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Does Federal Financial Aid Policy Influence the Institutional Aid Policies of Four-Year Colleges and Universities? An Exploratory Analysis

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By Don Hossler and Jihye Kwon

There is a dearth of empirical work that examines the relationships between federal financial aid policy and institutional financial aid priorities and expenditures. This study uses Resource Dependency Theory to explore whether changes the amount of financial aid awarded by colleges and universities during the last fifty years are best explained by changes in federal financial aid policy or by demographic and economic shifts. The results suggest that shifts in federal financial aid policy and in the economy have influenced the amount of institutional financial aid, but indicate that more research is needed on this important topic.

Keywords: *federal financial aid, institutional aid, higher education act, financial aid*

Considerable attention has been given to how much postsecondary educational institutions spend on student financial aid and how they allocate their aid dollars between need and merit (Baum & Payea, 2011; Gillespie & Carlson, 1983; Huff, 1971; Moore, 2010; Wilkinson, 2005). Scholars have also examined the extent to which state financial aid programs influence how colleges and universities spend their financial aid dollars (Doyle, Delaney, & Naughton, 2009; Doyle, 2010; Long, 2004). However, there is a dearth of empirical work that examines the relationships between federal financial aid policy and institutional financial aid priorities and expenditures (Wilkinson, 2005).

This exploratory study begins what we hope will lead to a series of studies that will help policymakers and researchers better understand the extent to which there is interplay between federal financial aid policies and institutional aid policies and practices. This study is organized in the following manner. First, we suggest that Pfeffer and Salancik's (2003) Resource Dependency Theory provides the best theoretical framework to shed light on our research questions. We then provide an overview of three shifts that we posit are most likely to reveal consistent associations with changes in institutional financial aid policies over time: federal policy, the economy, and demographic trends. Given the paucity of research, we also interviewed two highly regarded financial aid experts who have been professionally active during all or most of the years covered in this study.[1.] One of our experts has served as the senior financial aid administrator at several institutions as well as an associate director of financial aid for a state student aid commission. This individual has also served in leadership roles in financial aid organizations. The second expert has served in research, training, and policy leadership roles for a major higher education organization that focuses on student financial aid. Our goal was to see if these individuals could provide some additional insights that would help us undertake our study and how to best interpret some of our findings. We have interwoven their insights into this historical overview of changes in federal policy and economic and demographic changes. After providing a context for this study, we then present our research questions and move on to the results from the analyses we undertook. This is followed by and interpretation of our findings and our conclusions.

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A Theoretical Framework: Resource Dependency Theory

Resource Dependency Theory provides a useful conceptual framework for this investigation of the way federal financial aid has influenced how colleges and universities allocate their financial aid dollars. Pfeffer and Salancik (2003) posit that the behaviors of organizations are shaped by the availability of external resources upon which the organization relies for survival and legitimacy. Elaborating on this perspective, Drees and Heugens (2013) suggest that external dependencies can cause organizations to focus their attention on the acquisition or protection of valuable supplies

As state appropriations have declined (Delaney & Doyle, 2011), public colleges and universities have become more dependent on student enrollment for revenue. For both private and public four-year institutions, tuition-paying students are now the most important source of revenue and institutional health and vitality. While for-profit organizations can try developing new markets, find new sources of support, or change locations as they see fit, nonprofit organizations operate under different constraints. They have less geographic mobility, less control over their product, and face a difficult external environment because of their distinctive role in society (Clark, 1985).

Tolbert (1985) posits that the structure of organizations, both for-profit and nonprofit, is associated with the resources upon which they are dependent in the external environment. For example, Tolbert discovered that among private colleges and universities, as dependence on private gifts increased, so did the likelihood of having a development office. Similarly, institutions that derive significant portions of their revenue from tuition or from state funding formulas sensitive to enrollment shifts are likely to devote attention and resources to revenue.

Universities and colleges seek to establish connections with the external environment so they can manage their dependence on students and the tuition they pay (Heimovics, Herman, & Coughlin, 1993; Pfeffer & Salancik, 2003). Federal financial aid can assist institutions in enrolling more students by reducing the net cost of attendance. Institutions may use federal aid support to reduce their own financial aid expenditures, redirect campus aid dollars to enroll a more diverse student body, attract more high-achieving students, or reduce the amount of loans that low-income students take out.

Long notes (2004) that it is impossible to study only the effects of federal or state financial aid policy when studying how colleges allocate their own financial aid dollars because university aid policies may also be influenced by factors such as competition from other institutions. This point deserves emphasis because of the difficulties of teasing out the relative importance of federal financial aid, demographic changes, shifts in the health of the economy, changes in state scholarship programs, the importance of rankings, and so forth. In addition, it is difficult to conduct an experimental study, or to look for a natural experiment, when all institutions and students operate under the same rules for federal financial aid. It is for this reason that this study is exploratory and should be viewed as a first step toward more research on this important topic.

