

Proposal for Faculty/Student Research Project Project No. One

Topic: A National Retrospective Study of Technology-Based Regional Economies

The Applied Research Problem

Since the mid-1980s, a number of states have launched various public-private-university partnership programs designed to foster technology-based economic development. These have included: (1) manufacturing extension programs designed to assist small sub-tier suppliers in improving processes, systems and workforce; (2) programs to enhance technology commercialization and technology transfer function at research universities (patenting, licensing, startup companies); and (3) programs to seed major R&D initiatives that are trying to exploit new areas of science and technology with great potential (e.g., biotech, advanced materials). The State Science and Technology Institute (www.ssti.org) has been a clearinghouse organization for chronicling these activities for over 15 years.

The research problem here is to try to understand why there is great variance in the extent to which these programs are implemented and sustained. The lore is that many programs – involving alleged investments of many millions – never even get off the ground, other limp along for a few years, and still others (e.g., Georgia Research Alliance, Ben Franklin Partnership, Arkansas Science and Technology Alliance) survive and thrive, and can demonstrate significant impacts at the project level.

In effect this is a study of what determines the life and death of these types of initiatives. Results would presumably have implication for understanding “best practices” (or worst practices for that matter) in how to do this, which is of considerable interest to many states as well as leaders of high tech industry. It could also have implications in a larger context for understanding how any technology-focused organizational change survives – or not.

Prospective Role of the Faculty Technical Advisor

This is an area in which the faculty member has worked and published for over 25 years and the proposed project is one that he would play a major role working in collaboration with an MBA or EMP student. This would be a side-by-side working relationship, with the faculty member and the student working closely on a frequent basis. The faculty would work actively to develop the project proposal, guide the necessary literature review, and work with the student to develop measures and methods.

Anything Else?

If this can be pulled off, and there is reason to believe it can, there will be a research article or monograph that will result. Authorship would be shared, and generally follow the ethical guidelines of the APA Publications Manual. There is also a strong likelihood that LT will use the early results and approach as the basis of a grant proposal to the National Science Foundation and/or other potential funding agencies. The graduate student involved could be part of that process, if he/she so desired.



Proposal for Faculty/Student Research Project Project No. Two

Topic: Cost analysis and Life Cycle Assessment (LCA) of virgin (PET) and Recycled PET (RPET) used by Wal-Mart Stores for fresh produce packaging.

Research Project Description

Student would need to evaluate the business model by Wal-Mart requiring companies to meet the requirements of sustainability score card. The student must understand the cost of using recycled content versus virgin as well as LCA for each material in the supply chain. Recent articles in the Wall Street Journal have questioned Wal-Mart initiatives and citing high costs to U.S. based small business while foreign manufactures make false claims of recycled content. Wal-Mart is not monitoring material type or sources from these outside vendors with many false statements being made by these vendors with respect to percent post-consumer.

Assistance would be needed to write a peer-reviewed journal article using economic and supply chain data (to be gathered by the student) in conjunction with analytical data (currently being gathered by IT grad student) for percent post-consumer content of imported RPET products and LCA.

Qualifications

An MBA or EMP student with a supply chain background or interest in international business and outsourcing. Preference will be given to students who will be in their program of study more than 1 year.

Anything Else?

This project is currently being funded by a large domestic resin manufacturer claiming the Wal-Mart mandate unfairly penalizes U.S. manufacturers. This mandate requiring fresh produce suppliers to use recycled packaging from foreign suppliers is not being monitored by Wal-Mart for false advertising claims.

Proposal for Faculty/Student Research Project Project Nos. Three, Four and Five

The following are three research projects that I am currently working on, each of which can be an intriguing research project and a learning opportunity for a graduate student. Each project is likely to result in one or more scientific journal publication.

3. *Creativity: Designing, managing and sustaining creative behavior at the work place.*

Research on creativity in the workplace has generally focused on the role of work factors, such as empowerment or support for innovation, in encouraging employees to generate new ideas. Yet, one of the elements that received limited attention centers on how can creative behavior and performance be sustained. This research project will focus on exploring the design requirement, design dimensions and managerial competencies that are needed in order to facilitate long lasting creativity in organizations.

4. *Sustainable work systems: The managerial challenge*

The Brundtland report to the UN twenty years ago defined sustainability as the general worldview that 'people should strive to fulfill their needs without endangering the possibility that the future generations may fulfill their needs'. This definition of sustainability emphasizes protecting the richness of the world's resources through their preservation, re-generation and development. It led to the term 'the triple bottom line' focusing ecological, social and economic sustainability, where 'social' includes both individual and collective human and social resources. Work organizations have a responsibility to sustain the human and social resources engaged in their operations. While promoting their own existence, work organizations should concurrently enable the personal and professional development of their employees. This research project will focus on the development of a set of organization design principles that enhance sustainability as well as explore alternative planned change programs that were utilized to facilitate sustainable development.

