An Examination of Incentives to Attract and Retain Businesses in Kentucky

by

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Introduction

• Offering incentives to businesses considering locating in a state, or to try and keep businesses from leaving a state, has become wide spread in recent years.

• One reason this remains controversial is the lack of rigorous empirical analysis of these programs assessing their effectiveness.

• The Partnership Board of the Cabinet for Economic Development contracted with CBER to produce a series of reports examining the business incentive program in Kentucky.

• This is the first of the reports.
Introduction

• In this report we:
  – Review previous studies examining incentives
  – Briefly outline the currently existing incentive programs administered by the Cabinet
  – Discuss incentive programs in neighboring states
  – Discuss the data and methodology we use to analyze the impacts of business incentives
  – Present the results from our analysis
  – Offer some conclusions based on the results and discuss issues to be examined in future reports
Introduction

- Report available at: http://gatton.uky.edu/CBER/ResearchReports.html
Kentucky’s Business Incentive Programs

• For our study we divide the incentive programs into three groups:
  – Tax Incentives (KIDA, KREDA, KJDA, KIRA)
  – Training Incentives (BSSC)
  – Financing Incentives (KEDFA, EDB)

• Will not discuss the details of the incentive programs in Kentucky.
Previous Studies

• Advantages of this study over most of the previous studies
  – County-level information on actual tax incentives received by firms in a county as opposed to tax incentives awarded.
  – Data for a number of years (1992-2004).
Other States’ Incentive Programs

• All states we looked at offer some form of tax incentives, training incentives and financing incentives.
• Kentucky has incentives that are similar to the states we compete with in attracting businesses.
• The main differences between states lie in the type of credits, training and financing offered.
Data and Methodology

• All of our data on incentives come from the Cabinet for Economic Development
• We examine three measures of economic activity:
  – Employment
  – Earnings
  – Property Values
• Discussion will focus on employment and earnings
Data and Methodology

- All of our analysis uses annual data
- Geographic unit varies in the report
- The initial analysis of trends done at the state level and regional level using four regions based on ADDs.
- All dollar figures have been converted to 2005 dollars.
Figure 1: Regions of Kentucky
Data and Methodology

• Our more rigorous statistical analysis examines the impact of the incentive programs on economic activity in a county.
  – This means we are looking at how an increase in incentives received by firms in a county are associated with economic activity in the county.
Data and Methodology

• When examining the short-term impact of incentives on economic activity we look at how incentives received two years ago impact economic activity in the current year.
  – For example, we look at the impact of incentives taken in 2000 on employment growth in a county in 2002.
Data and Methodology

• There are a number of reasons why it may take a couple of years before we see the economic impact of the incentives
  – A firm may continue to grow for a number of years after receiving the incentive.
  – When a firm hires workers, these workers spend more money in a community, which impacts other businesses in an area. It may take a couple of years for these indirect effects to be seen.
Data and Methodology

• When examining the long-run impact of incentives, we estimate the effects of incentives taken in each of the five previous years on economic activity in the current year.
Relationship Between Incentives and Economic Activity

• Start by looking at trends and regional differences in the use of incentives
Figure 2: Amount of Business Incentives Taken in Kentucky, 1992-2004
Figure 6: Amount of Business Incentives Taken as Percent of Earnings in Kentucky, 1992-2004

- Tax Incentives
- BSSC Training Program
- State Financing
Amount of Business Incentives

• Overall amount of business incentives are fairly small
  – The combined amount of all programs in a year never exceeds 0.2% of total earnings in the state.
  – In 2003 the amount of the incentives is less than 10% of business taxes collected.
  – In 2003 amount of incentives was less than 1% of total state government revenue.
Figure 7a: Amount of Tax Incentives Taken Relative to Earnings, 1992-2004
Figure 7b: Amount of BSSC Training Taken Relative to Earnings, 1992-2004
Figure 7c: Amount of State Financing Taken Relative to Earnings, 1992-2004
Figure 8: Tax Incentives Claimed as a Percentage of Tax Incentives Awarded
Value of Incentives Claimed vs. Awarded

• Only a small percentage of Tax Incentives awarded are ever claimed.
• By 2004 only 12% of incentives awarded had been claimed.
• Shows that it is important to use tax incentives claimed when studying the impact of incentives.
Short-term Relationship Between Incentives and Economic Growth

• Based on our regression analysis we estimate the effect of a 10% increase in each of the incentive programs on economic activity in the average county.

• Keep in mind
  – A 10% increase in the tax incentive programs is $91,036.
  – A 10% increase in the BSSC program is $7,004.
  – A 10% increase in the financing program is $170,912.
Short-term Relationship Between Incentives and Employment

• Our estimates show that
  – A 10% increase in tax incentives is associated with an increase of 3.40 jobs in a county.
  – A 10% increase in the BSSC program is associated with an increase of 2.79 jobs in a county.
  – A 10% increase in the financing program is associated with a decrease of 2.28 jobs in a county.
    • Not statistically significant

• Average county has 18,332 jobs.
Short-term Relationship Between Incentives and Earnings

• Our estimates show that
  – A 10% increase in tax incentives is associated with an increase of $218,280 in earnings.
  – A 10% increase in the BSSC program is associated with an increase of $160,146 in earnings.
  – A 10% increase in the financing program is associated with no increase in earnings.

