

Northwind Traders Database Analysis

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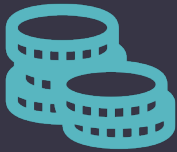
Module 3 Project Executive Summary

November 8, 2019

Problem Statement

Conduct analysis on Northwind Traders Database to identify areas for improved performance.

Business Value



Improvements to
Discount system



Employee
performance
monitoring



Evaluation of Order
Processing Time by
Shipping Companies



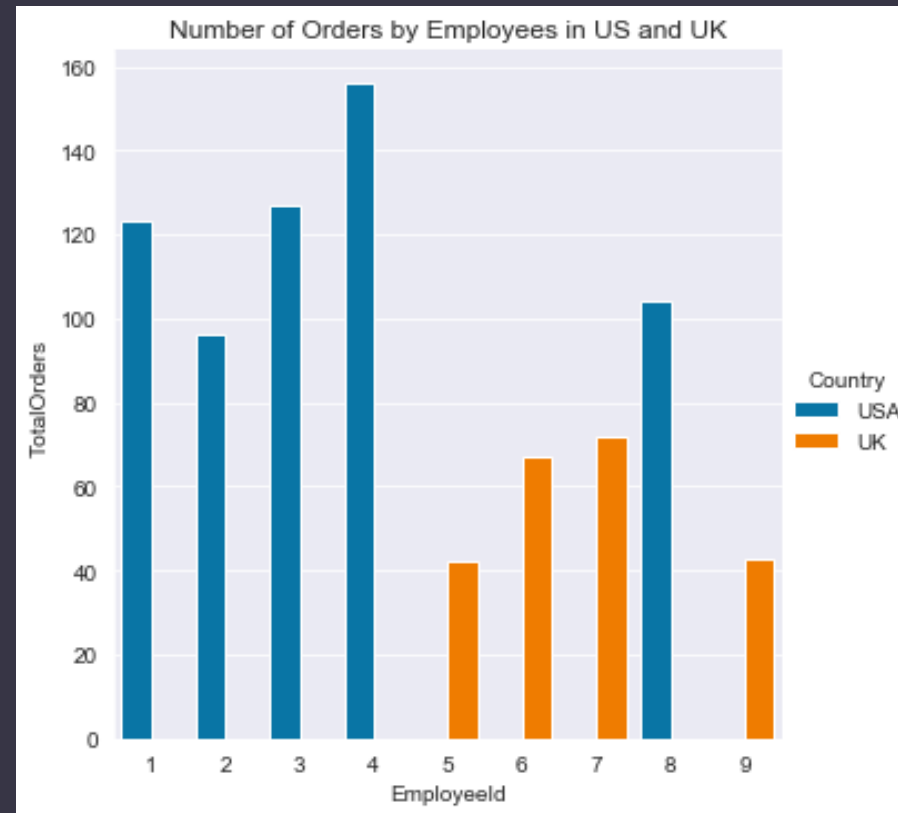
Understanding Market
Demand for certain
categories

