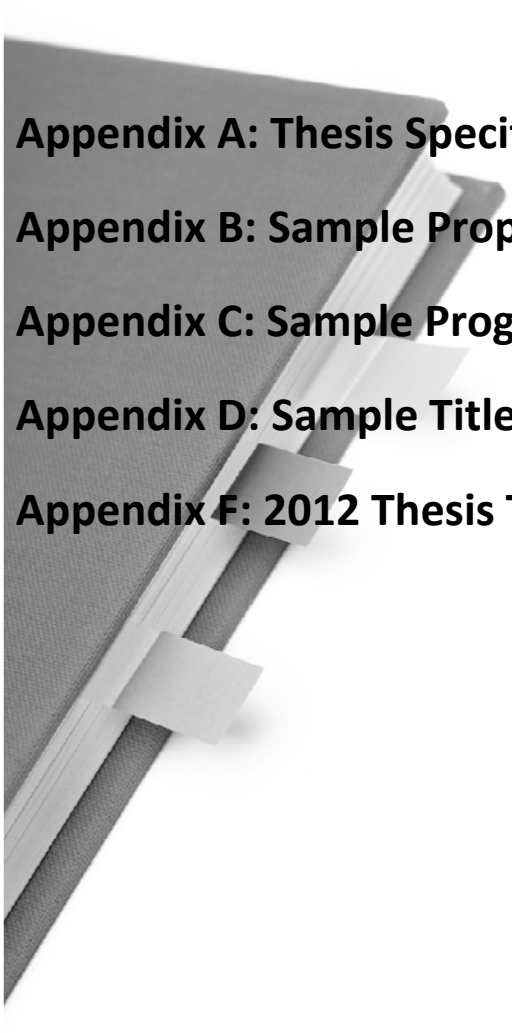
What is the Library Processing Fee?

All thesis writers must pay a library processing fee ($50) which covers the cost of making a microfiche copy. These charges will be added to your student bill during the semester, immediately preceding graduation.

Can I submit my thesis electronically?

Yes, this is optional. If you would like to submit your thesis to the digital library of MIT theses, visit http://libraries.mit.edu/docs/electhesis.html . NOTE: This is not an alternative to submitting paper copies. Two paper copies must still be submitted as usual.

APPENDICES



Appendix A: Thesis Specifications Checklist

Appendix B: Sample Proposal Forms

Appendix C: Sample Progress Report Forms

Appendix D: Sample Title and Abstract Pages

Appendix F: 2012 Thesis Titles and Advisors

APPENDIX A - THESIS SPECIFICATIONS CHECKLIST

In addition to the highlighted list below, refer to Appendix D, Sample Title Pages, and Appendix E, Sample Abstract Pages. Also consult the *MIT Archives Specifications Booklet* online at http://libraries.mit.edu/archives/thesis-specs/.

Paper

All copies should be printed on acid-neutral or acid-free paper. The following brands are acceptable:

- Xerox Image Elite or Archival Bond (available at CopyTech)
- Permalife
- Hollinger Acid-Free Bond
- Trojan Bond Technaclear
- Crane's Thesis Paper
- Gilbert Neu-Tech
- Hammermill Bond (not recycled)
- Strathmore Bond (not recycled)

Margins/Typeface

- Margins must be no less than 1 inch all around
- No Borders, headers, or footnotes outside of margins; page numbers may appear in the top or bottom margins
- Typeface for entire document must be no smaller than 11 point font and should not be script or italic
- Typeface for charts, footnotes, and appendices must be no smaller than 10-point font

Pagination

- The Title Page is always considered page 1, whether physically numbered or not (this is optional).
- The next sheet of paper, immediately following the Title Page, must be the Abstract:
    1. If you are submitting a **single-sided** copy of your thesis, the Abstract is page 2, with no blank pages between the Title Page and the Abstract.
    2. If you are submitting a **double-sided** copy of your thesis, then the Abstract is page 3. The back side of the Title Page is left blank (and is considered page 2).
- Biographical Notes and Acknowledgements are optional and should be placed after the Abstract.
- Page numbering must be consecutive throughout (all charts/figures must be included in numbering sequence).