A Historical Review

In this section we provide a brief historical overview of the changes in federal financial aid laws and legislation influencing federal financial aid. We also include major demographic and economic changes that occurred. Interviews with two senior financial aid practitioners who have experienced many of the federal changes we discuss provide insights into how federal policy changes might have influenced institutional aid policies.

A brief history of federal financial aid and public policy trends. Many scholars point to the passage of the GI Bill of Rights in 1944 as the beginning of the modern era of federal involvement in financial aid for postsecondary education (Moore, 2010; Wilkinson, 2005). Moore notes that the GI Bill helped to popularize the notion that larger numbers of American citizens could benefit from postsecondary education and that family financial status should not be a barrier to college attendance. Wilkinson (2005) and Pearson (1967), however, document a more complex environment. They note growing public pressure in the 1940s and 1950s to assure access for all students who might aspire to enroll and have the ability to succeed. Even though the baby boom generation would provide more potential students for colleges and universities, the growth and expansion of community colleges resulted in competition for students among sectors of postsecondary education. In addition, growing competition for top students pressed more institutions to provide increased levels of merit aid.

Between the 1940s and 1960s there are more references to concepts such as access for all students and balanced financial aid packages (Berdie, 1954; Horn, 1955; *Harry S. Truman: Statement by the President,* 1947). Wilkinson (2005) reports that leadership at private colleges and universities especially felt pressure to use their financial aid dollars to expand access, in part because of competitive pressures and also because they felt that large public universities had done most of the work in educating GIs. These societal trends, along with the 1957 launch of Sputnik, helped put in motion the passage of the National Direct Student Loan program in 1958, the Educational Opportunity Grant program in the early 1960s (now the Federal Supplemental Educational Opportunity Grant program), and the Higher Education Act in 1965.

Economic Opportunity Act of 1964 and Higher Education Act of 1965. One of the programs embedded within the Economic Opportunity Act of 1964 was the College Work-Study Program (CWS). The Higher Education Act of 1965 consolidated laws authorizing the National Defense Student Loan program and the CWS program and created two new programs: the Educational Opportunity Grant program (EOG) and the Guaranteed Student Loan program. The Federal Guaranteed Student Loan program allowed students to borrow money from the federal government to pay college costs.

Our interviews with two financial aid experts revealed some interesting connections between institutional financial aid policies and federal financial aid during this period. They reported that, prior to the creation of the BEOG/Pell legislation in 1972, institutions had to apply for both CWS funds and EOG funds. The application process was much like the process colleges and universities go through when they apply for research grants. Institutions made these applications under what the federal government called "fair share guidelines" (Bodofsky, n.d). The quality of the application determined the amount of funding for these two federal campus-based programs that postsecondary institutions received. Having to apply for these funds caused institutional policy leaders to come together and look at their current enrollment profiles, how they hoped to change their profiles, and what they were willing to do with their own resources to achieve increased postsecondary access. One expert opined that the combination of returning GIs, a greater emphasis on expanding postsecondary access, and the emergence of federal funds targeted at low-income students resulted in colleges and universities allocating increasing amounts of institutional aid dollars to assist low-income students.

The application process played an important role in focusing the attention of individual campuses on providing more need-based aid. Additional evidence suggests that, during the early years of these programs, colleges and universities focused on providing access and directed financial aid dollars toward low-income students (Hansen, 1983; Miller, 1981; The Michigan Alumnus, 1966). Bolstering the interview data, Karen (2002), Wilkinson (2005), and Palmer et al. (2004) have noted that the expansion of American higher education that occurred as the result of World War II and the growing civil rights movement had an impact on institutional priorities for their own financial aid dollars. Fuller (2014) summarizes this period nicely,

writing, "Societal attitudes had shifted and questions over access and affordability for a wider array of students were common political discourses by the 1950s and 1960s" (p. 52).

Amendments to the Higher Education Act, demographics, the economy, and societal trends. Our two financial aid experts opined that, after the Higher Education Act Reauthorization of 1972, the influence of federal financial aid policy on institutions declined and broader societal, demographic, and economic trends exerted more influence over institutional financial aid policies. The reauthorization of the Higher Education Act in 1972 resulted in the establishment of the Basic Educational Opportunity Grant (BEOG, later renamed the Federal Pell Grant). BEOG represented an important change from the EOG and CWS programs. Dollars for EOG and CWS were allocated to colleges and universities to then award to students. The new BEOG program did not require institutions to submit proposals to receive funds. Instead, it used the Uniform Methodology developed by the College Scholarship Service (CSS) and awarded the dollars directly to students. This approach not only promoted student access and choice, but also eliminated the need for institutions to apply for federal funds and no longer required them to specify how they would use their own funds to expand access. With the BEOG program (as with the previously established Guaranteed Student Loan Program), the federal government attached federal financial aid dollars to students rather than institutions (Gladieux & Hauptman, 1995).

