Research Portfolio

Ohio University
College of Business
Department of Management

M. Khurrum S. Bhutta Ph.D.

2015
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Research Statement

In my opinion research is one of the highest forms of creativity in a faculty member’s life besides teaching. The research idea and the end product – research paper; is solely his/her creation. This creation advances the knowledge although in small increments, but they belong to the researcher. The reward of seeing the product in print and your name referenced in others’ works is immeasurable. Yet a higher level of reward is the pleasure in sharing one’s research with students and colleagues. These are the motivating factors for me.

I believe in the philosophy of continuous improvement. This approach means that there is always room for proposing new methods of analyses, extension of concepts into other areas (horizontal scope), integration with other areas (vertical scope), creating a new body of knowledge, and conducting applied research to leverage economy of scope and scale. And thus just as organizations create new sources of innovation, effective researchers should constantly search for new frontiers to tackle.

I conduct mostly applied research. Perhaps my engineering background and experience has influenced me. Nonetheless, the research that I have undertaken so far could be applied in the industry. I have done extensive research in the following areas which has come to fruition; having published several papers in well-respected journals.

The following represent my current research interests;

**Lean Management:** I have recently begun a research stream on lean management practices. This stream of research has stemmed from my other research interests in operation efficiencies in firms and more specifically SMEs. Talking to executives and managers in the field evolved into the search of techniques to help improve the operational efficiencies and waste reduction strategies. I have already published one paper in a string of articles and working on 2 others.

**Global Supply Chain Management:** My dissertation focused on modeling global facility location decisions incorporating micro and macro-economic issues. Associated with this line of research, I have in the recent past begun to consider implications for developing countries and have firmed research links with colleagues in developing countries to study the changes being brought there, as a consequence of globalization.

**Supplier Selection:** Numerous techniques have been used in the past to consider the supplier selection and evaluation method. My research has focused on these techniques and I have attempted to classify them based on various criteria; another important aspect of Supplier Selection is the role of Information Technology/systems, I have ongoing empirical research to study the impact of IT/IS, focusing on SMEs.

**Small and Medium Enterprises:** A natural evolution of the previous two areas of research, SME’s has taken a prominent importance in my research interests. Research into the global supply chains and their supply chains, especially from the developing world; one cannot ignore the role that SME’s play. Specifically, my research has focused on interaction of operations strategies and the health of these firms; and the role that SMEs play in their respective value chains.
Efficient Consumer Response: Efficient Consumer Response is an approach to replenish products by increasing efforts on inventory control, lowering costs and improving customer service. Some issues that I have focused on include: the global barriers faced in the implementation of ECR, Technology issues.

Benchmarking: Benchmarking is a process of comparing oneself to the ‘best-in-class’. Past research considered the role of Benchmarking in organizations and a framework was proposed that provided an integrated approach to the Benchmarking process; recent research includes the creation of “Knowledge Cells” and “Intellectual Capital Webs” in organizations as means of transferring knowledge both within and between organizations.

In addition to these focused areas, I have also adopted a multidisciplinary approach to my research; working with colleagues from other disciplines on topics of mutual interest. This includes articles in topics such as online privacy, spam, e-taxation systems and knowledge management.

I have also participated in writing grants and obtaining funding for various projects. While at Nicholls State I participated in six grants out of which four received funding totaling over $150,000. I was the principal investigator of a grant that was awarded over $77,000.


Another way that I gauge if I am doing research in relevant topics is by considering the impact that I have on fellow researchers. My research has already been cited over 375 times in various journals including Decision Sciences, European Journal of Operational Research, International Journal of Production Research, European Journal of Operational Research, Benchmarking: An International Journal, Supply Chain Management: An International Journal and International Journal of Production Economics.

Research Collaborations

I am currently working on several manuscripts with colleagues here at Ohio University and other universities. I mentor junior faculty in developing research streams and extending their body of knowledge, for example I am currently mentoring Dr. Ana Rosado-Feger (Assistant Professor - COB).

