

Hyun-Soo Ahn
Samantha Keppler

case 3-892-759
February 21, 2025

AquaHope Clean Water Initiative: Predicting Donations— Teaching Note

Case Overview

This is a fictional data analytics case through which modeling *time* is explored and implemented. It covers the use of analytical results to justify a business decision. The protagonist believes she and her team are executing a sound plan to increase donations for highly important results, but her supervisor's analysis is showing a lack of success.

The case includes an Excel file with raw data (for students) and this teaching note includes an Excel file with the solution. Please note that students will need in-class access to regression software such as Excel or R.

Learning Objectives

After completing the case and its exercises, students will be able to:

1. Explain when and how *time* might matter for prediction problems.
2. Model *time* in multiple ways within a regression analysis.
3. Interpret *time* variables within regression analysis.
4. Leverage, translate, and effectively communicate analytical results to justify a business decision.
5. Discern when it is appropriate to revise a model and when it is not (i.e., p-hackingⁱ).

ⁱ P-value hacking, also known as data dredging, data fishing, data snooping or data butchery, is an exploitation of data analysis in order to discover patterns which would be presented as statistically significant, when in reality, there is no underlying effect. For more information visit: <https://embassy.science/wiki/Theme:6b584d4e-2c9d-4e27-b370-5fdbb983ab46>.

Published by WDI Publishing, an initiative of the William Davidson Institute (WDI) at the University of Michigan.

©2025 Hyun-Soo Ahn and Samantha Keppler. This teaching note was written by Hyun-Soo Ahn, Professor of Technology and Operations, and Samantha Keppler, Assistant Professor of Technology and Operations, both at the University of Michigan's Ross School of Business. The fictional case was prepared as the basis for class discussion rather than to illustrate either the effective or ineffective handling of a situation. The case should not be considered criticism or endorsement and should not be used as a source of primary data.