DO&IT Seminar Series
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Speaker: Barrie R. Nault, University of Calgary

Date: Friday, November 20, 2015

Time: 2:00 – 3:15 PM

Location: VMH 1206

Title: The Impact of IT on Productive Capacity and its Utilization Rate

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Abstract: The setting of production capacity through investments in IT capital and non-IT capital are key in firms' production planning and management of demand uncertainty. Capacity utilization (CU) reflects demand pressure, and we study the relationship of IT capital and non-IT capital on productive capacity and on CU examining three research questions. First is whether IT capital has a positive contribution to capacity. Second is whether IT capital is a more valuable constraint on capacity to relax than non-IT capital. Third is whether IT capital reduces CU because of its impact on capacity or whether IT increases CU by increasing efficiency. We find that IT capital is a tighter constraint on capacity than non-IT capital -- increasing IT capital expands capacity more than increasing non-IT capital. A $1M increase in IT capital is associated with a $5.22M increase in capacity for an average industry over 1987-99 and a $3.99M increase in capacity over 1998-07. Finally, since the late 1990s, both IT and non-IT capital have reduced CU. We find that a $1B increase in IT capital is associated with a 3.11% reduction in CU for an average industry from 1998-07, suggesting IT capital's capacity impact is greater than its efficiency impact.

Bio: Dr. Nault is the Robson Professor and Director of the IRC at the U of Calgary. He was previously at The Ohio State U, the U of California, and the U of Alberta. He is a graduate from UBC. He was an IS Department Editor for Management Science from 2004-07, and is a Distinguished Fellow of the INFORMS Information Systems Society.