1. I am working with Dr. Ana Rosado-Feger (Assistant Professor - COB) on several projects
   a. One of the projects involves looking at the Operations of Small and Medium Enterprises in a developing country and trying to understand the impact of these operations on the firm’s performance. This study will involve the use of Structural Equation Modeling. We
have presented a paper at a national conference based on this research and are currently working to refine our manuscript for submission to a journal.

b. Another stream of research looks at the impact of Lean Management on firms. We have a paper in print based on this work and are working on 2 other possible manuscripts.

c. The impact of “Buy Local” purchasing practices on the supply chain structure of the Athens, Ohio foodshed. We are working with local producers, processors, and commercial buyers of local agricultural products to understand how their commitment to purchase from “local” suppliers has influenced the development of a thriving food supply chain in an area not traditionally known for agriculture, including the focus on distributed production, organic methods, and incorporation of underutilized local products into the food chain. We submitted a College of Business Seed Grant application for this project. This project also involves Dr Amy Taylor-Bianco (Associate Professor - COB).

2. I am collaborating with Dr Amy Taylor-Bianco (Associate Professor - COB) on two projects one looking at Social Entrepreneurial Leadership issues and on a second project looking at values-based leadership of the rural Appalachian community determined to create a sustainable local food economy in the Appalachian region. This research will help us to better understand and replicate what areas of strategic local food initiatives are utilizing successfully and what can be done to further enhance their success in an area that has a true need for a stable supply of staple foods. My role in this research is to investigate the supply chain implications of the local food industry.

In addition to these projects I also continue to work with colleagues and friends outside Ohio University. Presently I am collaborating on the following manuscripts:

3. Dr Adnan Omar (Southern University of New Orleans) on a manuscript involving Sustainability.

I also regularly collaborate with faculty at Lahore University of Management Science. Among the faculty I have worked with are Dr’s Arif Rana, Jamshed Khan, Jawaid Ghani and Kamran Chatha.

4. The most recent of these collaborations is with Dr Kamran Chatha. We are collaborating on lean management practices in Pakistani firms.

5. I also work with my graduate students on research ideas helping them develop their own streams of research; one such collaboration is with Can Celikbilek, we are working on a facility location paper.

Summary

I have TWENTY (27) Refereed Journal Articles to my credit along TWO (2) book chapters and THIRTY THREE (38) Conference proceedings and Presentations.

Since joining Ohio University, I have Fifteen (15) articles [Numbered 1-15 in the next section] a Book Chapter and Two (2) Teaching Cases to my credit. I have also had Eleven (11) papers/abstracts presented at well-respected conferences.
I continue to be actively engaged within my field and continue to look for opportunities to extend the depth and breadth of my intellectual curiosity. My goals for the next five years include continuing to write quality papers with the aim to publish in top quality journals in my field.

As evidence to what I have accomplished in the recent past I was the recipient of the *Excellence in Research* award twice at Nicholls in 2005 & 2007. I present below a summary of my contributions.
**Summary of Intellectual Contributions**

I have **TWENTY SEVEN (27)** Refereed Journal Articles to my credit along with numerous Conference proceedings and Presentations.

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Joined Ohio University in 2008
## Journal Rankings

Based on the College of Business journal rankings (2015) my manuscripts fall in the following categories.