Title Page

- The Title Page is always considered to be page 1; physical numbering of the Title Page is optional.
- The Title Page must include the following elements, in this order (see Appendix D, Sample Title Pages):
  - ✓ Title
  - ✓ Author's name
  - ✓ Previous degree information
  - ✓ Degree(s) for which Thesis is submitted
  - ✓ Month and Year degree(s) will be granted
  - ✓ Copyright statement
  - ✓ Permission statement
  - ✓ Signatures and identification of Author, Advisor, Reader (if any), and Program Director
- **The month and year listed on the Title Page should be the *month your degree is being conferred* (June, September, or February), not the month you submit your thesis.**
- The Copyright statement appears as follows:
  - ✓ **© Year Author's Full Name. All Rights Reserved.**

  Copyright is usually held by the student; see the *MIT Archives Thesis Specification Booklet* for policies concerning Institute ownership of thesis copyrights.
- When Copyright is held by the student, the Title Page must include the following statement giving MIT royalty-free permission to reproduce and distribute copies of the thesis:
  - ✓ **"The author hereby grants MIT permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part in any medium now known or hereafter created."**
- Signature lines must have formal names and titles of Thesis Advisors, Readers, and Program Directors. If you don't know your advisor's correct title, ask them!
- It is strongly recommended that you do not wait until the last minute to gather signatures. It is not uncommon for a faculty member or program director to be off-campus or unavailable close to the thesis deadline. Make signature appointments early! A thesis will not be accepted without all proper signatures and Educational Services will not gather signatures on your behalf.
- Under the "Signature of Author" line, place "MIT Sloan School of Management", the name of another MIT department for dual degree programs, and ***the thesis deadline, May 10, 2013***.
- **The Title Page must have original signatures on at least one copy**.

Abstracts Page

- If you are submitting a **single-sided** copy of your thesis, the Abstract is page 2, with no blank pages between the Title Page and the Abstract.
- If you are submitting a **double-sided** copy of your thesis, then the Abstract is page 3. The back side of the Title Page is left blank (and is considered page 2).

- The Abstract must contain the following items, in this order (see Appendix E, Sample Abstract Pages):
  - Thesis title
  - Author's name
  - Degree submission information
  - The word ABSTRACT
  - Single-spaced summary of thesis, no more than 350 words
  - Full name and title of Advisor and Reader (if any)
- Degree submission information should read as follows:

"Submitted to the MIT Sloan School of Management *[and other MIT department, if relevant]* on *[date submitted]* in partial fulfillment of the requirements for the degree*[s]* of Master of Business Administration *[or other degree]*."

Covers and Labels

- All copies should be submitted unbound, with labeled, pressboard covers.
- Labels can be printed or handwritten with the following information:
  - ✓ Author's name
  - ✓ Thesis title
  - ✓ Program
  - ✓ Graduation date (month and year)
- Red thesis covers and labels are available in CopyTech located in the basement of building E52.

Final Submission

- ✓ **2 signed, unbound completed copies of thesis (3 for LGO); at least 1 with original signatures**
- ✓ **1 additional photocopy (on regular Xerox paper) of signed title page**
- ✓ **1 additional photocopy (on regular Xerox paper) of abstract.**
- ✓ **Completed grade sheet signed by your advisor (available on Stellar).**
- ✓ **Deliver to Heather Dill Petithory in SES by 5pm on Friday, May 10, 2013.**

APPENDIX B

SAMPLE PROPOSAL FORMS

THESIS PROPOSAL

Due to Sloan Educational Services by
Wednesday November 23, 2011

Student: Sergio Burdiles O.

MIT ID Number:

Program: ☐ LGO ☐ MBA Program ☒ Sloan Fellow ☐ MSMS ☐ MFIN

Thesis Supervisor: John Van Mannen

Thesis Reader (optional): _____

Proposed Thesis Title:

Key Factors to Improve Innovation Capabilities in the Chilean Mining Industry. An Analysis to the Chilean Innovation Survey results.

Directions: Type your thesis proposal on this form, obtain the signatures of your thesis supervisor and the thesis reader (reader is optional), give a copy to each of them; submit the original copy to Sloan Educational Services (E52-101). You are advised to retain a copy of the completed Thesis Proposal for your records. Proposal s for co-authored theses must be accompanied by a petition form and Request for Joint Thesis Form, also signed by the thesis supervisor.

Chile has been recognized for its economic growth and stability over the last 20 years. Although it's levels of productivity have been declining and thus delaying the opportunity for higher growth (Cyrille Schwellnus, June 2010).

The Chilean Government created in 2005 the National Council on Innovation for Competitiveness (NCIC). In addition, since 1995, the Chilean National Statistic Institute has conducted a survey to "collect, process and present data and information regarding technological innovation and research and development activities performed by Chilean Companies" (Chilean National Statistic Institute, 2010). This survey is similar to ones conducted in other countries and concerns innovation in a variety of industries. The mining industry is one of the most relevant industries for the Chilean economy and this sector had been part of this survey since 2001 and provides relevant historical information about innovation activities in the industry.