Over time there have been other changes in the Higher Education Act and other federal legislation that affected federal financial aid. In the following list, we identify federal policies that would have been the most likely to have influenced institutional financial aid policies or to have influenced student enrollment behaviors that, in turn, might have influenced institutional financial aid policies (Burke, 2014; Isidore, 2010).

1. 1965 - The original Higher Education Act
2. 1972 - Higher Education Amendments
3. 1978 - Middle Income Student Assistance Act (MISAA) resulted in the expansion of the federal student loan program so that all students, regardless of income, could borrow substantial amounts of federal loan dollars at low interest rates.
4. 1986 - Reauthorization of the Higher Education Act: This reauthorization did not create major changes but did expand borrowing limits of the Parent PLUS loan program.
5. 1992 - Higher Education Amendments: Established the Federal Unsubsidized Stafford Loan Program.
6. 1997 - Taxpayer Relief Act: This act created Tax Benefits Relating to Education Expenses, which introduced the Hope Scholarship Credit and the Lifetime Learning Credit. These credits allow families to claim credit against their income taxes for part-time enrollment in a degree or certificate program at a postsecondary education institution, and provide substantial tax credit benefits to middle-class families.).
7. 1998 - Higher Education Amendments: This reauthorization increased the value of the Pell Grant, extended student loan repayment, and cut Stafford Loan interest rates.
8. 2005 - Higher Education Reconciliation Act: Cut $12.7 billion from student aid.
9. 2007 - The College Cost Reduction and Access Act: This legislation resulted in the largest increase in federal student aid since the GI Bill by increasing the maximum Pell Grant award and cutting interest rates on subsidized Stafford Loans for undergraduate students in half. It also created income-based repayment and public service loan forgiveness, and it doubled the income protection allowance for dependent students.
10. 2009 - The American Recovery and Reinvestment Act: This legislation increased the maximum and minimum Pell Grant awards and increased the Hope Scholarship tax credit. It also added $200 million in additional Federal Work-Study (formerly CWS) funding and $200 million in AmeriCorps funding.

We explore the possible effects of each of these policy shifts in the last section of this paper using a series of descriptive analyses. The analyses explore relationships between increases in institutional aid expenditures and enrollment increases, economic recessions, and shifts in federal financial aid policies over the last 50 years.

Economic recessions. According to the National Bureau of Economic Research (NBER) (2010), the United States has experienced seven recessions since 1965. We identified time periods when the unemployment rate reached approximately 10% and GDP declined by 5% or more as the representative indicators for recession. The period from 1980 to 1982 marked one of the biggest recessions after 1965; the unemployment rate reached 9.7% in 1982 (Bureau of Labor Statistics, 2015). The other major economic recession, the Great Recession, started in 2007-08, continued into 2009-10, and is considered the largest recession since the Great Depression.

Research Questions

Palmer et al. (2004) suggest that a combination of public policy changes, demographic forces, and broader economic and societal factors have shaped postsecondary enrollment in the United States. We suggest the same set of factors have influenced institutional aid policies. We try to better understand the relative importance of federal financial aid in shaping how colleges and universities allocate their financial aid. Using a data base we compiled, we consider whether shifts in federal financial aid policies have influenced how institutions allocate their financial aid and whether other factors help to explain these changes. To do this, we examine the following two research questions:

1. Is there evidence that shifts in federal financial aid over the past 50 years have influenced how institutions allocate their financial aid?
2. Is there evidence that societal and demographic factors over time have shaped how colleges and universities have allocated their financial aid resources during the past 50 years?

Limitations. This study focuses only on four-year nonprofit colleges and universities. In addition, we do not try to disaggregate changes in institutional financial aid expenditures across public and private institutions. Because private institutions typically charge higher tuition, and because they have a longer history of providing generous financial aid, there is good reason to believe we would see differences that could be influenced by federal financial aid policies and/or other factors, some of which are included in this article. Due to space limitations, we do not attempt to examine shifts in institutional financial aid expenditures by sector (public or private). Due to lack of accurate data during the entire period of our study, we also do not attempt to examine institutional expenditures on merit and need based aid. Finally, we again emphasize the exploratory nature of this study. It is our hope that this analysis lays the groundwork for additional research.