<table>
<thead>
<tr>
<th>Journals</th>
<th>2015 Ranking</th>
<th>Comments</th>
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<tbody>
<tr>
<td>International Journal of Production Economics</td>
<td>Top</td>
<td>Under Review</td>
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<tr>
<td>International Journal of Production Economics</td>
<td>Top</td>
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<tr>
<td>Supply Chain Management: An International Journal</td>
<td>Top</td>
<td>Multiple Articles</td>
</tr>
<tr>
<td>Journal of Manufacturing Technology Management</td>
<td>High Quality</td>
<td>Multiple Articles</td>
</tr>
<tr>
<td>Academy of Information and Management Sciences Journal</td>
<td>Acceptable</td>
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<tr>
<td>Benchmarking An International Journal</td>
<td>Acceptable</td>
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<tr>
<td>Economics Research International</td>
<td>Acceptable</td>
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<td>Electronic Government: An International Journal</td>
<td>Acceptable</td>
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<tr>
<td>Information Systems Education Journal</td>
<td>Acceptable</td>
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<tr>
<td>International Journal of Business Continuity and Risk Management</td>
<td>Acceptable</td>
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<tr>
<td>International Journal of Entrepreneurship and Small Business</td>
<td>Acceptable</td>
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<tr>
<td>International Journal of Indian Culture and Business Management</td>
<td>Acceptable</td>
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<td>International Journal of Integrated Supply Management</td>
<td>Acceptable</td>
<td>Multiple Articles</td>
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<tr>
<td>International Journal of Knowledge, Culture and Change Management</td>
<td>Acceptable</td>
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<tr>
<td>International Journal of Management Practice</td>
<td>Acceptable</td>
<td>Multiple Articles</td>
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<tr>
<td>International Journal of Service and Operations Management</td>
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<td>International Journal of Technology, Policy and Management</td>
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<td>Journal of International Business Research</td>
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<tr>
<td>Journal of Small Business and Enterprise Development</td>
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*Journal rankings list in the COB were revised/updated in Aug 2014 and the categories for journals changed to reflect the most current academic rankings of journals, these new journal rankings list can be found at http://aspnet.cob.ohio.edu/isms/cobContent.aspx?5073.*

**Abstract:** This paper presents a two objective mixed binary integer linear programming model and a search routine solution method is proposed using a Service Factory environment with multi-processor workstations and a constant daily workload, for employee scheduling, number of machines per station, and makespan minimization objectives. The search routine is simple enough to be implemented by managers using readily available spreadsheet programs. Solution of the four station Service Factory formulation yielded results for improvement in the makespan of the shop. This search routine can be used by management in streamlining and optimizing the Service Factory production environment as exemplified in the four station case, and could also be applied to multi-processor flow shops.


**Abstract:** This paper proposes a heuristic approach to solving the problem of allocating surplus shelf and floor space in warehouses for the purpose of improving customer service as well as reducing costs. Frequently warehouse managers find themselves with surplus space and it may be possible to improve customer service and reduce costs by relocating some of the items to the surplus space. This may be particularly true after the receipt of a new shipment. In addition to relocating items in the primary warehouse this paper also considers relocating items from secondary storage locations. A case study is presented to demonstrate the efficiency of the proposed approach and results are encouraging.


**Abstract:** This research looks at the changing perceptions of e-commerce by Indian consumers. Literature study was done to understand and what are the factors (demographic or otherwise) that have been playing a role in online buying patterns and behavior. Researchers decided to gauge the mood of the buyers and decided to conduct a survey and follow (observe) a live case i.e. launch of Moto G exclusively on flipkart. This case study is presented to illustrate these changes and support research findings derived from the survey. Motorola’s recent launch of its Moto G smart phone through Flipkart (an online retailer), provides interesting insights to the changing behaviors in an Indian buying scenario.


Abstract: For Pakistani firms to remain competitive in the 21st century, they have to embrace and excel in practices that have brought considerable competitive advantages to firms in the developed world. Among these practices, world class manufacturing (WCM), lean management and just-in-time (JIT), just to name a few, have played a considerable role. A systematic approach needs to be devised to assess the level of adoption of these practices. In this research, we limit our observations to lean management practices. It is the objective of this research to gauge the level of adoption of lean management practices in the manufacturing sector in Pakistan and more specifically to the textile industry.