In order to measure the impact of innovation in the economy, requires measuring the ration of the Total Factor Productivity (TFP) growth to GDP growth. In the case of Chile, this contribution has been close to 0 since 1998 which TFP growth in the Mining Sector decreased (OECD Economic Survey: Chile 2010).

The mining industry is one of the five priority clusters defined by the National innovation Council. Given the priority of mining, it is relevant to identify new tools that might increase the productivity in this sector.

My thesis will provide a secondary analysis of the above survey data in order to identify new tools and key components of the innovative capabilities of the Chilean mining sector. Such capabilities may be of use in strategic planning at an industrial and organizational level.

Signature of Thesis Advisor: _____ Date: 11/21/11

THESIS PROPOSAL

Due to Sloan Educational Services by
Wednesday November 23, 2011

Student: Joshua Copp

MIT ID Number: 929643891

Program: ☐ LGO ☒ MBA Program ☐ Sloan Fellow ☐ MSMS ☐ MFIN

Thesis Supervisor: Ernie Berndt (primary); Mark Trusheim

Thesis Reader (optional): _____

Proposed Thesis Title:

Bridging the "Valley of Death" in molecular oncology diagnostics: The economic value proposition of a molecular diagnostic for a payor

Directions: Type your thesis proposal on this form, obtain the signatures of your thesis supervisor and the thesis reader (reader is optional), give a copy to each of them; submit the original copy to Sloan Educational Services (E52-101). You are advised to retain a copy of the completed Thesis Proposal for your records. Proposal s for co-authored theses must be accompanied by a petition form and Request for Joint Thesis Form, also signed by the thesis supervisor.

The success of the genome project opened up a myriad of possibilities within healthcare, ranging from enhancing human performance to modifying identity management. The ability to potentially tailor medical treatment to an individual garnered significant interest, particularly in the field of oncology, where treatment cost is high for only marginally improved outcomes. The '-omics' revolution began to take-off in 2005, with Her2 on the market and other biomarkers (EGFR, KRAS, etc) nearing FDA acceptance. Further, the general perception was the advent of molecular tests resembled that of biotechnology. Multiple new companies were emerging intent on developing a specialized biomarker test intended to promote better treatment of patients. By 2009, the enthusiasm came to a halt, with funding drying up and many companies having to stop development or pivot on their product goals. The market had shifted, with the combination of FDA decisions and pharmaceutical company disposition significantly altering the outlook for companion diagnostics in oncology. In light of this market shift, several questions arise from the perspective of the companion diagnostic manufacturer. What exactly was the trend in funding from 2005-2009? What changes precipitated the revised outlook for companion diagnostics? For cancer types where we know treatment doesn't help a significant portion of the patient population, does it still make sense to enter and pursue development? The hypothesis is that it does not, so for what stakeholder does a companion diagnostic still hold value?

Goals of the Thesis: (1) Investigate the historical funding cycle for companion diagnostics over the 10 year period from 1999 to 2009, providing a unique few as to the volume of companies being started, the funding backing them, and the subsequent market shift; (2) Investigate the hypothesis that, for a cancer type with only generic chemotherapy treatments that would benefit from a companion diagnostic, the independent development of that diagnostic does not economically make sense; (3) Investigate the hypothesis that private payors have a value proposition for a companion diagnostic given an average patient population.

Signature of Thesis Advisor: Ernst R. Berndt Date: 11/9/11

APPENDIX C

SAMPLE PROGRESS REPORT FORMS

THESIS PROGRESS REPORT

Due to Sloan Educational Services by
Tuesday February 28, 2012

Student: Thomas German

MIT ID Number:

Program: ☐ LGO ☐ MBA Program X Sloan Fellow ☐ MSMS ☐ MFIN

Thesis Supervisor: John Van Maanen

Thesis Reader (optional): _____

Proposed Thesis Title:

Zero emission passenger vehicles in the United States, anticipating future automobile industry trends based on stakeholder interview analysis.

Directions: Indicate the progress you have made to date on your master's thesis, including a definition of your methodology, how far you have progressed through that methodology, and a timetable for the completion of unfinished portions of your study (please note that you are not limited to one page). After you have completed this report, please obtain the signature of your thesis supervisor, give a copy to him/her, and submit the original to Sloan Educational Services (E52-101). You are advised to retain a copy of the completed Thesis Progress Report for your records.

