

CQI

A journey through
aromatic bliss

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Business Problem



Business Problem: Enhancing Coffee Quality Evaluation



The Coffee Quality Institute (CQI), a non-profit organization dedicated to improving coffee quality worldwide, provides a wealth of data on coffee production, processing, and sensory evaluation.

This data includes crucial sensory attributes like aroma, flavor, aftertaste, acidity, body, balance, and more, each contributing to the overall Total Cup Points, which reflect the coffee's quality score.

The business challenge is to predict the Total Cup Points using these sensory features, providing valuable insights to coffee growers, roasters, and processors. By leveraging data, we can improve coffee quality standards, promote sustainability, and support the specialty coffee industry.



DEFECTS

Defects are undesirable qualities that can occur in coffee beans during processing or storage. Defects can be categorized into two categories: Category One and Category Two defects.

Category One defects are primary defects that can be perceived through visual inspection of the coffee beans.

These defects include Black beans, sour beans, insect-damaged beans, fungus-damaged beans, etc.

Category Two defects are secondary defects that are more subtle and can only be detected through tasting. These defects include Over-fermentation, staleness, rancidness, chemical taste, etc.

The primary goal of this project is to leverage the rich dataset provided by CQI to understand the factors contributing to coffee quality.

Specifically, we aim to explore the following research questions



What are the key determinants of coffee quality as evaluated through sensory attributes such as aroma, flavor, acidity, etc.?