Abstract: Over the recent past, the global market of electrical and electronic equipment (EEE) has grown exponentially, while the lifespan of these products has become increasingly shorter. More of these products are ending up in rubbish dumps and recycling centers, posing a new challenge to policy makers. The purpose of this paper is to provide a review of the e-Waste problem and to put forward an estimation technique to calculate the growth of e-Waste.


Abstract: It has been suggested that much of the potential inefficiencies associated with supply chain management costs can be traced to wasteful practices such as inefficient, unnecessary or redundant stocking practices, or inefficient transportation. This paper developments a simulation model which reconciles many of these inefficiencies by integrating production factors, purchasing, inventory and trucking decisions for optimizing supply chain costs between first and second tier suppliers and subsequent OEM customers. There are two key issues in the process of optimizing costs: plant economics and transportation between parties. In an effort to determine the significance of the transportation component of the proposed model, we differentially test the fully-developed model, including standard production variables varying transportation costs, paired with similar instances of the model in which the transportation costs are fixed. Significant differences are found in the predictive abilities of the respective models, and this supplies pragmatic evidence of the important role that transportation issues play in the consideration of integrated supply chain management costs.

8. Tejinder Sharma, Suresh Kumar Turka, M. Khurrum S. Bhutta, Vivek S. Natarajan, Location Strategies Of Dairy Plants In India, International Journal of Indian Culture and Business Management.

Abstract: Competing for a perennial supply of milk is a major factor influencing dairy plants, and theoretically, they must be positioned at an optimum distance between themselves in order to sustain their profitability. However, the location optimized on economic variables seldom corresponds with the actual location of a dairy plant as the final selection is an outcome of a complex set of variables, both objective and subjective in nature. The paper models the influence of various the subjective and objective factors on location strategies of the dairy plants in India. Data on the objective variables, comprising of the geographic and economic parameters was collected from the secondary sources, while that on the psychographic/subjective variables of decision makers was collected by means of a questionnaire-based survey of a sample of dairy units located in North India.

Findings indicate that the demographic factors, represented as population density, employment and literacy emerge as the most significant influencers of the choice of a manufacturing location of small, medium and large scale units. The population serves the twin purpose of being an input to the manufacturing operations as well as the market for consumption of the manufactured output. Amongst the subjective variables, the site specific and micro factors,
comprising of regulatory framework and the site-specific fixed costs score over the macro factors while selecting a location.


Abstract: Text messaging or short message service (SMS) was created during the late 1980s to work with a digital technology called global system for mobile communications (GSM), which is the basis for most modern cell phones, has grown into a multi-billion dollar investment. Text messaging is gaining popularity as an advertising standard because it is relatively inexpensive and allows businesses to reach out to consumers who find it a convenient tool in their everyday lives. Business executives use text messaging for time-critical and very sensitive communication. It is considered the most valuable communication tool by business executives in most advanced markets. This technology is used by 1.8 billion people daily. It was estimated that over 100 billion dollars would be generated in revenue as a result of the use of text messaging (Ahonen & Moore, 2007). The objective of this study is first to analyze some of the ways SMS is being used in business globally. Then forecast the number of the SMS user based on giving data using the Linear Regression Equation.


Abstract: There is an increasing recognition of the potential contribution of Small and Medium Enterprises (SMEs) towards employment and economic growth in Pakistan. Unfortunately SMEs have a high mortality rate. A survey was conducted of the executive heads (CEO, Chairman, MD, GM, etc.) of target organisations and information related to different functions of SMEs was collected to try to identify the characteristics that make an SME successful. This paper presents the results.


Abstract: Unsolicited commercial e-mail, or spam, is an ever-growing problem in today’s increasingly digital world. Spam comprises an amazing 40% of all internet e-mails with an annual cost in excess of $30 million. With little cost and effort, one can send several thousand unsolicited messages in less than an hour. The result is not only slower internet traffic but also an unjust, costly, counterproductive and time-consuming burden on the receiver. Several attempts have been made to limit spamming and its deleterious impacts. Such efforts vary in their effectiveness and include managing and regulating e-mail traffic, employing filters, avoiding ‘junk’ e-mail lists and becoming increasingly aware of the ploys senders use to obtain e-mail addresses. This paper will discuss the problem of unsolicited bulk messaging, its magnitude and consequences, as well as potential solutions.