Methodology

1. Conduct 15 interviews representing five automotive industry stakeholder groups. Automobile industry, utility industry, petroleum industry, academia, and government.
2. Read relevant literature including: books, academic journal articles, corporate sustainability reports, interdepartmental academic reports, and media articles.
3. Present findings and conclusion in a four chapter thesis. Chapter 1 – Problem statement and background, Chapter 2 – This motivation and method, Chapter 3 – Analysis, and Chapter 4 – conclusion

Progress

1. Complete: all interviews, draft chapter 1 (written and reviewed), draft chapter 2 (written)
2. Incomplete: draft chapter 3 (80% complete), target draft completion 2/26/2012
3. Not started: chapter 4 – conclusion, abstract, executive summary and final draft. Target completion 4/1/2012

Signature of Thesis Supervisor: John Van Maanen Date: 2/22/12

THESIS PROGRESS REPORT

Due to Sloan Educational Services by
Tuesday February 28, 2012

Student: Krzysztof Blaszczuk

MIT ID Number:

Program: ☐ LGO ☐ MBA Program ☐ Sloan Fellow ☒ MSMS ☐ MFIN

Thesis Supervisor: Professor Henry B. Weil

Thesis Reader (optional):

Proposed Thesis Title:

Investment opportunities in green technology real estate projects.

Directions: Indicate the progress you have made to date on your master's thesis, including a definition of your methodology, how far you have progressed through that methodology, and a timetable for the completion of unfinished portions of your study (please note that you are not limited to one page). After you have completed this report, please obtain the signature of your thesis supervisor, give a copy to him/her, and submit the original to Sloan Educational Services (E52-101). You are advised to retain a copy of the completed Thesis Progress Report for your records.

In my thesis I analyze how investors could benefit from the combined trends in the real estate, energy and sustainability. Having discussed the topic with my Thesis Advisor we have agreed on the outline and specific areas that I should cover. I plan to build my thesis around following main points:

1. Real estate and sustainability
2. Customers and unmet need
3. Sustainable real estate developers and projects

During the IAP period I have collected materials and reached out to faculty members and company representatives. Thanks to a meeting with Professor Geltner (MIT Center for Real Estate) I have received many interesting materials with relation to real estate valuation and application to sustainable projects. I have reviewed recent research papers and literature with regard to premium customers are willing to pay for sustainability. I have gathered reports on real estate sector, energy sector and climate change. Additionally I collected data on the green real estate projects of major eco-cities/green developers. Through my research I have confirmed my hypothesis regarding relation between real estate, energy and sustainability and potential opportunity for investment in this area. I have presented my findings to my Thesis Advisor and basing on the received feedback and suggestions I am currently finalizing first part of my thesis.

Signature of Thesis Supervisor: Henry Bridaye Weil Date: 24/2/2012

APPENDIX D

SAMPLE TITLE AND ABSTRACT PAGES

Please note:

Each program has slightly different requirements for the title and abstract pages (degree, advisors, etc.). We strongly recommend all students have at least their title and abstract pages checked once before the thesis deadline. This will ensure that there are no formatting mistakes that would prevent SES from accepting your thesis on the final deadline.

If you should have any questions regarding your title and abstract pages or would like to schedule a formatting review please do not hesitate to contact Heather Dill Petithory in Sloan Educational Services, hdill@mit.edu.

SAMPLE TITLE PAGE FOR MSMS IF MICHAEL CUSUMANO IS NOT YOUR ADVISOR

Thesis Title as Submitted to the MIT Registrar

By

John Smith

B.E. Computer Science & Engineering
P.E.S. Institute of Technology, 2002

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2013

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The author hereby grants to MIT permission to reproduce
and to distribute publicly paper and electronic
copies of this thesis document in whole or in part
in any medium now known or hereafter created.

Signature of Author: _____
May 10, 2013
MIT Sloan School of Management

Certified by: _____
Your advisor's name
Advisor's title – if you are not sure, ask!
Thesis Supervisor

Accepted by: _____
Michael A. Cusumano
SMR Distinguished Professor of Management
Program Director, M.S. in Management Studies Program
MIT Sloan School of Management

SAMPLE

SAMPLE TITLE PAGE FOR MSMS IF MICHAEL CUSUMANO IS YOUR ADVISOR

Thesis Title as Submitted to the MIT Registrar

By

John Smith

B.E. Computer Science & Engineering
P.E.S. Institute of Technology, 2002

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2013

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The author hereby grants to MIT permission to reproduce
and to distribute publicly paper and electronic
copies of this thesis document in whole or in part
in any medium now known or hereafter created.