5. *Innovative regions: A global comparative study*

Science-based, commercially successful product innovations represent a highly desirable but extremely hard-won fusion of scientific and business knowledge. The capability of a region to bring about that fusion varies considerably and, as a consequence, so does their economic growth and prosperity. This research project will conduct a preliminary comparative investigation of 5-6 innovative regions (from different parts of the world) and attempt to articulate a generic model of the innovative region.

Proposal for Faculty/Student Research Project Project Nos. Six and Seven

Research Project Description

I am conducting research on the role that emotion and intuition play in decision-making and leadership. I anticipate conducting two types of research projects that could greatly benefit from the help of graduate students, and in turn, be of interest to them:

6. Short experiments with undergraduate or graduate students on how specific emotions, such as anger and fear, influence managerial decision-making. On this project, I anticipate needing the help of graduate students to:
 - **Run the experiments (mostly)**
 - Help with the statistical analysis of the results (possibly)
 - Research the literature on emotion and decision-making (possibly)

7. Qualitative study of military leaders making tactical decisions under stress in the field. On this project, I anticipate needing the help of graduate students to:
 - **Analyze and code videotapes and audiotapes of military leaders making critical decisions in the field (mostly)**
 - Gather data in the field, such as filming military training exercises and interviewing military leaders after the fact (possibly)
 - Research the literature on emotion and decision-making (possibly)

Qualifications

I am looking for hard-working, motivated students who are interested in people management and research. Knowledge of psychology is a plus (especially the field of emotion and/or decision-making), but not required. Research experience (e.g. assisting in research) is a plus, but not required. For the 1st project (experiments), quantitative skills are a plus (knowing how to perform statistical analyzes on software packages such as SPSS), but certainly not required. For the 2nd project, interviewing skills (active listening, empathy) are a plus, but not required. These projects should be of interest to any student interesting in psychology, management, consulting, or research.

Proposal for Faculty/Student Research Project Project Nos. Eight and Nine

8. ZONING VARIANCES: MISUSE AND ABUSE OF ZONING

SUMMARY: Zoning laws were originally feared, because landowners viewed land use restrictions as an inappropriate interference with private landowner rights. Over the course of time, the benefits of zoning became clear, with communities benefiting from even handed application of land uses (e.g. agriculture, commercial, and high/low density residential) as well as land use restrictions, such as building height and size. Zoning laws effectively create a societal contract, where each landowner within a designated zone is bound by zoning restrictions, as are the other owners within the zone. The current trend is for this societal contract to be frequently breached. Zoning has transformed from a non-discriminatory and uniform set of land use laws into a horrid mish-mash of variances, exceptions, and grants of special privilege. These special privileges are typically granted by appointed, rather than elected, local planning commissions and zoning review boards (collectively, "zoning boards"). Appeals are typically handled by local elected officials who appointed the underlying zoning board. The lack of expertise by local zoning boards, coupled with the pursuit of self interest rather than furtherance of the public good, is problematic in the context of zoning variances. When there is judicial review of a variance, the courts extend too much deference to the zoning boards.

STUDENT RESEARCH ASPECTS: This research project has two important tangents, which would justify two students working on each independent component.

(1) **STATISTICAL COMPONENT:** The number, type, and frequency of approvals granted for variances must be investigated. As the supporting data will be in public records, the "legwork" will involve assembling the facts. A national sampling would be preferable, but a focus on California and the Central Coast would be suitable and acceptable. This is not a mere assembly of data, but would also involve statistical analysis as well. A student with an interest in statistics would add valuable expertise to the project.

(2) **LEGAL COMPONENT:** The California standards of legal review for zoning boards needs to be reviewed and evaluated. This will involve research into statutes and case law, where I can offer tremendous assistance. Revisions to the current law will be proposed, and the potential of an expert administrative agency for zoning variances will be explored. A student with an interest in land use planning, public policy, or law will find this portion of the project to be rewarding.

STUDENT DELIVERABLES: The student deliverables will include copies of supporting materials, along with a well crafted analysis. The student(s) will be required to critically analyze the issues and to draft a "law review quality" statement of the assigned issues. Extensive writing will be required in reporting research results, as well as attaching supporting research documentation. The student would likely find that an average of 14 hours per week is required to fully complete the required work.