Abstract: Most universities view e-learning as a step to the future. In past years, universities regarded e-learning as a strategy to increase their student enrollment, retention, and quality while lowering tuition. However, after Hurricane Katrina, several Gulf Coast universities resorted to elearning as a means of providing basic education to their students. In fact, Southern University of New Orleans (SUNO) has chosen e-learning as an element of its quality enhancement program (QEP), to enhance the quality of education and instruction especially for first year freshmen. However, despite the administration of pre-mastery tests at the beginning of every semester along with an extensive workshop by the e-learning department, students still do not get motivated in their daily performance in a timely fashion. The reason behind this phenomenon is most likely the lack of good oriented learning, a deficiency in mentoring from K-12, and social-economic constraints on the students’ time. As a result, administrators and scholars
at SUNO have spent countless hours and resources addressing reasons for this lack of student participation. Pre-
tests and post-tests were administrated to measure students' learning outcomes. Data was collected to analyze the
lack of student involvement. The findings of this study will provide faculty members teaching online courses with
ways of structuring their online courses.

13. Huq Faizul, Ken Cutright, M. Khurrum S. Bhutta, Analysis of Scheduling Rules in a Flexible Job Shop with
Non-Zero Setup Costs, International Journal of Technology, Policy and Management, Volume 9, Number 2,
pp 126-147, 2009.

Abstract: This paper evaluates the scheduling of parts in a Flexible Job Shop (FJS) with non-zero setup costs, varying
arrival rates and multiple objective functions. The Shortest Processing Time (SPT), Longest Processing Time (LPT),
First-in, First-out (FIFO) and Earliest Due Date (EDD) scheduling rules are evaluated with respect to minimising the
number of early jobs and optimising the due-date performance while simultaneously approximating Just-in-Time
(JIT) inventory levels. We show in this paper that when the setup costs are not zero, depending on which objective
is given priority, different machine loading configurations optimise system performance.

14. Omar Adnan, M. Khurrum S. Bhutta, Terrance Sanchez, The Impact Of E-Taxation Policy On State And Local
Government Revenue, Electronic Government: An International Journal, Volume 6, Number 4,
2009, pp. 378 – 390

Abstract: The tax-free status of most items purchased online has resulted in significant loss of tax revenues to state
and local government. Our research indicated that the loss of taxes amounting to $13.3 billion in 2001 will rise to
$62.1 billion by 2011, unless taxation policies are changed. Changing the tax laws governing online trading is
problematic. One significant aspect concerns the one who collects the revenues: should the taxes on items
purchased online be collected by the state and local government, as is now done in traditional brick-and-mortar
trades, or should this be done by a concerted, standardised federal effort?

15. Ghani Jawaid, Arif Rana, M. Khurrum S. Bhutta, The Economics of Outsourcing in a De-integrating Industry,

Abstract: Many large firms in low scale economy industries are actively considering outsourcing options, in the face
of competition from smaller more efficient players. A framework is developed for determining which set of products
and activities to outsource and which to keep in-house supported by review of the theoretical literature and case-
studies of outsourcing decisions at two large vertically integrated footwear manufacturers in Pakistan. The
framework suggests activities being considered for outsourcing be evaluated in terms of level of proprietary
knowledge, economies of scale, inefficiencies of vertical integration, transactional costs, and the existence of reliable
vendors. It is suggested that activities with low levels of proprietary knowledge and activities where cost savings due
to outsourcing justify the increased transaction costs, should be outsourced.