Signature of Author: _____
May 10, 2013
MIT Sloan School of Management

Certified by: _____
Michael A. Cusumano
SMR Distinguished Professor of Management
Thesis Supervisor

Accepted by: _____
Michael A. Cusumano
SMR Distinguished Professor of Management
Program Director, M.S. in Management Studies Program
MIT Sloan School of Management

SAMPLE

SAMPLE TITLE PAGE FOR MBA

Thesis Title as Submitted to the MIT Registrar

By

John Smith

B.E. Computer Science & Engineering
P.E.S. Institute of Technology, 2002

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2013

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May 10, 2013
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Thesis Supervisor

Accepted by: _____
Maura Herson
Director, MBA Program
MIT Sloan School of Management

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John Smith

B.E. Computer Science & Engineering
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Thesis Supervisor

Accepted by: _____
Stephen Sacca
Director, MIT Sloan Fellows Program in Innovation and Global Leadership
MIT Sloan School of Management

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John Smith

B.E. Computer Science & Engineering
P.E.S. Institute of Technology, 2002

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF FINANCE
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Thesis Supervisor

Accepted by: _____
Heidi Pickett
Program Director, MIT Sloan Master of Finance Program
MIT Sloan School of Management

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John Smith

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P.E.S. Institute of Technology, 2002

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AND
[YOUR OTHER DEGREE]
IN CONJUCTION WITH THE LEADERS FOR GLOBAL OPERATIONS PROGRAM AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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May 10, 2013
[Your other department], MIT Sloan School of Management

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(Your Advisor's Title)

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[Department name]

Accepted by: _____
Maura Herson
Director, MBA Program
MIT Sloan School of Management

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Thesis Title as Submitted to the MIT Registrar

By

John Smith

Submitted to MIT Sloan School of Management
on May 10, 2013 in Partial Fulfillment of the
requirements for the Degree of Master of Science in
Management Studies.

ABSTRACT

Today's age of information centric globalization over the Internet requires customer awareness by not only good content communication, but also trust and empathy. Trust and Empathy can be generated only when the sellers understand customers. This is only possible when sellers are aware about how the customers conceive the advertisement presented to them over the web. Fortunately, this knowledge is facilitated by analyzing customer buying behavior and understanding the cognitive behavior of the customer using cognitive engines and stochastic measures. My research will focus towards empirical substantiation of the affects and implications of Morphing.

The study includes methodologies that corporate world can device to develop strategic measures to target potential customers based on individual cognitive styles. The study also includes an analysis of the online advertising industry trends, interviews & perspectives of industry thought leaders, and business models of the future.

Thesis Supervisor: Glen L. Urban
Title: David Austin Professor of Marketing

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SAMPLE ABSTRACT PAGE for MFIN

Thesis Title as Submitted to the MIT Registrar

By

John Smith

Submitted to MIT Sloan School of Management
on May 10, 2013 in Partial Fulfillment of the
requirements for the Degree of Master of Finance.

ABSTRACT

Today's age of information centric globalization over the Internet requires customer awareness by not only good content communication, but also trust and empathy. Trust and Empathy can be generated only when the sellers understand customers. This is only possible when sellers are aware about how the customers conceive the advertisement presented to them over the web. Fortunately, this knowledge is facilitated by analyzing customer buying behavior and understanding the cognitive behavior of the customer using cognitive engines and stochastic measures. My research will focus towards empirical substantiation of the affects and implications of Morphing.

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Thesis Supervisor: Glen L. Urban
Title: David Austin Professor of Marketing

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SAMPLE ABSTRACT PAGE for MBA/SLOAN FELLOW

Thesis Title as Submitted to the MIT Registrar

By

John Smith

Submitted to MIT Sloan School of Management
on May 10, 2013 in Partial Fulfillment of the
requirements for the Degree of Master of Business Administration.

ABSTRACT

Today's age of information centric globalization over the Internet requires customer awareness by not only good content communication, but also trust and empathy. Trust and Empathy can be generated only when the sellers understand customers. This is only possible when sellers are aware about how the customers conceive the advertisement presented to them over the web. Fortunately, this knowledge is facilitated by analyzing customer buying behavior and understanding the cognitive behavior of the customer using cognitive engines and stochastic measures. My research will focus towards empirical substantiation of the affects and implications of Morphing.

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Thesis Supervisor: Glen L. Urban
Title: David Austin Professor of Marketing

SAMPLE

SAMPLE ABSTRACT PAGE for LGO

Thesis Title as Submitted to the MIT Registrar

By

John Smith

Submitted to MIT Sloan School of Management
on May 10, 2013 in Partial Fulfillment of the
requirements for the Degree of Master of Business Administration
and [list your other degree].