• Average county has $645 million in earnings.
Short-term Relationship Between Incentives and Property Values

• Also look at the relationship between incentives and property values.
• If benefits of incentives exceed the costs then property values should rise. If costs exceed the benefits then property values should fall.
• Estimates show no significant relationship between a change in any of the incentive programs and property values in a county.
Long Term Relationship Between Incentives and Economic Growth

• Now we examine the long term relationship between incentives and economic growth.

• Recall we allow economic activity in a county to be affected by incentives received by firms in each of the previous five years.

• Focus on tax and training incentives effects on employment and earnings.
Figure 9a: The Long Term Impacts of Tax Incentives on Employment

Number of Jobs

1 2 3 4 5 Total

Years after Increase
Figure 9b: The Long Term Impacts of Tax Incentives on Earnings
Figure 10a: The Long Term Impacts of BSSC Training Programs on Employment
Figure 10b: The Long Term Impact of BSCC Training Programs on Earnings
Overall effect of incentives

- Based on our estimates we can calculate the number of jobs that would be lost in the absence of the incentive program.
  - The use of business incentives is associated with 4,981 jobs, or 0.22% of total jobs, annually.
    - BSSC incentives are associated with 6,075 jobs, or 0.27% of total jobs, annually.
    - Tax incentives are associated with 2,138 jobs, or 0.1% of total jobs, annually.
Overall effect of incentives

• Without business incentives from 1996 to 2004 we estimate that Kentucky would have had 44,829 fewer jobs in 2004, which is 1.9% of the total number of jobs.
• Total amount of incentives claimed over this period is $925 million (2005 dollars).
• $20,000 per job.
• Based on our estimates, without business incentives over this period, earnings would have been lower by $4.5 billion.
Spillovers from Business Incentives

• Also looked at whether incentives taken by firms in one county affect economic activity in other counties in the same ADD.
• Found no evidence of spillovers.
Main Findings

• Kentucky’s business incentives are very similar to the incentives offered by its competing states.
• Since 1992 there has been a substantial increase in the amount of the tax incentives claimed as well as a substantial reduction in the use of financing programs. Use of the Bluegrass State Skills Corporation (BSSC) training program has been small but steady (due to statutory and budget limitations).
Main Findings

• The yearly cost of all incentive programs is quite small relative to the size of the Kentucky economy or the magnitude of Kentucky’s taxes, amounting to less than 1% of total state revenues in a year.
Main Findings

• A ten percent increase in tax incentives, which is equivalent to $91,036, is predicted to increase employment by 3.40 jobs and earnings by $218,280 in the average county.

• A ten percent increase in the BSSC program, which is equivalent to $7,004, is predicted to increase employment by 2.79 jobs and increase in earnings of $160,146 in the average county.
Main Findings

• Financing programs were found to have no significant relationship with either employment or earnings.

• We find that both the tax incentives and BSSC training incentives are associated with long-term (five years) impacts on employment and earnings that are as much as four times larger than the short-term impacts.
Main Findings

• Without business incentives between 1992 to 2004, we estimate that Kentucky would have had 44,829 fewer jobs in 2004, which is 1.9% of the total number of jobs.
Recommendations

• Decline in the state financing program seems appropriate.
• Legislature may want to consider expanding the BSSC training program.
• Tax incentives have a positive impact. However, we want to look at them individually before recommending that they be expanded.
Future Report

• Look at tax incentive programs separately.
• Look at how the estimated size of effects vary by:
  – Region
  – Industry
  – Across the business cycle
• Type of employment associated with changes in incentives
Future Report

• We have not looked at how incentives affect location decision of firms.

• To provide a complete answer requires data on:
  – Incentives Kentucky offers firms.
  – Incentives other states offer firms.

• Data on what other states offer are unavailable so we were unable to address this question.
Future Report

• Could provide a partial answer if we had data on:
  – What Kentucky offers to firms that come to Kentucky and to firms that decide not to come to Kentucky.
  – Where firms that decided not to come to Kentucky located.
  – Cabinet tries to collect this information but it is hard to obtain in a systematic and timely fashion.
  – If we could get these data we could try and provide a partial answer in a future report.
Final Remarks

• Kentucky has long been one of the poorest states in the country.

• Primary reasons for Kentucky’s low income is the low level of education among Kentucky workers and lack of innovative activity occurring in the state.
Figure 3: Percent of Population Age 25 and Older With a College Degree
Figure 4: Stock of Patents Per-Capita

- Kentucky
- Border States
- US
Final Remarks

- If we fail to address these fundamental gaps sustained economic growth, no matter what incentives we offer businesses, will never be realized in the Commonwealth.