

Credit and non-credit community college enrollment and the economy

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Though studies have been conducted to find out the effect of unemployment on credit enrollment in community colleges, none have been done to find the effect of unemployment on non-credit enrollment. The present study explores the following question: "When the economy is on a downward curve, does non-credit enrollment decrease and credit enrollment increase?" The economic indicator in the study is Michigan's unemployment rate. Schoolcraft College, Livonia, Michigan, provided current and past enrollment figures for 1986 to 2002, which were compared against the unemployment rate for the same years. Analysis showed a strong negative correlation between Michigan's unemployment rate and the enrollment in non-credit classes. No statistically significant correlation was found between Michigan's unemployment rate and enrollment for credit classes. The purpose of the study is to assist community colleges in better understanding general enrollment patterns for credit and non-credit classes and to help with planning and forecasting class offerings.

Introduction

Since enrollment in community colleges fluctuates for both credit and non-credit classes, studies have been conducted to find why the fluctuations occur in credit classes and if there is any relationship to the economy. However, studies have not attempted to find the effect of the economy on non-credit enrollment. According to Sherry Zylka (2003), Associate Dean of Continuing Education Services, Schoolcraft College,

Within the non-credit class community there had always been anecdotal information about how non-credit enrollments were impacted by the economy. In good economic times it

was thought that enrollment would be up and during an economic downturn, non-credit enrollment would decrease.

The enrollment in non-credit programs at Schoolcraft College reflects such a pattern. When researching previous studies which would document the phenomenon, none could be uncovered. This project originated to document or to dispel the perception of non-credit enrollment fluctuations as a function of the economy. Credit classes have been defined as traditional and nontraditional while non-credit classes have been defined as Continuing Education Services (CES) or Lifetime Learning classes.

Review of literature

Published data shows that when the economy is good, enrollment in credit classes decreases because people are working and do not see a need to seek a college degree. Conversely, noncredit enrollment increases because people have more discretionary money, and they are looking for leisure-related activities or certification options to maintain or upgrade their existing positions without the commitment of a college degree.

Community colleges report locally when their enrollment is up, letting taxpayers know that the college is fulfilling the obligation to provide higher education.

In 2002, Giegerich states that “Norma Kent, a spokesperson for the American Association of Community Colleges (AACC), said that many schools are reporting double digit enrollment increases this past year.” Barmak Nassirian, a policy analyst with the American Association of Collegiate Registrars and Admission Officers, reports in the article by Giegerich that a recession tends to inflate college enrollment.

Lansing Community College in Michigan reports in the *Lansing Community College Results Inventory 2001-02* that its 1999-2000 enrollment was 2.9% higher than in 1995-1996. It also reports that statewide enrollment fell by approximately 2.6% over the same period. The report goes on to declare that “there is no competitive data available for other community colleges at this time” (Lansing Community College, 2001). Unfortunately, the report does not separate credit from non-credit enrollment. In 1995, January showed a Michigan unemployment rate of 5.4% and ended the year with a rate of 5%. For 1999, January was 4.1% and December ended with 3.4% (U.S. Department of Labor, 2002). The unemployment decline from January 1995 to December 1999 was 2%, which might explain the drop in statewide enrollment as reported by Lansing Community College.

Shults (2002), a researcher at the AACC, advises that there

is no information for non-credit enrollment on a national level. Shults goes on to state, "One of the reasons that this information does not exist is that non-credit is defined, and often funded, differently across states, so it is impossible to compare numbers." The National Education Data Resource Center (NEDRC) was established by the U.S. Department of Education National Center for Education Statistics (NCES) to serve information needs of teachers, researchers, policy makers, and others who need access to the most current education data. When NEDRC was contacted for information concerning credit and non-credit enrollment, it advised, "Unfortunately, we do not have information this specific regarding courses taken in community colleges" (Fenix, 2003).

Coly (2000) writes in *The American Community College Turns 100: A Look at its Students, Programs, and Prospects*,

Because of definitional and other differences in how students are counted, no accurate national data exists on noncredit enrollment. However, some reliable non-credit data are available for some states and give some indication of the magnitude of noncredit enrollment.

For those schools that do offer non-credit classes, the percentage of those classes can play an important role when it comes

to planning budgets. Coly goes on to state that North Carolina and Wisconsin report almost 70 percent of their enrollment is non-credit, California reports 14% and Florida reports that 11% of their enrollment is in non-credit classes. Flynn (2001) points out that "industry certification programs are popular with the general public because they are not tied to the credit apparatus." The demand for such classes shows a need for expansion where possible so that community colleges may serve their community more advantageously.