OTHER INFORMATION: If the student deliverables are of substantially excellent caliber, serious consideration will be given to inclusion of some student drafted portion(s) with an acknowledgement of assistance, such as a footnote with acknowledgement of assistance by the named student. Although it would be a rare event, if the caliber of work is of outstanding academic quality, consideration will be given to naming the student(s) as co-author(s), and if published, this would be a tremendous addition to the resume of the student(s).

9. PROTECTION OF WILDLIFE CORRIDORS

SUMMARY: Throughout the United States, farmland, forests, and other undeveloped land is undergoing a transition of being converted to residential housing and havens for "big box stores." Wildlife pays the biggest price in this process, not only by losing precious habitats, but also by being subjected to having trails and corridors disrupted by streets and highways. Nowhere in the land use planning or environmental review process is there any provision to protect these wildlife trails or corridors, leading to the horrible loss of animals with the resultant "road kill" caused by poor human planning.

This research project and resulting paper will propose that proper land use planning and environmental compliance compels us to consider animal pathways and to provide appropriate pathways protection for animals to safely migrate under or over roadways.

STUDENT RESEARCH ASPECTS: I have already commenced research in this area and have a student currently performing research and analysis on this topic, but additional analysis of statutes and regulations (especially environmental and land use laws) is necessary. The student will:

- (1) Assist in performing additional research on the topic, including a thorough analysis of federal and state environmental laws and land use planning laws;
- (2) Assist in obtaining background and implementation information about the Canadian activities in protecting animal pathways in Banff National Park; and
- (3) Aid in preparing a compelling argument for such protection of animals.

STUDENT DELIVERABLES: The student deliverables will include copies of statutes, ordinances, and court filings, along with the student's own briefing of those materials. The student will be required to critically analyze the issues of land use and environmental protection. Extensive writing will be required in reporting research results, as well as attaching supporting research documentation. If performed over one academic quarter, the student would likely find that an average of 14 hours per week is required to fully complete the required work.

OTHER INFORMATION: This is an opportunity to get involved in a creative, original concept, and to "make a difference." An MBA student who is interested in real estate, land development, regional planning, and environmental issues will likely gain the greatest reward from this project. It is preferable for the student(s) to assist in drafting the article, and if such work is of acceptable caliber, serious consideration will be given to inclusion of some student drafted portion(s) with an acknowledgement of assistance, such as a footnote with acknowledgement of assistance by the named student. Although it would be a rare event, if the caliber of work is of outstanding academic quality, consideration will be given to naming the student(s) as co-author(s), and if published, this would be a tremendous addition to the resume of the student(s).



Proposal for Faculty/Student Research Project Project No. Ten

The Economic Impact of Cal Poly on the city and county of San Luis Obispo

This project will update a study first done in 1990, and most recently done in 2004.

This involves updating a study on the Economic Impact of Cal Poly on the City and County of SLO. It involves obtaining information from different people across campus (Cal Poly Fiscal Affairs, ASI, the Foundation, the Corporation, Alumni Association, etc.) and analyzing it using a model that past student teams and I have developed.

The publication and release of this study usually receives a lot of attention from local media, since it reaffirms the significant impact that Cal Poly has on the local economy. It also receives excellent cooperation from the on-campus entities who supply the data, since it represents a major piece of positive news regarding Cal Poly's impact in the community.

Part of the analysis involves using "IMPLAN" software, which is the standard method of estimating direct, indirect, and induced economic impacts, including jobs created, tax revenues generated, and overall economic impact. So this could be of interest to students with an interest in community development, economic development, or finance.

This could be done by one student, with significant input on my part, or by a team of students.. I would prefer that it be done as a Winter or Spring quarter project so that all the data from the previous year can be included.

**Proposal for Faculty/Student Research Project
Project No. Eleven**

The research project would be a continuation of another project I currently have under review at the “Financial Analyst Journal” (see abstract at the end of the memo). In particular, the study would investigate how financial analysts derive long-term earnings growth forecasts for firms they cover, and what role long-term earnings growth forecasts play in the valuation models they use. The contribution of the project would be to: (i) understand the optimistic bias in the long-term earnings growth forecasts, (ii) test market efficiency using abnormal return models exploiting the bias, and (iii) make suggestions in how to reduce the bias, which would benefit academic studies that use long-term earnings growth as a proxy and investors that rely on analyst investment advice. This project would greatly benefit students seeking a position in the investment banking industry as it covers stock market efficiency research and how accounting/finance information are incorporated into equity valuation and forecasts. It would also benefit students interested in forensic accounting and securities litigation work, as the bias in analyst outputs is examined.