16. Bhutta M. Khurrum S., Arif Rana, Usman Asad, Owner Characteristics and the Health SMEs, Journal of Small

Abstract: A major frustration for most policy researchers in the SME area is the virtual non-existence of scientific
data on this sector in the country. A survey of 651 small and medium enterprises (SME) from the manufacturing
sector of Pakistan was conducted in 2003. And statistical analysis was carried out to analyze the data. This paper
focuses on the relationship between the health indicators namely, sales/employee, increase/decrease in sales, and
investment plans and the different personal characteristics of the owner/entrepreneur. Our analysis suggests that
education; generation setting up the business; and number of partners; have significant relationship with the health
of SMEs. Health of the firm is also dependent on owner habits like watching TV, reading newspapers and using
computers for office work. Other factors like caste of the owner and occupation of the owner’s relatives were also
analyzed but no significant relationship with the health of an SME was observed. The implications of this study are
far reaching in understanding the profiles of owners of SMEs in Pakistan and how these profiles impact the profitability of the firms. To date no such study has been carried out in Pakistan. Similar studies on owner profiles have previously been carried out in other countries such as UK and US.


Abstract: The purpose of this research is to provide a window into the supply chain practices of the Small and Medium Enterprise sector in Pakistan. The Small and Medium Enterprise Center (SMEC) at the Lahore University of Management Sciences undertook a survey in 2003 to gauge the health of this sector. A survey of 650 firms in ten districts in the country was conducted. This paper presents the results and analyses of the supply chain practices of these SMEs. There is dearth of independent data and research in the field of SME’s in Pakistan. This paper provides a window to the supply chain practices of SME’s in Pakistan and will enable future researchers to use this research as a building block in understanding these practices and the factors that pertain to successful firms. The implications of this study are far reaching enabling trainers, consultants, donor agencies, and entrepreneurs in the SME sector to learn the practices of successful firms and adopt /help SMEs adopt these in their operations. This paper we report some of the results of the survey and our analysis of factors related to supply chain management practices that seem to correlate with the health of the enterprise. The analysis shows that successful firms on average had more products, more customers as well as more new customers. SMEs into exports were the healthiest and exhibited most dynamic characteristics, followed by those that sold to OEMs. Another interesting insight is that growing firms sold more directly to end users while firms with higher sales per employee sold the least to the end user. A major frustration for most policy researchers in the SME area is the virtual non-existence of scientific data on this sector in the country. This is the first survey of its kind in Pakistan.


Abstract: Efficient Consumer Response is an approach to replenishing products by increasing efforts in inventory control, lowering costs and improving customer service. It is based on integrated Electronic Data Interchange (EDI), Demand Management, Continuous Product Replenishment and Enabling Technologies that help in ordering and tracking product, and information flows. This paper depicts the various ECR initiatives and then provides a framework to study the global barriers in the implementation of ECR. The framework is based on several factors including trust, technology, macro-economics, organisation, finance and operations. This work is an initial attempt and provides a framework for future research. The literature review, though extensive, is not exhaustive and because of the dynamic nature of global commerce, the barriers identified are subject to change.


Abstract: Both industry leaders and government officials around the globe are struggling with how to address online privacy. One solution suggested by both groups within the United States is for companies to voluntarily comply with the fair information practices of Notice, Choice, Access, and Security. A content analysis of the online privacy policies of the firms in the Fortune Global 100 was conducted to determine the extent to which the most successful global companies comply with fair information practices. The results indicate that 1.2% fully comply, 87.2% partially comply and 11.6% fail to comply with one or more fair information practice.


Abstract: In this era where knowledge is seen as a key organizational and strategic resource, managing knowledge can play a key role in defining the degree of success of a venture. Knowledge retention is one important component
of a successful knowledge management plan. In this paper, we explain the workings of Upstart and show how it may be applied to meet this challenge by illustrating how it may be used to construct a network which stores organizational knowledge in an active fashion. To aid our explanation, we apply Upstart to a key business challenge—selecting among a group of suppliers. We specifically show how Upstart can store knowledge regarding an organization’s level of satisfaction with suppliers in an active fashion.


