

BUS 123: PECO Practice Worksheet

Companion to the Research Question & Data Toolkit handout. Business Statistics Information Literacy Session.

Name: _____ Date: _____

Read the three worked examples below. Each one shows how a business observation turns into a hypothesis, then a PECO breakdown, then a final research question. Then use the template on the next page to build your own.

3 Worked Examples

Example 1: Comparing Two Groups

Interest: Some local retailers run loyalty/rewards programs and others don't.

Hypothesis: Businesses with a loyalty rewards program keep customers longer than those without one.

PECO:

P: small independent retailers

E: has a loyalty program, yes or no (the variable you think matters)

C: no loyalty program (the comparison group)

O: customer repeat-purchase rate (what you're measuring)

Research question: "Among small independent retailers, do those with a loyalty rewards program have a higher repeat-purchase rate than those without one?"

Example 2: Correlation Between Two Variables (drop the C)

Interest: Businesses that post heavily on social media seem busier.

Hypothesis: More social media ad spend is associated with higher sales.

PECO:

P: small retail businesses

E: monthly social media ad spend (the variable you think matters)

O: monthly sales revenue (what you're measuring)

Research question: "Among small retail businesses, what is the relationship between monthly social media ad spend and monthly sales revenue?"

Example 3: Comparing More Than Two Groups

Interest: A retail chain's stores sit in malls, downtown strips, and standalone buildings, and sales seem to vary.

Hypothesis: Average weekly sales differ depending on a store's location type.

PECO:

P: stores in a single retail chain

E: store location type: mall, downtown, or standalone (three categories instead of two, so C isn't needed separately)

O: average weekly sales (what you're measuring)

Research question: "Among stores in this chain, do average weekly sales differ by location type: mall, downtown, or standalone?"

Now You Try

Follow the same four steps to build your own research question. Use the library resources from the handout to check that your data actually exists before you finalize it.

Step 1. Spot something countable. What have you noticed in the business world?

Step 2. Turn it into a hypothesis (a testable prediction, not just a topic).

Step 3. Frame it with PECO.

P (Population):

E (Exposure):

C (Comparison, optional. Leave blank for a correlation question):

O (Outcome):

Step 4. Write your final research question.

Is It Workable?

Check each box that fits your question.

- ☐ **Findable:** I can realistically get this data this semester.
- ☐ **Specific:** It's narrowed to a population, industry, or timeframe.
- ☐ **Measurable:** My variables are numbers or clear categories.
- ☐ **Data-answerable:** A statistic, not an opinion, will settle it.

Partner Check

Swap worksheets with a classmate. Does their question pass all four checks above? Suggest one way to narrow or sharpen it.

Partner's name: _____

Your suggestion:
