Gun Control Policy

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Hypothesis:

Gun control is effective

Warning: Law of Small Numbers

- Loose Gun Laws << Strict Gun Laws
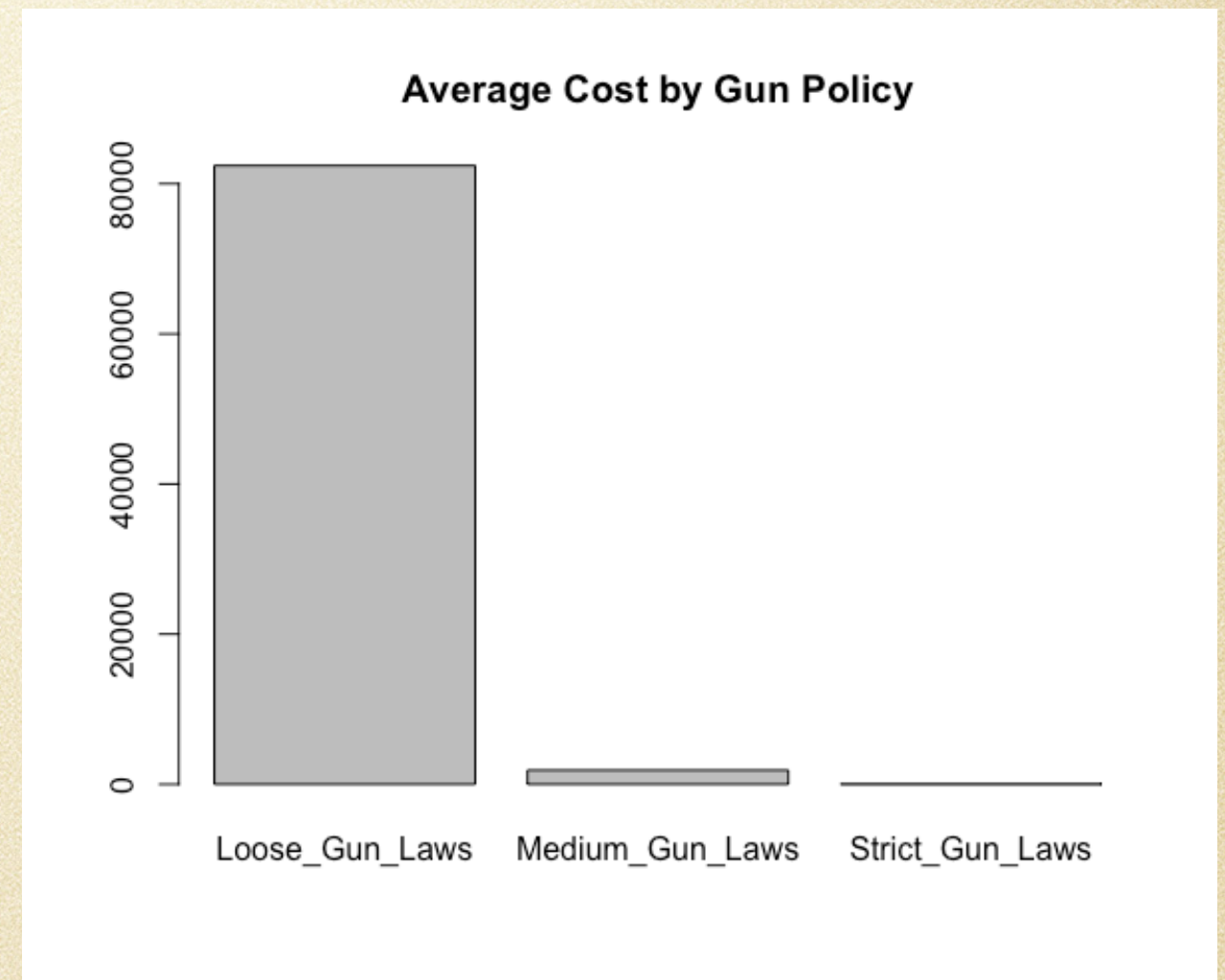
  - magnitude of 20x