Abstract: Since efficient consumer response (ECR) was first introduced into the academic literature in 1993, it has been defined more in the sense of a system or a philosophy rather than a particular concept and stresses the complete vertical integration of the marketing channels. The purpose of this paper is to collect, categorize, and merge the existing knowledge of ECR. We explain the ECR strategies, definitions, and initiatives that were found in the academic literature. Our main contribution is the compiling and classification of the ECR academic literature.


Abstract: Classification-identifying the appropriate group to which an object belongs—is a process that is important to many aspects of business. Upstart is a mechanism that constructs a computer-based classification scheme by modeling the patterns that exist in a data set that has been separated into groups beforehand. The model that Upstart generates is structured as a network of nodes, which each serve as a linear separator for the data set. This network is composed of a single root node that is responsible for the entire data set and a number of child nodes which each serve to correct the mistakes made by the network within a specific subset of the data. Construction of an Upstart network will continue until some appropriate stopping criterion is met. We examine existing stopping criterion that may be applied to Upstart, and we present a novel stopping criterion based on the calculation of a breakeven point. This breakeven point stopping criterion will ensure that Upstart continues to build a more and more precise model of the data set until the benefits associated with the classification scheme sufficiently outweigh the costs associated with the classification scheme.


Abstract: Recently, international facilities location problems have attracted a great deal of attention in literature. Consequently, there has been an explosive growth in analytical studies in the field of facility location and, more specifically in global facility location. This paper provides a review of the existing literature with respect to factors involved in global trade and develops a taxonomy of existing analytical models. Some avenues of further research are also suggested.


Abstract: Supplier selection and evaluation has attracted serious research attention at both the academic and the practitioner levels. In this paper, an attempt is made to review the status of methodology literature in supplier selection. A total of 154 papers from 68 refereed journals were selected and reviewed. This paper provides insights to the literature by considering the breakdown of journals that have published research in this area, by classifying the literature into various categories and considering the various methods/techniques suggested in the literature. Based on the review, avenues for further research are also discussed.

Abstract: We present a mixed integer linear formulation that extends published models on multinational corporation facility location decisions by including exogenous variables such as exchange rates and tariff rates and incorporating production, distribution, and investment decisions. The model provides insights on production levels; facility configurations, distribution strategies and levels of investment needed at these facilities and explores factors that influence the facility’s configuration decisions. Several scenarios are considered based on various facility configurations and levels of exchange and tariff rates. The results obtained from these show that the model’s performance and results are in complete agreement with accepted economic theories.


Abstract: Supplier selection and evaluation are arguably one of the most critical functions for the success of an organization. Several approaches exist in the literature to objectively evaluate suppliers, including analytic hierarchy process and total cost of ownership. Analytic hierarchy process provides a framework to cope with multiple criteria situations involving supplier selection, while the total cost of ownership is a methodology and philosophy, which look beyond just the price of a purchase to better understand and manage costs in selecting and maintaining relationships with suppliers. This paper illustrates the two approaches and provides a comparison.


Abstract: The essence of benchmarking is the process of identifying the highest standards of excellence for products, services, or processes, and then making the improvements necessary to reach those standards - commonly called “best practices”. Various companies have adopted benchmarking and customized the methodology to suit their needs. A five step benchmarking model is suggested in this paper as a model to be used when undertaking a benchmarking study. Two case studies are enumerated and a comparison presented.

Other Publications and Presentations

Refereed Conference Proceedings


Presentations & Other Scholarly Activities


Books and Monographs

Book Chapters


Grants and Sponsored Research

LEQSF Enhancement Grant, Interactive Teaching Classroom in Support of the Computer Information Systems Program at Nicholls State University, 2007-2008, $77,646.29 (Principal Investigator)

LEQSF Enhancement Grant, Interactive Presentation Technologies In Support of the Computer Information Systems Program at Nicholls State University, 2006-2007, $19,552.00 (Co-Principal Investigator)

LEQSF Enhancement Grant, "Meeting the Challenge--Mobile Internet/Client Server Applications in the CIS Curriculum." 2002-2003. $53,690. (Co-Principal Investigator)

Thesis and Dissertations Committees

I am (have) serving as Committee members on several graduate students Thesis and/or Dissertations.

