

Statement of Purpose

I Amit Desai graduated in July 1996 with a degree in Civil Engineering from Institute of Technology, Bombay. Many of my courses and research activities in the final year were in the field of Structural Engineering and Damping Techniques with a strong focus on strength of material. I am presently working in Tata Technologies India Ltd., an information technology firm that is involved in the areas of enterprise integration and CAD/CAM. I am applying for admission and financial aid to the Ph.D. program in Operations Management at the Krannert Graduate School of Management, Purdue University. Detailed information about my academic record and my research and other experience is attached to this statement.

I was introduced to mathematics and the physical sciences while at school and it was in high school that I considered a career in this area. The desire to study the applied physical sciences and mathematics prompted me to take the Joint Entrance Examination (JEE) for admission to the Indian Institutes of Technology. I was ranked in the top 0.25 % of the nearly 1,00,000 students who took the examination.

My undergraduate education at IIT Bombay has not only given me a certain set of skills but has also helped me understand my fields of interest and my academic strengths and weaknesses. This understanding has made me realize that though the applied physical sciences appeal to me, my strengths lie in applied mathematics and in abstractions of reality. In particular, I am interested in the managerial aspects of industrial and technological systems. This interest developed during my junior year seminar titled 'Productivity Management' in which I explored the relationship between manufacturing strategy and productivity improvement. I continued further research in this area through my senior year project titled 'Decision Support System for Quality Control' which sought to investigate various decision making mechanisms in the quality function and provide corresponding computer support. The project also enabled me to appreciate the interaction between manufacturing and the other functions of the firm especially information systems. The reading of certain outstanding books during the course of my research such as Skinner's 'Manufacturing in the Corporate Strategy', Deming's 'Out of the Crisis' and Goldratt's 'The Goal' finally convinced me to pursue a Ph.D. in operations management and an academic career thereafter.

My past work in the area of industrial engineering and operations research was characterized by a dichotomy of approaches. The courses that I took in this area dealt with various operational and tactical issues. The basic aim was to understand a specific problem, model the problem appropriately and find an optimal or reasonably optimal solution using the techniques of operations research. This has given me a good background in issues related to methodology, modeling, and heuristic solutions. On the other hand, my research has been oriented towards strategic issues. The basic thrust of my junior year seminar and senior year project has been 'integrative'. Through my future research efforts I would like to understand this dichotomy better.

Initially, I want to study rigorous model-based methods and do research on operational and tactical topics. After gaining a thorough grounding in these topics, I am interested in applying the same methodologies and techniques to strategic topics in operations management.

I believe that I have the qualities to be a good researcher and teacher. I am a creative person and often think in a contemplative way about various issues of practical importance. Being able to identify patterns and relationships that are not obvious to others is perhaps my greatest strength. This will prove very valuable because an integral part of being a researcher and teacher is to perceive the balance between theory and practice, analytical rigor and intuition. My communication skills are good and I like expressing ideas and concepts both in oral and written form - an ideal platform for the dissemination of knowledge in my chosen field of specialization.

The Krannert Graduate School of Management is one of the best schools of management in the world with a strong orientation towards research. The diversity of research interests in the operations management group is of particular interest to me. The eminent faculty and the individualized nature of the doctoral program will definitely bring out the best in me. I would like to reiterate that I possess the background, the ability and the motivation to make a significant contribution to Operations Management. I hope you will take a favorable decision regarding my admission to the Ph.D. program and I look forward to joining the Krannert Graduate School of Management and Purdue University.

Amit Desai