Sum of Aroma

1.60K

Sum of Aftertaste

1.57K

Sum of Acidity

1.59K

Sum of Balance

1.58K

Sum of Body

1.58K

Sum of Flavor

1.60K

Sum of Uniformity

2.07K

Sum of Clean Cup

2K

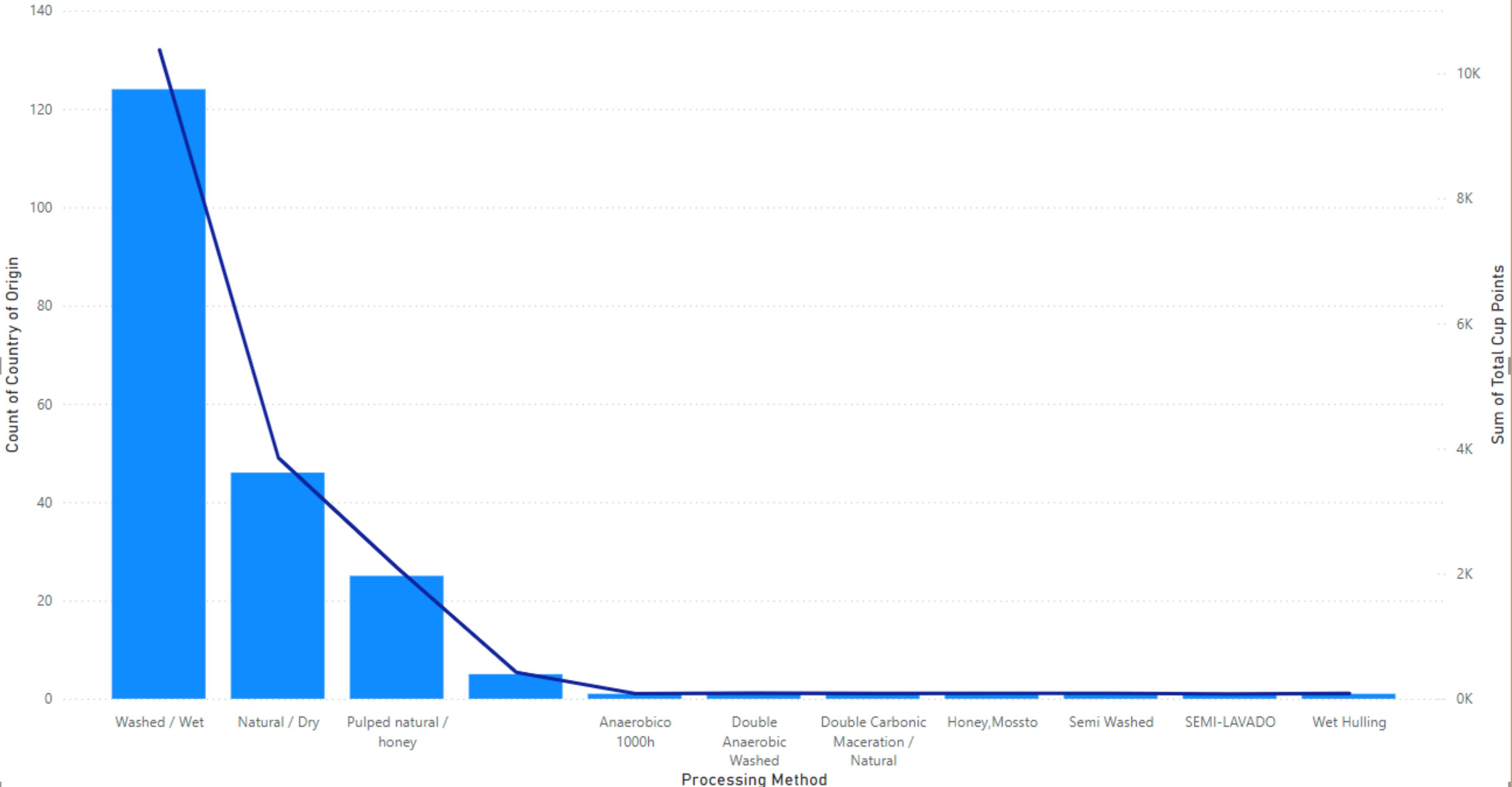
Sum of Sweetness

2K

Is there a correlation between processing methods,
origin regions, and coffee quality scores?