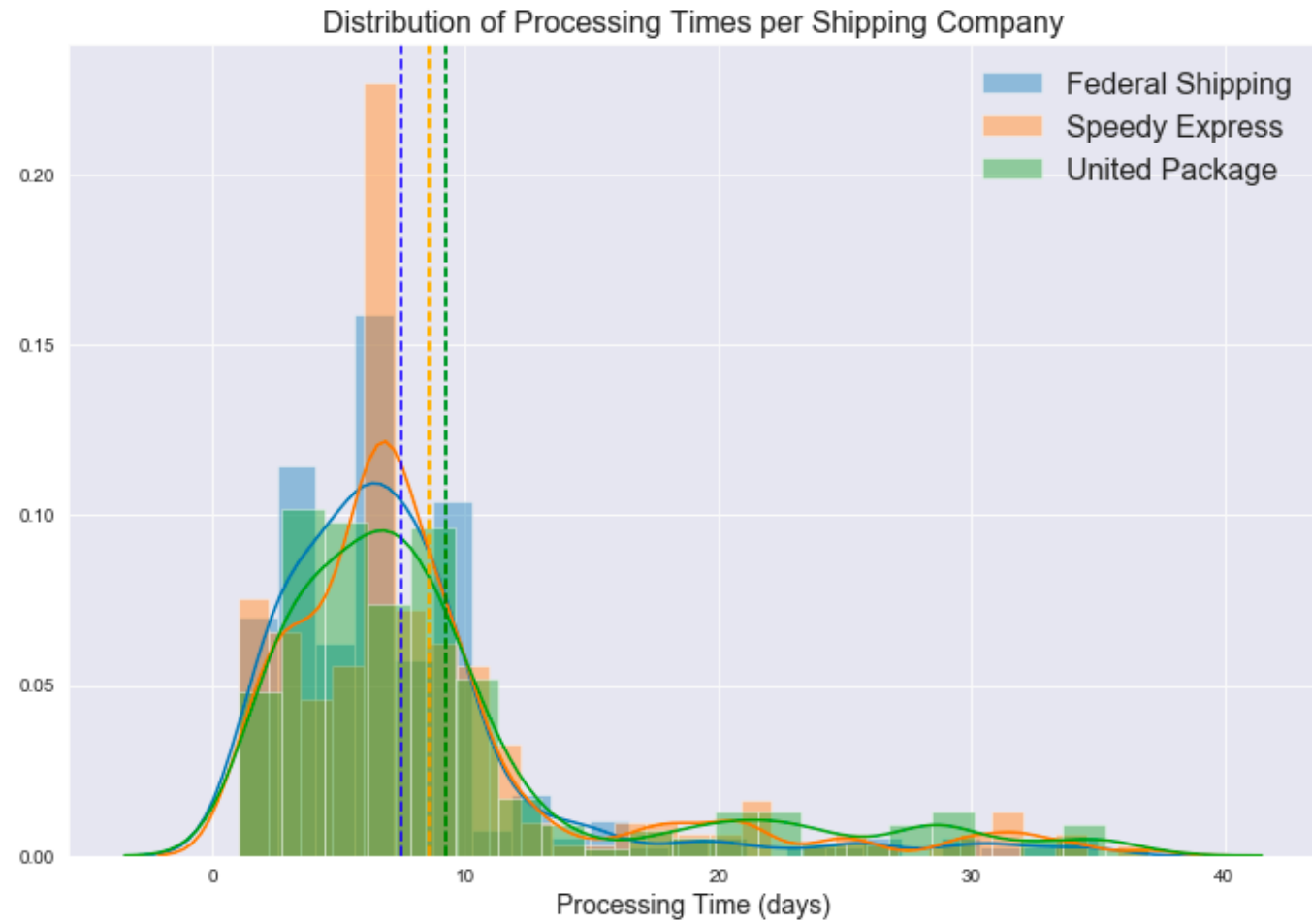
Methodology

- ▶ Hypothesis Testing
- ▶ Welch's T-Test
- ▶ Cohen's d
- ▶ ANOVA test
- ▶ Tukey's HSD Test