ABSTRACT

Today's age of information centric globalization over the Internet requires customer awareness by not only good content communication, but also trust and empathy. Trust and Empathy can be generated only when the sellers understand customers. This is only possible when sellers are aware about how the customers conceive the advertisement presented to them over the web. Fortunately, this knowledge is facilitated by analyzing customer buying behavior and understanding the cognitive behavior of the customer using cognitive engines and stochastic measures. My research will focus towards empirical substantiation of the affects and implications of Morphing.

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Thesis Supervisor: Glen L. Urban
Title: David Austin Professor of Marketing

SAMPLE

APPENDIX E

2011-2012 THESIS TITLES AND ADVISORS

AY 2011-2012 Thesis Titles and Advisors

Program	Last Name	First Name	Thesis Title	Advisor	
LGO	Alfano	Edward	Reducing Complexity in Biomanufacturing Operations through Single-Use Assemblies	Roy	Welsch
LGO	Anito	Mary	Is the Pharmaceutical Industry Ready for Value Based Procurement?	Roy	Welsch
LGO	Ball	Braden	Simulation as a Method for Determining Inventory Classifications for Allocation	Stephen	Graves
LGO	Balwani	Siddharth	Operational Efficiency through Resource Planning Optimization and Work Process Improvement	Donald	Rosenfield
LGO	Bolgren	Daniel	High Reliability Performance in Amgen Engineering	Steven	Spear
LGO	Bonnefoi Monroy	Tatiana	Demand Forecast for Short Life Cycle Product: Zara Case Study	Stephen	Graves
LGO	Cavazos Cavazos	Jose	Mergers and Acquisitions Process Improvement in a Matrix Organization	Vahram	Erdekian
LGO	Chen	Jason	787 Mid-body Job Precedence Networks for Improving Production Rate	Steven	Spear
LGO	Chou	Cheng-Lung	A Proposed Approach to Assess Supply Chain Risks to Meet the New Challenges in the Defense Industry	Roy	Welsch
LGO	Christensen	Benjamin	Improving ICU Patient Flow through Discrete-Event Simulation	Retsef	Levi
LGO	Christensen	Daniel	Overcoming Obstacles to Lean in a Repair Operation	Roy	Welsch
LGO	Chuang	Pamela	Impact of Shipping Ball-Grid-Array Notebook Processors in Tape and Reel on the PC Supply Chain	Donald	Rosenfield
LGO	Conway	John	Evaluation of Environmental Foot Printing Techniques	Roy	Welsch
LGO	Daigh	Sarah	Helicopter Final Assembly Critical Path Analysis	Roy	Welsch
LGO	Drake	Bryan	Enabling Strategic Fulfillment: A Decision Support Tool for Fulfillment Network Optimization	Stephen	Graves
LGO	Franken	Joseph	Improved Supplier Selection and Cost Management for Globalized Automobile Production	Donald	Rosenfield
LGO	Garvin	Christopher	Alignment Strategies for Drug Product Process Development and Manufacturing	Roy	Welsch
LGO	Gentiletti	Andrea	Design and Optimization of Global Distribution Supply Chain at McCain Foods	Donald	Rosenfield
LGO	Gimlin	Richard	Workflow Management & Visibility Tool Definition and Implementation for International SKU Creation Process	Donald	Rosenfield
LGO	Grillon	Louis	Creation and Sustainment of Manufacturing Technology Roadmaps	Steven	Eppinger
LGO	Hendrickson	Brian	A Lightweight Method for Improving Coordination in Distributed, High-Variability Product Companies	Donald	Rosenfield
LGO	Hilliard	David	Achieving and Sustaining an Optimal Product Portfolio in the Healthcare Industry through SKU Rationalization, Complexity Costing, and Dashboards	Donald	Rosenfield
LGO	Hollander	Marnix	Evaluating Future Biopharmaceutical Inspection Needs, Infrastructure Capability Gaps, and Technology Development Strategies	Douglas	Hart
LGO	Johnson	Marcus	Implementation of a Manufacturing Technology Roadmapping Initiative	Warren	Seering
LGO	Kang	Annie	Creating Supply Chain Visibility: A Case Study on Extending Intel's Unit Level Traceability to Customers	Donald	Rosenfield
LGO	Lanza	Leonora	Understanding the Dynamics of Organizational and Process Complexity: A Case Study in the Pharmaceutical Industry	Roy	Welsch
LGO	Lee	Esther	Global Demand Transparency in ABB Supply Chain	Donald	Rosenfield
LGO	Lieberman	Jeremy	Reduction of Rework at a Large Aerospace Manufacturer	Roy	Welsch
LGO	Liu	Edward	Business Case Assessment of Unmanned Systems Level of Autonomy	Roy	Welsch
LGO	McKenney	Kurtis	Sustainable Approach to Achieving Energy Efficiency in Manufacturing Operations	Steven	Eppinger
LGO	Millerd	Paul	Driving Cycle Time Reduction Through An Improved Material Flow Process In The Electronics Assembly Manufacturing Cell	Roy	Welsch
LGO	Mody	Amil	Improving the Risk Identification Process for a Global Supply Chain	Donald	Rosenfield
LGO	Ng	Chong Keat	Inbound Supply Chain Optimization and Process Improvement	Donald	Rosenfield
LGO	Patel	Jalpa	Optimization-Based Decision Support System for Retail Sourcing	Donald	Rosenfield
LGO	Reveley	Matthew	A Capacity Planning Methodology for Aerospace Parts Manufacturing in a High-Mix, Low-Volume Environment	Roy	Welsch
LGO	Riechel	Patrick	A Phased Approach to Distribution Network Optimization Given Incremental Supply Chain Change	Donald	Rosenfield
LGO	Rothman	Craig	Objective Assessment of Manufacturing Technology Investments	Roy	Welsch
LGO	Rowan	Brandon	Study of the Role of Strategically Managed Inventory (SMI) in the Caterpillar Supply Chain	Donald	Rosenfield
LGO	Schwartz	Trevor	Improving Surgical Patient Flow in a Congested Recovery Area	Retsef	Levi
LGO	Sham	Gregory	Developing a Data-Driven Approach for Improving Operating Room Scheduling Processes	Vivek	Farias