● Count of Country of Origin ● Sum of Total Cup Points

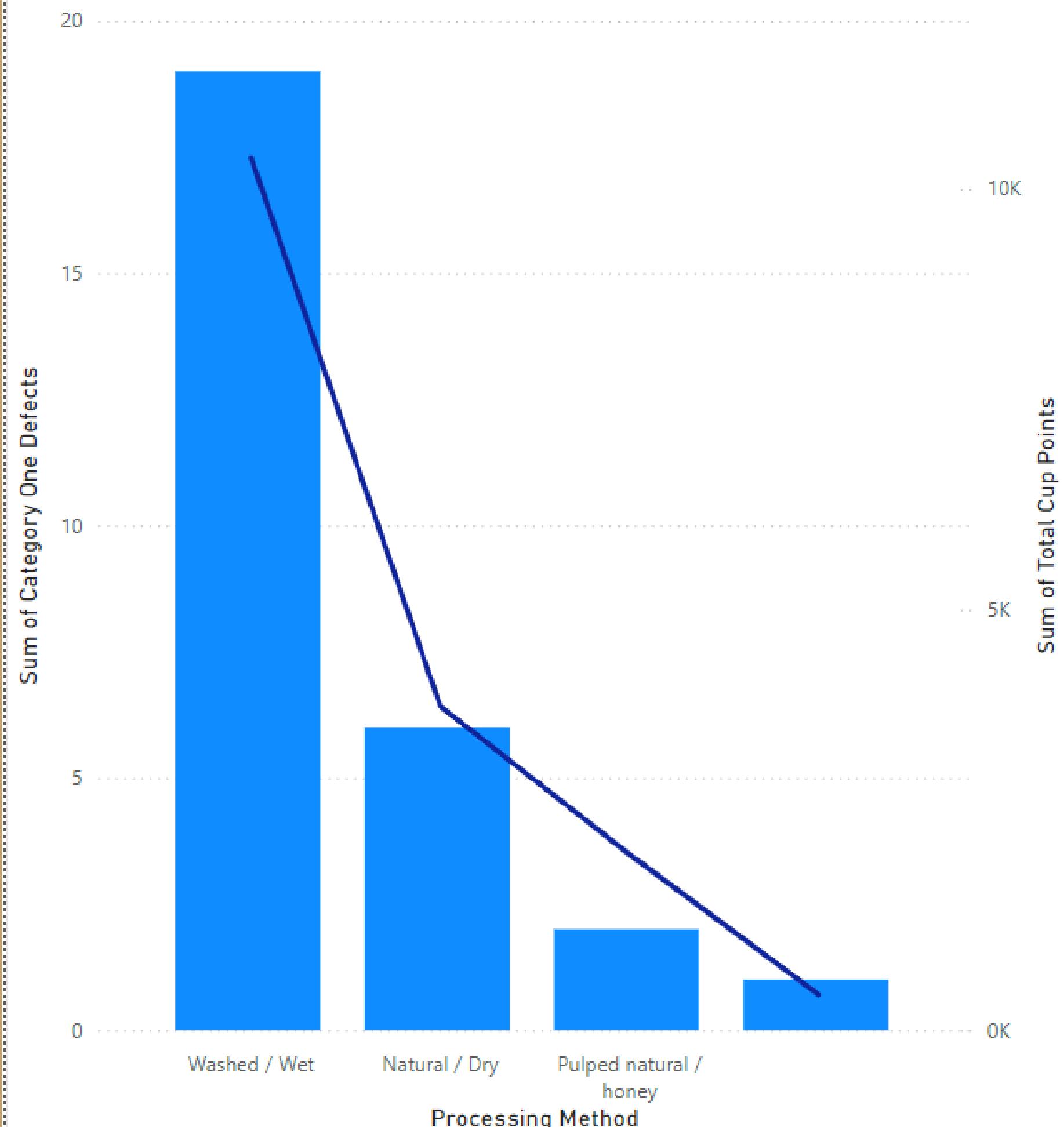


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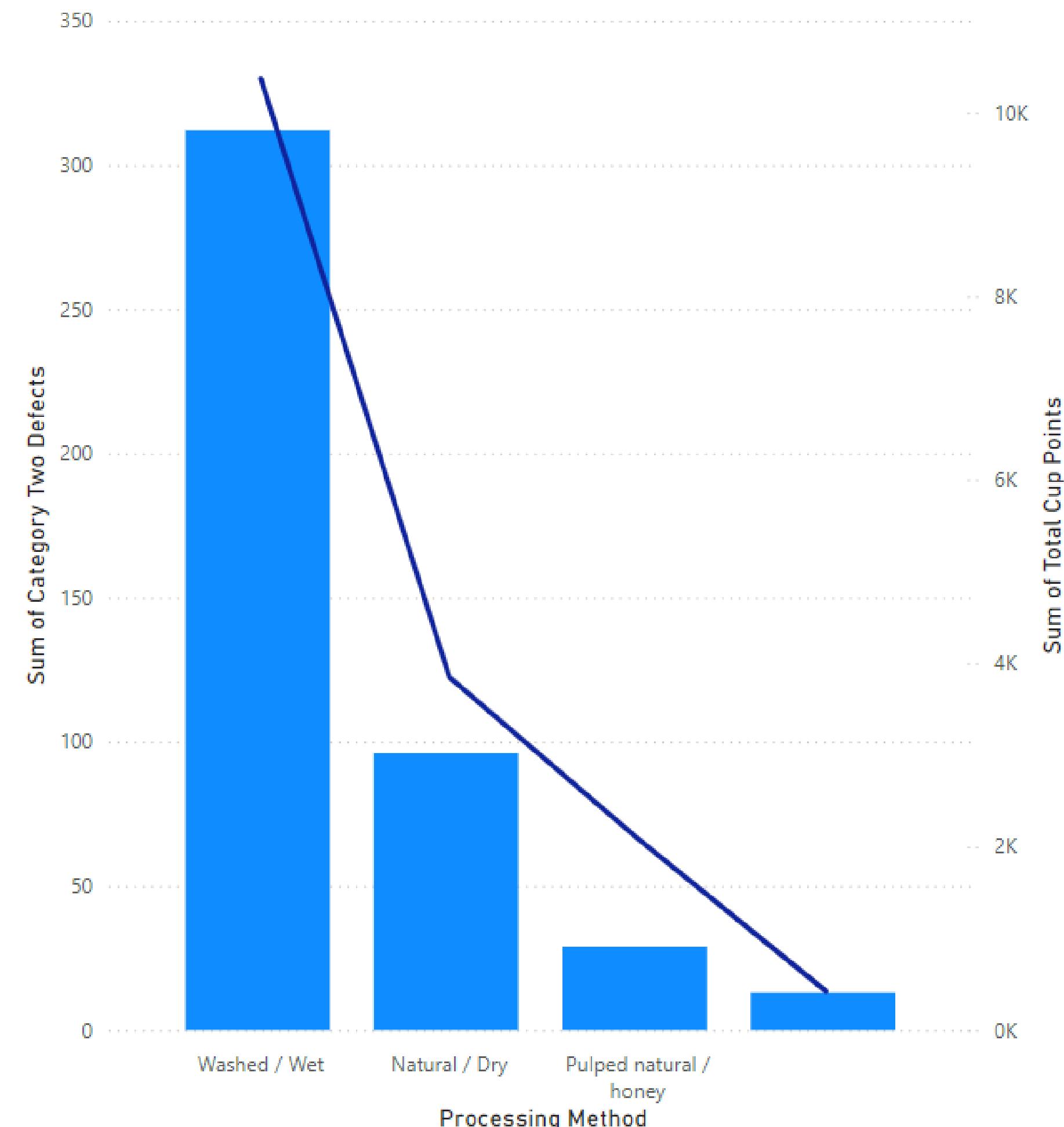
Can we identify any trends or patterns in defect occurrences and their impact on overall coffee quality?