- **Xiaozhe Yang PhD Candidate** Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Ongoing)

- **Gökhan Egilmez** PhD. student Proposal Defense - Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Ongoing)

- **Alamzeb Khan PhD. Candidate** - Department of Chemistry and Biochemistry Ohio University (Ongoing)

- **Muhammad Kamran Mumtaz PhD Candidate** (Operations Management), Lahore University of management Sciences, Suleman Dawood School of Business, Lahore Pakistan. (Ongoing)

- **Mike Dunn Master of Science** – Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Completed 2011)

- **Rami Al Orun Master of Science** – Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Completed 2011)

- **Gökhan Egilmez Master of Science** Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Completed Summer 2011)

- **Adam Miller Master of Science** – Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Completed Summer 2012)

- **Dhurva Kurmapu Master of Science** – Department of Industrial and Systems Engineering, Russ College of Engineering and Technology (Completed Summer 2012)
Grant Proposals

Fulbright Teacher Exchange Program-Pakistan Project, 2006-2007. Grant amount $130,000 (UnFunded), (Co-Principal Investigator)

Enhanced Learning Environments Using Flexible Learning Technologies In Support Of A Master Plan In The College Of Business Administration As Nicholls State University: Phase II, 2005-2006 (Funded) (Co-Principal Investigator)

Case Studies

LUMS Case # 30-105-98-1: INTEK Computer and Management Training: Diploma Plus (with Dr Arif Rana). This exercise can be used to introduce students to MS-Project. It describes a simple project planning situation and the student gets introduced to most of the major features of MS-Project as he/she goes through the assigned questions. The exercise can also be used to introduce students to basic issues in resource leveling. Key Words: MS-Project, CPM, Resource leveling

LUMS Case # 03-806-2002-1: Angora Textiles Ltd: Product Mix Decision (with Dr Arif Rana) - The case is about finding the optimal product mix, given production and marketing constraints. Also, in developing the objective function one has to deal with the concept of differential flows. The assignment questions in the case push the student to understand the sensitivity reports. Keywords: Product mix decisions, Linear Programming, Textiles

Impact on Others

Citations

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<th>Manuscript</th>
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(Source: Google Scholar)


Global supply chains: an integrated location, production distribution and investment model for a multinational corporation operating under varying exchange rates and tariff structures 2001- *Dissertation University of Texas at Arlington*  

Continued...

**Manuscript**

**Citations**


**Bhutta M. Khurrum S, Supplier Selection Problem: Methodology Literature Review, Journal of International Technology and Information Management, Volume 12, Number 2, 2003, pp53–71. 3**

**Adnan Omar, Daff Kalulu, M. Khurrum Bhutta, Assessment of Student Outcomes in Management Information Systems Online Course, Proceedings, Information Systems Education Conference (ISECON)Conference, Phoenix AZ, 2008 3**

**Bhutta Khurrum, Supplier Selection Problem: A Classification of Methodology Literature, Proceedings, Southwest Decision Sciences Institute, Houston TX, 2003. 3**

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<td>Bhutta Khurrum, Taguchi Approach to Design of Experiments</td>
<td>Proceedings, Southwest Decision Sciences Institute, Houston TX, 2003.</td>
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<td>Tejinder Sharma, Suresh Kumar Turka, M Khurrum S. Bhutta, Vivek S. Natarajan, Location Strategies Of Dairy Plants In India</td>
<td><em>International Journal of Indian Culture and Business Management</em>, Volume 3, Number 3, 2010, pp. 239 - 259.</td>
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Total (September 01, 2012) 594