

Rural Policy Brief

Volume Five, Number Two (PB2000-2R*)

March, 2000

RUPRI Rural Equity Capital Task Force

A Critical Review of the IC² Institute Report

“The Certified Capital Companies Economic Development Innovation: Missouri’s Experience To Date”

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*This Rural Policy Brief, a revision of an earlier brief, reflects information acquired in an iterative process, through which these authors considered clarifications provided by the IC² Report author.

The "Rural Policy Brief" series is published by the Rural Policy Research Institute. RUPRI provides objective analysis and facilitates dialogue concerning public policy impacts on rural people and places.

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Good public policy benefits from independent, well-designed research. Such research will identify the potential costs and benefits of a public program and the distribution of these impacts among affected parties. Questionable public policy, on the other hand, may be encouraged by incomplete or unbalanced research results regarding a program's potential impacts. Thus, research on public programs benefits from independent reviews which insure that research results are based on appropriate assumptions, data, and methodologies.

The Innovation Creativity Capital (IC²) Institute of the University of Texas at Austin recently issued a report titled "The Certified Capital Companies Economic Development Innovation: Missouri's Experience to Date." The report concludes that the Missouri CAPCO program has been quite promising in terms of jobs created (and forecast) and investments leveraged. The IC² report uses information from interviews and an economic forecasting model to evaluate Missouri's CAPCO program. Interviews and forecasting models are used frequently to estimate economic impacts of public policies. However, their usefulness is directly related to the quality of the data collected and the use of the data in the forecasting model. Some of the assumptions that underlie the IC² analysis are not clearly specified in the report, while other assumptions do not follow standard techniques of economic analysis. As a result, the economic impact estimates and projections provided by the study may not be reliable. We recommend caution in the use of the IC² report as the sole basis for public policy decisions regarding state-supported venture capital programs, for the reasons provided below.

A. This Study is Premature

The success or failure of a state-sponsored venture capital program can be assessed only after sufficient time has passed to allow successful investments to grow and mature and unsuccessful investments to fail and close. Two and one-half years of a CAPCO program is insufficient time to assess the development potential of firms receiving venture capital. It is well documented that a significant proportion of small businesses fail, but many of these future failures will not be captured by an analysis of the first few years of a business. The first in-depth study of the Louisiana CAPCO program was conducted in 1999, ten years after the program became active. The Louisiana study (Louisiana Department of Economic Development, p. 47) notes ". . . we have almost ten years of actual information regarding gross receipts of companies that were financed by a CAPCO. This type of information enhances the quality of the results." Employment impacts and projections based on the first year or two of a new business are premature.

B. Overestimation of Impacts

The IC² report overestimates the new jobs attributable to the CAPCO program. We restrict our discussion of the estimation problems to jobs created in the first three years of the program (Table 3 in the study). We do not address the employment projections of the REMI model, because the study provides insufficient information to determine if the REMI analysis was appropriately conducted. However, the REMI projections build on current employment estimates; thus errors in estimating current employment attributable to CAPCOs will be reflected in overstated projections of future employment. Specific concerns with the IC² methodology and current employment estimates follow:

1. Co-investors. The study overestimates jobs created by the CAPCO program, by crediting CAPCOs with all employment growth in the businesses, regardless of the contributions of other investors. The study rationalizes this approach by suggesting that the CAPCOs “induced” all follow-on investments through their “certification effect.” We agree that CAPCO activity may encourage co-investors and induce follow-on investments. However, there is no documentation to support crediting all \$408,108,889 of non-CAPCO investment to \$40,370,789 of CAPCO investment. In fact, IC²'s report provides evidence that other venture capital providers invested in Missouri companies before or at the same time as the CAPCOs. For example, for StreamSearch.com and SAVVIS, the report indicates that the CAPCOs provided the follow-on investments. Thus, in these cases, certification effects should be credited to the pre-CAPCO investors.