● Sum of Category One Defects ● Sum of Total Cup Points



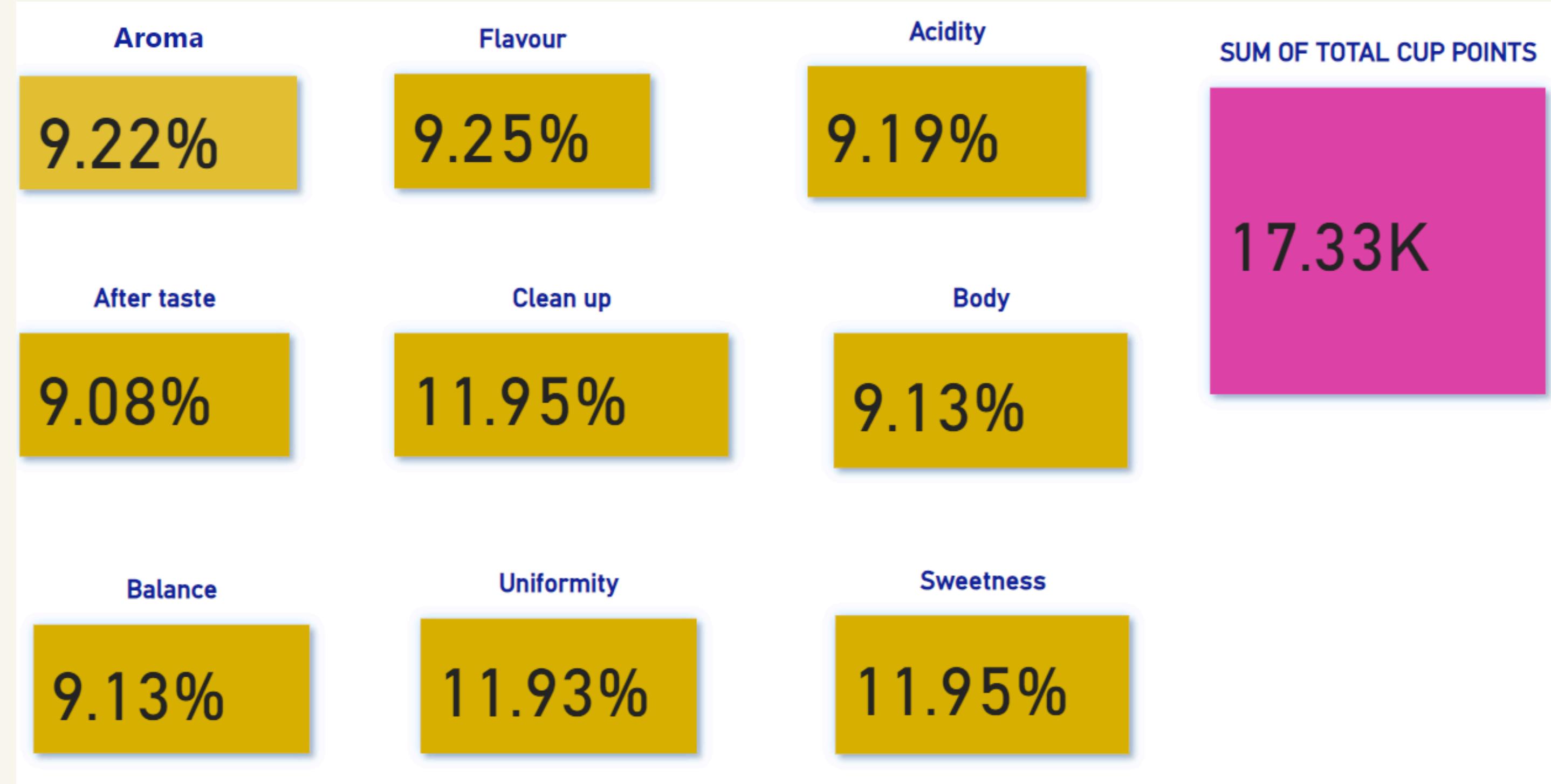
● Sum of Category Two Defects ● Sum of Total Cup Points



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How do different variables interact to influence the Total Cup Points, which represent an overall measure of coffee quality?





Thanks