If the project is significantly moved forward it may result in a working paper at the end of the quarter, with student as co-author. The student may even consider a PhD degree after completion of the project ☺

The project would involve the following stages:

Detail of project	Professor’s deliverables	Student deliverables	Time commitment
Analysis of financial analyst reports on the use long-term earnings growth forecasts	<p>Give student an overview of research area and importance</p> <p>Specify sample period, sample firms and financial analysts and download reports from Investext database</p> <p>Determine search criteria for data collection</p>	<p>Read some seminal papers in analyst research, and discuss contribution of the project.</p> <p>Read reports and code criteria into sub-categories based on criteria determined in prior research.</p>	Similar to a 4 unit class,
Testing the hypotheses using the collected data	Provide econometric models and explain to student how to use statistical and data management software	Arrange data so it can be imported into statistical software, and test the hypotheses based on the theory. The student will also have to use data management software	This part of the study moves away from data collection, and allows student to <u>go beyond application of knowledge</u> , and rather think critically about learned material. This should be greatly_relevant for practice. Emphasis on professor-student discussion.

		(Excel), or based on experience SAS or other programming language to arrange the data and test the hypotheses.	
Write up and presentation of results	Tie all the analysis together and guide student through scientific reasoning and writing	Draft of results and presentation in class/ brown bag of results. The student will have to write up the results and draw conclusions from the findings.	The time commitment will be reduced. However, the presentation of results will take considerable preparation time.

The academic background, qualifications, interest, etc., of the student(s)

A student with a bachelor in Finance/ Accounting or Economics would be preferred. As work experience in the Finance or Accounting industry, with the student's ambition for jobs in that industry after the MBA, would benefit the students understanding of finance/accounting research issues. It could also lead to a strong Alumni relationship as the student should obtain an appreciation for business research which could lead to collaborations among faculty and industry.

However, a student with a computer science or engineering background could contribute programming support and data analysis support to the project, and could get an appreciation for the finance/ accounting industry, which may result in job opportunities after the degree.

Other

The project is a continuation of another project I have been working on, and has high publication potential (please see abstract below). A highly motivated student may be able to obtain an internship at an Equity Research firm in San Diego.

Abstract: This study investigates the self-selection of analysts' long-term earnings growth (LTG) forecasts. I find that analysts who forecast LTG differ in their ability, characteristics, information environment and incentive structure from analysts who do not forecast LTG. Specifically, I find that analyst's forecasting LTG (i) have higher predictive ability; (ii) more experience, follow fewer firms, and have more resources available; (iii) have more private information; and (iv) worked prior the Regulation FD period for brokers with underwriter relationships (post Regulation FD these incentives conflicts disappear). Tests of firm characteristics reveal that analysts' selective forecasting behaviour is not dependent on whether firms have (i) high earnings volatility or (ii) high market-to-book ratios. Analysts issuing LTG forecasts tend to pick larger firms with high intangible asset bases. These findings are intriguing as it shows that analysts are more likely to issue LTG forecasts for firms with future growth prospects that cannot be captured by short-term earnings forecasts.

**Proposal for Faculty/Student Research Project
Project No. Twelve**

**Profitability Through Product Packaging, Consumers Perceptions of Price,
and Retailer Acceptability**

Description

Two faculty are seeking a self motivated graduate student to assist on a research project. The research project is going to study the impact of packaging on consumer price perceptions. The study looks at how premium packaging commands a premium price even when there is little difference in the actual product. The goal is to use packaging to increase profitability for firms. An example of the product could be bottled water where you see a tremendous difference in price between product offerings but little difference in the product evaluation at purchase.

Beyond that during the study the packaging will have to be evaluated for its carbon footprint because some retailers such as Wal-Mart are more likely to accept a low footprint product.

We are interested in a study to investigate the issue of packaging on product profitability. We want to approach the study from two perspectives: 1) premium pricing and 2) environmentally friendly packaging. Products with unusual or premium packaging command premium pricing due to their packaging. Examples include bottled water that is packaged in an array of elaborate bottles. Pricing for water varies from \$0.59 to \$3.99 for a product that consumers are unable to evaluate in a pre-purchase venue. The difference consumers evaluate is the product's package. This is true of many consumer product categories. The present study investigates attributes of packaging that consumers perceive as having higher perceptions of value, thus warranting a price premium. By combining the preferred attribute study with a packaging cost feasibility study a firm will have resulting higher profitability. The study must go one step further and investigate the impact of the packaging on the environment. This is done so that the firm can sell their product at firms such as WalMart where an environmental footprint score is assigned before a product can be sold.

The result will be a product that will command a higher price for increased profitability, with lower packaging costs, resulting in higher perceptions of value by the consumer, and a product with a low environmental footprint with high retailer acceptability.

The research is intended for the Journal of Marketing