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Program	Last Name	First Name	Thesis Title	Advisor	
LGO	Sheth	Neel	Quantifying the Impact of Customer Allocations on Supply Chain Performance	Donald	Rosenfield
LGO	Smith	Sally	A Network Planning Process and Inventory Strategy for High-Mix Low-Volume Markets	Donald	Rosenfield
LGO	Stoddard	Steven	Project Process Mapping: Evaluation, Selection, Implementation, and Assessment of Energy Cost Reduction Opportunities in Manufacturing	Welsch	Roy
LGO	Vento	Michael	aVoilà: Optimizing and Evaluating Procurement Paths across the Commercial Aviation Product Life Cycle	Donald	Rosenfield
LGO	Williams	Christina	Integration of Technical Operations and Quality Teams to Build Site Unification	Roy	Welsch
LGO	Xu	Ethan	Defining New Business Models for the Mobile Device Supply Chain	Donald	Rosenfield
LGO	Zehavi	Limor	Evaluating Demand Planning Strategies in the Retail Channel	Roy	Welsch
MBA	Bottino	Felipe	The Brazilian Pension System from an Innovative Perspective	Robert	Merton
MBA	Copp	Joshua	Bridging the "Valley of Death" in stratified medicine: Commercializing Molecular Diagnostics in Oncology	Earnst	Berndt
MBA	Hartley	Alice	Sustainability in the Product Cycle: Development of a Shared Standard for the Apparel Industry	Matthew	Amengual
MBA	Murphy	Shannon	Leviathan's Double Bottom Line: Sovereign Wealth Funds as Tools of Strategic Statecraft	Elena	Obukhova
MSMS	Bae	Il Tack	Managing the Paradigm Shift to Mobile Platforms in the Semiconductor Industry	Jason	Davis
MSMS	Barary Savadkoohi	Farnaz	Personalized Online Promotions: Long-term Impacts on Customer Behavior	Juanjuan	Zhang
MSMS	Blaszczuk	Krzysztof	Investment Opportunities in Green Technology Real Estate Projects	Henry	Weil
MSMS	Bouygues	Leonard	Openness at Google: Perspectives from Theory and Practice	Scott	Stern
MSMS	Caballero Parra	Luis	Strategic Analysis of Mobile Money Ventures in Developing Countries	Jason	Davis
MSMS	Chandrasekaran	Abhijit	Impact of Money Market Funds on Commercial Paper Markets in United States and South Korea	Jun	Pan
MSMS	Chekanskiy	Sergey	Collective Intelligence in Financial Markets: Does Consumer Sentiment Affect Valuation of Financial Products	Peter	Gloor
MSMS	Chen	Jian	Exploring Online Retailing Strategies: Case Studies of Leading Firms in the U.S. and China	Michael	Cusumano
MSMS	Francois	Sebastien	Challenges for Internationalization Models: the Case of E-Commerce Ventures’ Informal Internationalization	Scott	Stern
MSMS	Gharbi	Moez	Challenges and Opportunities in the Tunisian Private Equity Sector	S.P.	Kothari
MSMS	Harwood	Catherine	An Analysis of Russian Equity Capital Markets	Roberto	Rigobon
MSMS	Iskender	Gokhan	Turkish e-Government Transformation: A Country Analysis Based on Efforts, Problems and Solutions	Michael	Cusumano
MSMS	Khait	Maria	Forecasting Future Economic Growth: Term Structure of Interest Rates, Volatility and Inflation as Leading Indicators	Doug	Breeden
MSMS	Knudsen Salazar	Vagn	Emerging Trends in the Satellite Industry	James	Utterback
MSMS	Lo	Matthew	A Strategic and Financial Analysis of the DRAM Industry	Michael	Cusumano
MSMS	Lu	Adrian	Seeds of Growth: The Challenges of Venture Capital in the Australian Landscape	Michael	Cusumano
MSMS	Nam	Joongkwon	Importance of "Stakeholder Approach" in Service Industry	Jason	Davis
MSMS	Ogunsanwo	Olumide	The Changing Competitive Landscape of the Smartphone Industry	Henry	Weil
MSMS	Sevil Esteban	Angel	Interaction Model of Private Equity and Venture Capital Developing Factors in Chile and Latin America	Stewart	Myers
MSMS	Sharma	Pranab	Identifying Disruptive Customers to Nurture for Long Term Growth	Sharmila	Chatterjee
MSMS	Sinha	Prasanta	Non-Linear Revenue Creating Business Platform for IT Service Companies Using Cloud Computing	Michael	Cusumano
MSMS	Teran Aguilar	Marco	Corporate Entrepreneurship Programs: Practices and Their Implications in Developing Economies	Valentin	Livada
Sloan Fellows	Yevgeniy	Alexeyev	Prospects for Application of US Shale Gas Technology in Eastern Europe: Legal, Economic and Environmental Concerns Poland Vs. Ukraine	Weil	Henry
Sloan Fellows	Burdiles Orellana	Sergio	Process Innovation by Working Miners: A Case of User Innovation in Copper Mining Industry	John	Van Maanen
Sloan Fellows	Cardenas	Fernando	“Business Elevators”: An Innovative Model for Accelerating Growth of SMEs in Developing Markets	Retsef	Levi
Sloan Fellows	German	Thomas	Zero Emission Passenger Vehicles in The United States, Anticipating Future Automobile Industry Trends Based on Stakeholder Interview Analysis	John	Van Maanen
Sloan Fellows	Hillie	Kenneth	Strategic Management of Innovation and Entrepreneurship Framework Applied to the South African Nanotechnology Flagship Projects	Fiona	Murray