– StreamSearch.com:

“. . . a firm from New York City became the lead investor, with a west coast firm and a local CAPCO as co-investors.”

– SAVVIS Communications Corporation:

“In Fall 1996, SAVVIS did a first round of financing of \$4-5 million. Beginning in July 1997, and over the next nine months, two CAPCOs invested approximately \$4.1 million. Other investors provided approximately \$30 million in late 1997 and 1998.”

The study also implies that a \$600,000 CAPCO investment in Intra leveraged \$24,000,000 and a \$5.28 million CAPCO investment in Birch leveraged \$170 million (please refer to the quotes below). Surveys of these outside investors are required to determine if their investments were the result of CAPCO investments. Without documentation of this implied causal link, it is not reasonable to assume that Ascend Communications would invest \$24 million, based solely on a CAPCO investment of \$600,000 one month earlier. It also is not reasonable to assume that outside investors would risk \$170 million, based solely on \$5 million in earlier CAPCO investments.

– Intra:

“One CAPCO provided an initial investment of \$600,000 in May 1998. A month later, Ascend Communications, now part of Lucent Technologies, provided \$24 million.”

– Birch Telecommunications:

“In July 1999, Birch received another infusion of CAPCO financing (\$2.53 million [to go with an earlier \$2.75 million]) and two other major investments from outside Missouri: \$60 million equity from Kohlberg, Kravis, Roberts & Company and \$110 million from a public debt offering by Lehman Brothers and BT Alex Brown.”

How much outside investment should be credited to the CAPCO program? It is obvious that CAPCO investments will encourage some co-investments and follow-on investments. It is equally obvious that every dollar invested in a business (and every job created) cannot be attributed to the CAPCO's investment in the company. The IC² study errs in crediting every post CAPCO dollar invested by outside investors to the CAPCO program, in effect claiming that none of the outside investments would have occurred without the

program. If one followed this procedure to its extreme, every dollar invested through the life of the firm would be credited to the first dollar invested. A more academically acceptable approach would be to survey the outside investors (in addition to CAPCOs and certified businesses) to assess whether the presence of a CAPCO investment significantly influenced the investment decision of the outside investor. Such a survey was not conducted by the IC² study. If such a survey had been undertaken, then employment attributable to CAPCOs could be estimated more accurately, using the following approach:

- a. credit CAPCOs with total employment generated only if the CAPCOs sought and arranged for all the subsequent non-CAPCO investments.
- b. if non-CAPCO investments were independent of CAPCO activity, credit CAPCOs with all employment growth until subsequent investments, then credit CAPCOs with additional employment growth based on their share of the total capital invested.

A second alternative for more reasonable estimates of employment impacts would be to use the mean (6 to 1) or median (2.3 to 1) leveraging ratios for the 19 certified businesses. Employment attributable to CAPCO investments would be 40% lower with the mean leveraging ratio and 75% lower with the median leveraging ratio. A third alternative for more reasonable estimates of the impacts of CAPCO investments was used in the study of the Louisiana CAPCO program. This study compared three assumptions about the importance of CAPCO investments in attracting additional capital to the certified businesses, and the study found that the outcomes varied greatly, depending on the assumptions used. In summary, the IC² study selected the methodology for accounting for outside investments that resulted in the greatest employment attributable to CAPCO investments, rather than a more generally accepted alternative.

2. Part-Time Employment. The IC² report treats all new jobs created as full-time, yet the case studies refer to many part-time jobs. For example, the StreamSearch case study notes that “the majority of employees are under 30, and from local colleges and universities, with some being part-time.” In the Birch Communications case study, the IC² study reports that “many of the (200) customer service representatives are college students.” Following accepted economic principles, employment projections for CAPCO businesses should be expressed as full-time-equivalents (FTE). Employment measured in FTEs would be less than the numbers provided in the report. A thorough research design would have collected these data and documented whether part-time employment is widespread or not.
3. Out-of-State Employment. The employment gains attributable to CAPCO investments include jobs outside of Missouri. The case studies note numerous examples of out-of-state employment for businesses receiving CAPCO investments. For example,
 - StreamSearch:
“Field offices have been established on the East and West coasts.”
 - LoanSurfer:
“Account executives, who are located in local markets, will double also by that time.”
 - SAVVIS:
“Will move its headquarters to Reston, Virginia in 2000.”
 - Initra:
“The company is expanding operations primarily in California.”

