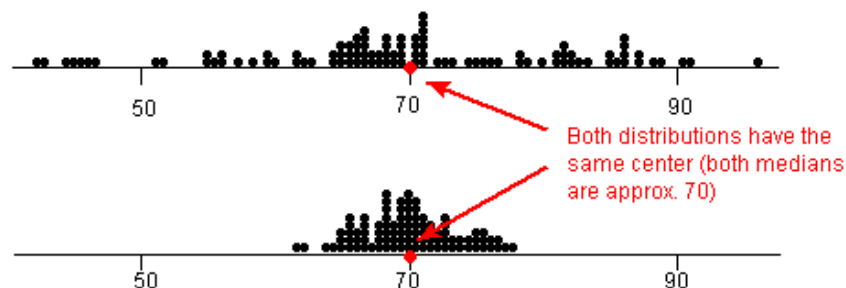Course  ›  EDA: Examining Distributions  ›  One Quantitative Variable: Measures of Spread - Range, IQR, & Outliers  ›
Measures of Spread Introduction

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## Measures of Spread Introduction

## Introduction

So far we have learned about different ways to quantify the center of a distribution. A measure of center by itself is not enough, though, to describe a distribution. Consider the following two distributions of exam scores. Both distributions are centered at 70 (the median of both distributions is approximately 70), but the distributions are quite different. The first distribution has a much larger variability in scores compared to the second one.



In order to describe the distribution, we therefore need to supplement the graphical display not only with a measure of center, but also with a measure of the variability (or spread) of the distribution.

In this section, we will discuss the three most commonly used measures of spread:

- Range

- Inter-quartile range (IQR)

- Standard deviation

Like the different measures of center, these measures provide different ways to quantify the variability of the distribution.

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