
EMPIRICAL PROJECT

ECN 460/560

Prof. Bruce Blonigen

Due Date: Wednesday May 25

Pick one of the following projects. You may work by yourself or in groups of 2 or 3. Groups hand in just one report. Your written report for the project should be 3-4 pages double-spaced with at most 4 tables and/or graphs. For each project, giving quick answers in sequence to the questions will not be sufficient to receive a good grade. It should be a report that flows and has a logical consistent narrative. You should certainly use concepts you have learned in class to **analyze** the issues, but hypothesizing and providing evidence for alternative explanations for what you observe may be necessary as well. You are tackling issues that could take up many more pages than you are given, so spend considerable time on making your report concise and to the point. Pretend that this is a report for an important manager or policy maker who will have at most 10 minutes to read it and has not had an industrial organization class. This means it needs to start with a motivation and background for why this issue is important and good “roadmaps” along the way about what you are doing and finding. In other words, tell a good “story”.

PROJECT A: STRATEGIC BUSINESS LOCATION DECISIONS.

You have been given the assignment by your boss at Lowe’s Home Improvement, a company with hundreds of stores nationwide, to do a market analysis of the Eugene-Springfield area for a possible new Lowe’s store in this area. The key question is whether you think it would be generally profitable to enter this market with a superstore.

The following are questions and “data” that you should examine and discuss in your report:

- 1) Jerry’s Home Improvement and Home Depot have been the major players in the market. What has been the history of capacity expansion over the past ten years? (A search of Register Guard articles over time could help here)
- 2) What is the role of smaller players, such as True Value in the market, which tend to be in more densely populated areas of the city, but charge higher prices.
- 3) How does the Eugene market compare in terms of current capacity of existing players to similar-sized markets, such as Salem, Medford, Tri-Cities (WA), Boise, etc.?
- 4) How much has demand for such stores changed in the last five years nationally?
- 5) What types of games and strategic responses are possible scenarios for explaining what you observe?
- 6) **Optional:** Can you find any evidence on intensity of price competition? For example, will each player match for a customer the lowest price offered by its rivals?
- 7) **Optional:** Can you find any evidence of non-price competition? Does one firm advertise more? Advertise more in certain mediums, like the paper or television? Are there significant differences in the amenities they offer customers?
- 8) Don’t forget to answer the key question: Should you locate here?

PROJECT B: TAX INCENTIVES AND FIRM GROWTH

The West Eugene Enterprise Zone was established in 1987 to provide tax incentive for firms in a designated area in West Eugene to encourage job creation and to attract new firms. Firms that invested in their plant at least \$25,000 and created 10% more jobs were eligible for full property tax exemptions up to five years after the investment.

These “business incentive” programs by cities and states are controversial. With cities and states competing with each other for new firm investment, opponents worry that cities and states lose tax revenues to fund public works, but don’t ultimately affect firm growth or locations. This issue was particularly controversial in Eugene, with many upset at the incentive given to the high profile location of Hynix Semiconductor in the mid 1990s. As a result, the West Eugene Enterprise Zone was allowed to lapse in 1997, ten years after it began.

Despite all the controversy, there is very little evidence whether such business incentives achieve the goals they set. One of the main goals of business incentives is typically job creation. This project will address this by examining whether job growth of plants in the West Eugene Enterprise Zone grew faster than plants not in the zone, which would not have access to the property tax exemptions.

A database has been created of employee numbers for plants in 1985 before the West Eugene Enterprise Zone went into place and for those same plants in 1996 as the enterprise zone was ending. The database also has similar information on plants in Benton and Linn counties, as well as the Bend area, to get a reasonable sample of plants not in an enterprise zone. This resulted in the data sample of 170 plants that you will be using. The key question is whether employment growth is faster for firms in the West Eugene Enterprise Zone than for firms not in the zone. From the course’s website you can access an Excel spreadsheet of data and an Excel spreadsheet that gives descriptions of the variables in the database.

The following are the steps you need to take to run the basic regression to examine our key question.

- 1) Create a plant employee growth variable over the 11 year period: $(emph96-emph85)/emph85$.
- 2) The literature on factors affecting firm growth suggests to that initial firm size (in log form) is crucial as small firms grow faster than large firms. Thus, create this variable: $ln(emph85)$.
- 3) Regress (OLS) the 11-year growth variable on: $ln(emph85)$
 $inzone$
- 4) Add in other controls:
 - A) Industry dummies: *mfg, whsle, and services*
 - B) Location variables to control for local growth differences: *Benton, Bend, Eugene and Linn.*

After running the basic regression, you should address the following questions:

- 1) The coefficient on $ln(emph85)$ is statistically significant at the 1% significance level. Is the magnitude of the effect large? How would one describe its impact on the dependent variable?
- 2) Does the evidence in the initial regressions suggest that the West Eugene Enterprise Zone increases employment growth?

- 3)** The size of the enterprise zone effect may depend on whether the firm is large or small. Examine this by including an interaction between *inzone* and its interaction with $\ln(\text{emph85})$? Using the interaction term, what is the effect of enterprise zone on a firm with initial size of 10 employees versus one with 50 employees?
- 4)** Plot out the dependent variable. Is there evidence of outlier observations? What happens to the coefficient estimates when you rerun without observations of growth rates greater than 500%.
- 5)** Many would suggest that cities' tax competition for firm investment is a prisoner's dilemma for the cities. Explain this logic. To the extent that you find that firms grow faster in the West Eugene Enterprise Zone does this mean that the city should have such incentives?