The IC² study overstates employment benefits from the CAPCO program in Missouri, because it includes out-of-state jobs. It is difficult to evaluate the extent of this overstatement, as out-of-state employment numbers are not documented in the report.

4. Opportunity Costs. The State of Missouri contributes tax credits to support the CAPCO program. The tax credits represent money that could be used in alternative ways to achieve economic growth and job creation. If Missouri refunded this money to the state's taxpayers, spending as a result of such a tax refund would create jobs in the state. An estimate of the number of jobs that would have been created should be subtracted from the CAPCO job estimates, in order to provide a more accurate CAPCO employment effect.
5. Growth without CAPCO Investments. The IC² report assumes that no growth or new job creation would have taken place in the firms that received CAPCO funding, if the CAPCO investments had not occurred. However, the pre-CAPCO employment levels of these businesses (as discussed in the report) indicate that a number of them had experienced growth without CAPCO funding. It is reasonable to assume that some of these businesses would have continued to grow if CAPCO funding had not been forthcoming. IC²'s estimate of CAPCO program impacts should have subtracted out the projected employment growth of these firms from the total job creation numbers.

In summary, inappropriate assumptions regarding future business failures, follow-on investments, full-time employment, out-of-state employment, opportunity cost, and growth without CAPCO investments may have resulted in exaggerated estimates of the employment and income effects attributable to the CAPCO program.

C. Replication of Research Findings

Professional research on a public program presents the assumptions, data, econometric and statistical models and methods employed clearly enough that the study's findings may be replicated by others. The IC² study is not presented in such a fashion. This lack of specifics does not encourage confidence that traditional and acceptable research methods were followed. In addition, the IC² report was undertaken at the request of a consortium that includes the Growth Capital Alliance. The Growth Capital Alliance has provided information in support of CAPCO programs in several states that have passed or are considering similar legislation. The report does not make clear that one of the organizations supporting this research is also engaged in lobbying efforts for CAPCO programs.

D. Summary

Although we do not dispute that the Missouri CAPCO program has provided economic benefits to the state, we have identified three important limitations in IC²'s evaluation of the Missouri CAPCO program. One, the magnitude of job creation demonstrated in the IC² report is subject to question. Two, the assumptions underlying the IC² report have not been adequately developed or justified. Three, there is no consideration given to the cost to the state of these programs. In fact, program cost may be the most relevant public policy issue in evaluating the CAPCO program. That is, could similar economic development benefits be provided by an alternative public venture capital program at less cost to the state treasury? The IC² study does not address the cost issue. One study that does more adequately address this issue is a report on the Louisiana CAPCO program, prepared for that state's Department of Economic Development. Researchers have also evaluated other state-sponsored venture capital and tax credit programs that promote business activity and employment in other states. CAPCO programs should be compared with such alternative programs, to best assess the relative impact of the CAPCOs on a state's economy.

The Rural Policy Research Institute's (RUPRI's) Rural Equity Capital Initiative, funded by USDA's Fund for Rural America, is an ongoing research project focused on understanding innovative equity capital institutions, both public and private. As part of this three-year project, this research team has prepared a policy brief, "Public Involvement in Venture Capital Funds: Lessons from Three Program Alternatives." This brief describes the advantages and disadvantages of three different models for public involvement in venture capital programs, which we hope is useful in identifying the advantages and disadvantages of the CAPCO program, relative to alternative public policies. (RUPRI Publication Number P99-9, <www.rupri.org>)