The *Michigan Community Colleges Enrollment Simulation and Planning* study prepared by Charles McIntyre (1999), and under contract to Michigan Community Colleges Data and Evaluation Committee (MCCDEC), was conducted to determine the causes of enrollment fluctuation at Michigan Community Colleges (MCC). The purpose was to help the 28 Michigan community colleges plan for the future. The study included factors that affected enrollment: ones that could be controlled by the schools and those that could not be controlled. Enrollment patterns were studied from the years 1979 through 1998, and losses and gains in enrollment were noted. Also, the changing patterns of student demographics were included in the study. The study, conducted in 1999, shows budgets, unemployment, and tuition and fees as factors that cause

enrollment changes. It forecasts a modest growth in enrollment for community colleges in Wayne County (greater metropolitan Detroit area) for the years 2000-2005.

McIntyre does not mention whether the enrollment figures document credit or non-credit classes. The study notes that unemployment affects enrollment figures for the colleges. Since the study does not differentiate between credit and non-credit classes, no relationship between credit or non-credit enrollment in community colleges and the economy can be found. With non-credit classes playing such an important part in a community college's overall budget, there needs to be more research conducted to determine how unemployment and the economy affect both non-credit and credit classes. Pedersen (2002) states, "Few writers have looked carefully at non-credit courses in community colleges and statisti-

cal analysis of that information is unlikely to establish a valid relationship between courses and the state of the economy."

A study published in 2002, titled *Community College Enrollment as a Function of Economic Indicators*, was conducted by Kevin L. Pennington and Dixie McGinty from Western Carolina University and Mitchell R. Williams from the University of North Carolina. Their research examines past studies that correlate the economy to enrollment rates at community colleges. The study mentions an investigation by L.L. Sundberg (1998), who examined the enrollment trends of individual community colleges in Illinois. The study found only a moderate correlation between unemployment and enrollment. Sundberg concluded that declines in enrollment at community colleges might not happen in periods of unemployment if the colleges established careful program planning.

Table 1. Partial correlations between community college enrollment variables and economic variables, controlling for population

	Per capita enrollment	Total enrollment
Unemployment rate	.49**	.45*
Consumer price index	-.23	-.21
Gross domestic product	-.81***	-.76***
Dollars disposable income	-.67***	-.61**
Personal consumption	-.81***	-.76***
Average hourly earnings	.14	.12

* $p < .05$; ** $p < .01$; *** $p < .001$

The study conducted by Pennington, McGinty, and Williams focuses on six variables that affect the economy and correlates them with enrollment figures from various community colleges. The variables include the following:

1. National Annual Average Unemployment Rate (U.S. Bureau of Labor Statistics)
2. Consumer Price Index
3. Gross Domestic Product (U.S. Department of Commerce, 2001)
4. Dollars Disposable Income (U.S. Bureau of Economic Analysis, 1999)
5. Personal Consumption Expenditures (U.S. Bureau of Economic Analysis, 1999)
6. Average Hourly Earnings of Production Workers (U.S. Bureau of Labor Statistics, 2001)

In a correlation analysis, the annual economic indicators were considered as a lagging variable, in the belief that there is a lag time between what happens in the economy and enrollment. If the economy is down in the year 2000, people do not make a decision about enrolling in classes until the next year, which would be 2001.

A strong relationship was found between enrollment and four of the six economic variables as shown in Table 1.

A strong negative correlation was found between:

- Gross Domestic Product and per capita community college enrollment ($r = -.81, p < .001$)
- Gross Domestic Product and total enrollment ($r = -.76, p < .001$)
- Personal Consumption Expenditure and per capita community college enrollment ($r = -.81, p < .001$)
- Personal Consumption Expenditure and total enrollment ($r = -.76, p < .001$)