Frequency of Gun Laws
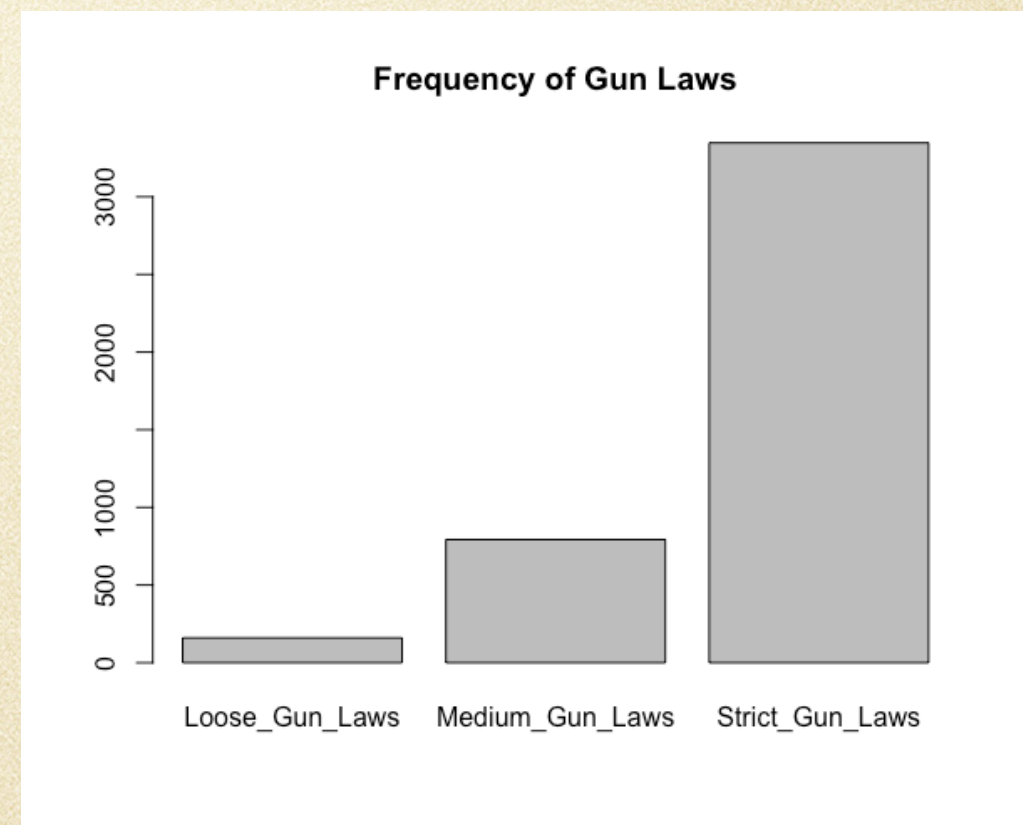
Let's explore this further...

Usage of Guns in Crime

- Loose - 160 out of 160 used gun

- Medium - 793 out of 793 used gun

- Strict - 0 out of 3,346 used gun

- Take away: law of small numbers not an issue

Monetary Damage

- <u>Significantly</u> higher average cost

- Is this because of a few outliers?

Loose_Gun_Laws	Medium_Gun_Laws	Strict_Gun_Laws
82411.71424	1874.99765	23.65553

Not Just Outliers

- Places with **loose gun control** account for:

  - Top 32 most costly robberies

  - 61 of the top 100 most costly (0 are from strict)

    - accounts for $12852968.8 / 13185874.28 = 97\%$ of net damage from the loose policy group

  - Seems unlikely to be accidental —> Permutation test

Conclusion

- Loose gun policy results in less crimes but greater average and net cost of robberies

- Permutation test of top 100 most expensive robberies, shows that there is 8e-04 likelihood medium gun laws would have higher net costs than that loose.

- Take way: Loose Gun Laws result in more expensive robberies