The Chair of Logistics & Supply Chain Management is offering the following

**Project Study**

in cooperation with Aldi Süd:

**Forecast irregular demand in retailing**

**Problem definition:**
Demand forecasts play an important role in retailing. Since future demand is uncertain, a retail manager has to rely on forecasts when making order decisions. Quantitative forecast models assume that relationships from the past also hold in the future and some demand pattern can be observed. In real-life, situations may arise when demand differs from its regular pattern, for example, before and after holidays or during promotions. It can be observed that demand increases strongly during these times and then resumes its regular pattern. The objective of this study is to develop a model that forecasts demand on days with irregular demand due to holidays or promotions. The project team will be given a dataset to compare the performance of existing causal and time-series models. This comparison serves as a basis for developing a model that specifically matches the requirements of the data. The performance of the model will be measured in terms of forecast accuracy based on an ex-post forecast.

**Tasks:**
- Statistical analysis of the dataset
- Overview and comparison of quantitative forecast methods
- Develop a forecast model that fits the data using statistics software (e.g., Stata, R, MATLAB)
- Evaluate results based on forecast accuracy

**Requirements:**
The project study is for students of the study-programs TUM-BWL and TUM-WIN. Qualified candidates have a major in Supply Chain Management. The ability to work independently as well as analytical skills are required. Knowledge in modelling, optimization and simulation is helpful. The thesis should be written in English.

**Begin:** Summer term 2012

**Advisor (TUM):** Anna-Lena Beutel

For further information, contact Anna-Lena Beutel in room 1516. Any interested student, please send your application (including motivation letter, curriculum vitae and transcripts of records) by email to:

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