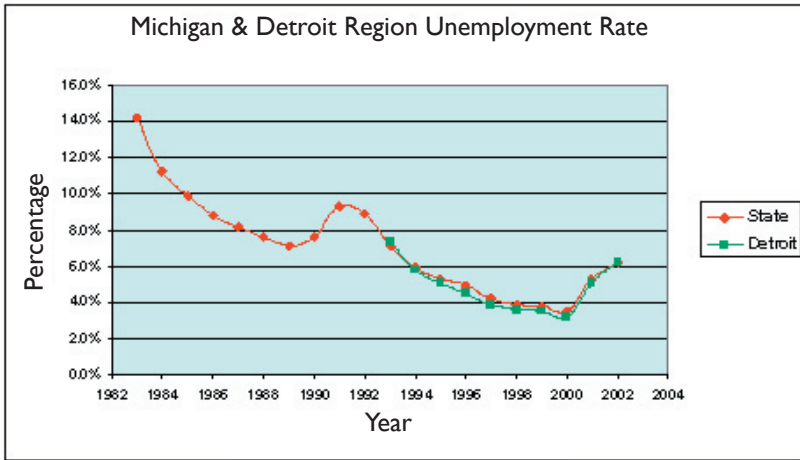
The Gross Domestic Product and high Personal Consumption Expenditure both tend to be strongly associated with low enrollment in community colleges.

Two other economic indicators showed a correlation:

- Dollars Disposable Income and per capita community college enrollment ($r = -.67, p < .001$) and total enrollment ($r = -.61, p < .01$)
- Unemployment was positively correlated with both per capita community college enrollment ($r = .49, p < .05$) and total enrollment ($r = .45, p < .05$)

There were no statistically significant correlations found between community college enrollment variables and the two remaining economic variables, Average Hourly Earnings, and the Consumer Price Index.

Table 2. Michigan & Detroit region unemployment rates



When the correlations were recalculated without lagging the community college variables, the relationship with the unemployment rate was much stronger ($r=.76$, and $.75$ for per capita community college enrollment and total enrollment).

The unemployment rate in Michigan reached a ten year high in 2003 (see Table 2). In the early 1990s, there was a labor shortage which helped Michigan to reach low unemployment rates. Now Michigan has an excess of workers trained in the manufacturing sector, which has been hard hit by the depressed local and national economy. Between 1989 and 1999, the unemployment rate fell by 2.3% statewide. As the economy of the U.S. and the state fell into a decline, Michigan started to see its unemployment

rate climb. Marasco and Bean (1998) state, "Much of the loss of employment in the manufacturing sector comes from the motor vehicle industry."

Methodology

Schoolcraft College enrollment figures were gathered for both credit and non-credit classes and then compared with the unemployment figures for Michigan to note correlations that would statistically explain the fluctuations in enrollment. Credit figures covered fall of 1983 through fall of 2001. Enrollment figures for 2002-2003 were not available since the school year was still in progress during the time of the study. The non-credit enrollment figures start with fall 1986 and continue through fall 2001. Figures for

Michigan's unemployment rate were obtained from the U.S. Department of Labor Bureau of Labor Statistics website. Unemployment is not considered a lagging variable in this study.

Results

Using Schoolcraft College as the test subject, Table 3 lists enrollment figures, and Table 4 charts both traditional (credit) and continuing education (non-credit) enrollment.

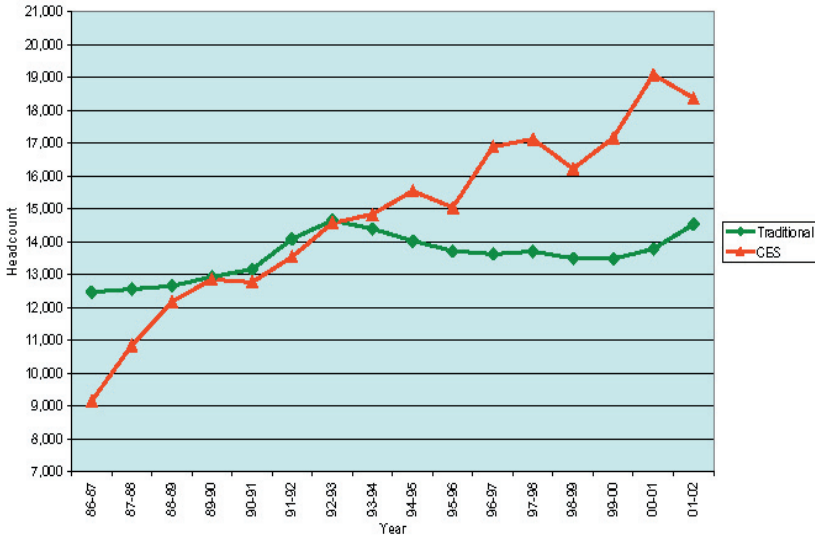
Table 3. Schoolcraft College enrollment

Year	Traditional Head Count	CES Head Count
83-84	12,979	N/A
84-85	12,439	N/A
85-86	12,245	N/A
86-87	12,478	9,156
87-88	12,566	10,853
88-89	12,660	12,189
89-90	12,945	12,859
90-91	13,166	12,775
91-92	14,097	13,551
92-93	14,655	14,579
93-94	14,403	14,847
94-95	14,033	15,550
95-96	13,727	15,050
96-97	13,634	16,898
97-98	13,711	17,138
98-99	13,499	16,228
99-00	13,486	17,169
00-01	13,788	19,092
01-02	14,536	18,377
02-03	N/A	N/A

Source: Schoolcraft College figures obtained from traditional college course enrollment report and continuing education services enrollment report produced by the registrar's office. Includes all CES classes, BDC, Public Safety, CES and CES-PF.