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Program	Last Name	First Name	Thesis Title	Advisor	
Sloan Fellows	Kurtz	Kristel	Sponsorship and Career Progression in the Consulting Industry	John	Van Maanen
Sloan Fellows	Lonza Robledo	Carlos Jose J	Technological Change in the Salmon Farming Industry in Chile: Using Investment Decision Tools to Model an Innovation Path and a Framework for Developing a New Technology	John	Van Maanen
Sloan Fellows	McGuigan-Lewis	Alison	International Entrepreneurship	Rick	Locke
Sloan Fellows	Okada	Tomohiko	Human Resources Management in Japan: Before and After the 1990s	John	Van Maanen
Sloan Fellows	Oshi	Tomoko	Innovation Performance, Policy, and Infrastructure: A Comparison of Japan and the U.S.	John	Van Maanen
Sloan Fellows	Swarna	Kailash	The Evaluation of System-Wide Financial Incentives in Pipeline Decisions in the Pharmaceutical and Biotechnology Industry: The Paradox of R&D Spend vs. New Drug Approvals	Andrew	Lo
Sloan Fellows	Tanaka	Jin	Acquisition and Management of Technology-Based Firms in a Trading and Investment Company	Michael	Cusumano
Sloan Fellows	Williamson	Jeffrey	Employee Retention in the Federal Government; A Case Study of the United States Postal Service	John	Van Maanen

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- ☐ Submit an additional copy of **signed title page and abstract** (can be photocopied on regular paper)
- ☐ Deliver your grade sheet (downloaded from Stellar) to your MIT Sloan faculty advisor

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