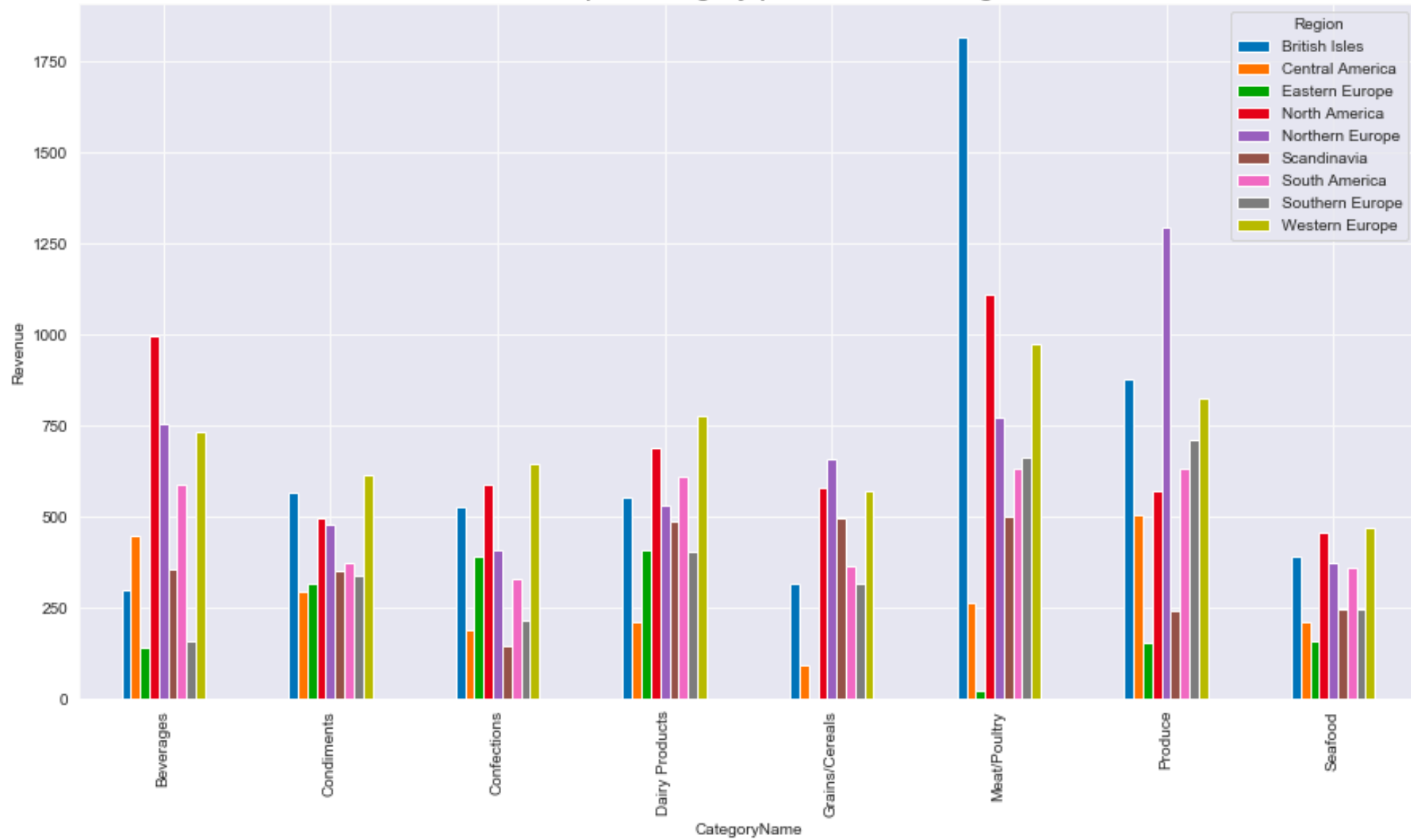
Findings

- ▶ With a discount, the average quantity ordered of a product is 27, compared to 22 *without* a discount.
- ▶ US employees manage an average order total of 121.2 orders, compared to UK employees, who average 56 orders.
- ▶ Across the 3 Shipping Companies, United Package has the lengthiest processing time of 9.2 days on average, compared to Federal Shipping's average of 7.5 days.
- ▶ There is no interaction between Category and Customer Region regarding Total Revenue per category.





Revenue per Category per Customer Region



Future Work

- ▶ Additional analysis needed to identify which categories and/or products will benefit the most from discount program (increase revenues through increased quantities ordered).
- ▶ Investigate the discrepancies between the average number of orders managed by US versus UK employees.
 - ▶ Consider issues of client satisfaction/retention, increased sales efforts, commission incentives, and defining the optimal number of orders per employee.
- ▶ Investigate options for increasing processing times for United Package.
 - ▶ Assess the process for notifying shipping company of order details.
 - ▶ Consider removing United Package as a vendor if costs and expediency of processing time can not improve.

Thank you