Table 4. Schoolcraft enrollment comparison

Traditional vs Continuing Education Unduplicated Headcount



In Table 5, a strong negative correlation appears between the state unemployment rate and the total enrollment for Schoolcraft College CES (non-credit) classes ($r = -.82, p < .001$). No statistically significant correlation is found between the unemployment rate and total enrollment for Schoolcraft traditional classes (credit). As the unemployment rate increases, enrollment for the test subject in CES classes declines but has little effect on the enrollment rate for traditional credit classes.

Table 5. Correlations between Schoolcraft College enrollment (credit & non-credit) and Michigan unemployment rate from 1986-2001

	N	Correlation
Michigan Unemployment Rate & Credit Enrollment	16	-.18
Michigan Unemployment Rate & Non-credit enrollment	16	-.82

* $p < .001$

Correlating the unemployment rate with the enrollment rate indicates that there is not a strong relationship with credit classes. Though not a strong relationship, there appears to be some effect from the unemployment rate. In the 2002-2003 academic year, enrollment rose by 5.2% over the previous year. The 2000-2001 academic year also showed an increase of 2.2% over 1999-2000. Looking at Michigan's unemploy-

ment rate for the same years, in 2000 the rate was 3.2%, increasing to 5.1% in 2001, then 6.2% in 2002. The unemployment rate had very little fluctuation from 1997 through 1999; 3.9 to 3.5% was the range. As the rate of unemployment has been increasing, so has the enrollment rate for credit classes.

During the same periods for non-credit classes, enrollment peaked in the 2000-2001 academic year at 19,092 students. The following year showed a sharp decline of 715 students or 3.8%. The figures for 2002-2003 were not yet available. In May, 2003, Michigan's unemployment rate was 6.7%, seasonally adjusted (U.S. Department of Labor, 2003).

Conclusion

The absence of a strong correlation between the economy and traditional credit enrollment could be due in part to planning, the high density of the population in the area, or tuition increases at the state universities. The tuition that a college receives from students plays an important part in a college budget. Past studies mention the need for further research about that relationship. The amount of revenue that non-credit enrollment generates can also be important to overall college funding. For Schoolcraft, in the 2002-2003 academic year, the CES courses accounted for 3.78% of the school's gross funding. The

CES courses during the same period also accounted for 11.64% of all tuition and fees collected (Zylka, 2003). Warford (2002) states in his article, "Funding Lifelong Learning - A National Priority," published in the *Community College Journal*, that:

Enrollments in community colleges do not end with credit courses. No one knows how many people enroll in America's community colleges for non-credit, lifelong learning programs because many states do not ask colleges to report non-credit enrollment statistics. AACC conservatively estimates non-credit enrollments at community colleges to be 5 million students. Many practitioners feel this estimate is very low and could easily be double this figure.

Recommendations

Since non-credit enrollment plays a significant role in the total enrollment of an institution, community colleges need to look at how the economy affects both credit and non-credit enrollment at their institutions to understand and project when enrollment will increase or decrease. These increases or decreases will not only help a college to plan curricula, but also help when it comes to budgeting, assigning staff, and purchasing equipment. The ef-

fect of the economic indicators on non-credit enrollment also needs to be studied more closely. By understanding the effects of the economy, community colleges can design their non-credit classes around the needs of the community so that residents and students can benefit from well-planned, life-long education.

Despite a slower economy, colleges can lessen the impact on enrollment by carefully planning courses to meet the particular needs of students at their institutions. Pedersen (2002) states that

“substantial enrollment growth at community colleges has occurred even in communities that have not been particularly hard-hit by the economic slowdown.” Pedersen goes on to state that Donald Supalla, president of Rochester Community and Technical College, New York, “has seen an increase of approximately 7% in the college’s full-year equivalent enrollment. ‘When the nation’s economy is in difficulty, it has always been a good time for community college enrollments,’ Supalla said.”

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