Results

Table 1 provides a descriptive overview of the timing of demographic trends, federal legislation, economic recessions, and the average amount of financial aid awarded per student enrolled. The first increases in institutional student aid follow enactment of the Higher Education Act of 1965. We also see increases in aid dollars per student in the early and late 1970s. The 1980s are a period of steady increases in student aid, and the 1990s represent a period of increases and decreases in student aid. Then, in the 21st century, this simple descriptive table suggests that increases in aid have generally been modest. This is true even through the worst years of the Great Recession. It bears reiterating, however, that one limitation of this study is that these data do not distinguish between the public and private sectors. It is possible that a different pattern would emerge if more data were available.

Table 1. Overview of Student Aid Patterns

Year	Federal Policy & Economics Shift	Student Enrollment	Institutional Aid per Student Enrolled in Current Dollars
1959-60		3,639,847	47.25
1961-62		4,145,065	55.01
1962-63			
1963-64		4,779,609	62.77
1964-65		5,280,020	
1965-66	Higher Education Act of 1965	5,920,864	71.78
1966-67		6,389,872	91.24
1967-68		6,911,748	103.01
1968-69		7,513,091	108.34
1969-70		8,004,660	122.93
1970-71		8,580,887	127.96
1971-72		8,948,644	138.68
1972-73	Education Amendments of 1972	9,214,860	143.46
1973-74		9,602,123	145.38
1974-75		10,223,729	141.73
1975-76		11,184,859	146.18
1976-77		11,012,137	160.73
1977-78		11,285,787	162.95
1978-79	1978 Middle Income Student Assistance Act	11,260,092	172.65
1979-80		11,569,899	190.15
1980-81	Recession: 10% of unemployment rate	12,096,895	207.00
1981-82		12,371,672	216.95
1982-83		12,425,780	235.16
1983-84		12,464,661	264.83
1984-85		12,241,940	299.79
1985-86		12,247,055	339.67
1986-87	1986 Reauthorization of Higher Education Act	12,503,511	381.97
1987-88		12,766,642	417.10
1988-89		13,055,337	453.30
1989-90		13,538,560	491.56
1990-91		13,818,637	546.44
1991-92		14,358,953	630.97
1992-93	Higher Education Amendments of 1992	14,487,359	700.47
1993-94		14,304,803	785.61

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Table 1–Continued. Overview of Student Aid Patterns

Year	Federal Policy & Economics Shift	Student Enrollment	Institutional Aid per Student Enrolled in Current Dollars
1994-95		14,278,790	860.37
1995-96		14,261,781	921.20
1996-97		14,367,520	796.94
1997-98	Taxpayer Relief Act of 1997 & Need-Based Educational Aid Antitrust Protection Act of 1997	14,502,334	867.45
1998-99	Higher Education Amendments of 1998	14,506,967	956.09
1999-00		14,849,691	1,031.00
2000-01		15,312,289	1,060.59
2001-02		15,927,987	1,063.54
2002-03		16,611,711	1,063.11
2003-04		16,911,481	1,171.39
2004-05		17,272,044	1,253.47
2005-06	Higher Education Reconciliation Act of 2005	17,487,475	1,363.26
2006-07		17,758,870	1,475.88
2007-08	The College Cost Reduction and Access Act of 2007	18,248,128	1,540.98
2008-09		19,102,814	1,623.84
2009-10	The American Recovery and Reinvestment Act of 2009	20,427,711	1,705.04
2010-11		21,016,126	1,839.54
2011-12		20,994,113	2,003.42
2012-13		20,642,819	2,186.25

Sources: Snyder, T.D., and Dillow, S.A. (2015). *Digest of education statistics 2013*. (NCES 2015-011). Washington, D.C.: U.S. Department of Education; Baum, S., Elliott, D., & Ma, J. (2014). *Trends in student aid.* The College Board.

Moving beyond the data presented in Table 1, we draw on several analytic techniques. Because of space limitations, this article only presents summaries and a few key tables. Correlation matrices and all results are available on request. Tables 2, 3, and 4 provide coding definitions for the variables used in this study.

We created a series of scatter plots to examine the relationships between the variables we selected and the outcome measure: changes in total institutional aid awarded. Only one scatter plot revealed a positive linear relationship (see Figure 1). The analysis shows that, as student enrollment increases, so does the amount of institutional financial aid awarded. The rest of the plots show no clear pattern between the two variables.

Box plots (Figure 2) further illustrate the increase in financial aid and student enrollment as different economic shifts and federal policies come into play. These results suggest that institutional aid per student and student enrollment increased with changes in federal policy and economic shifts. These box plots appear to support the idea that economic conditions and shifts in federal policy are both associated with increases in student enrollments and the amount of institutional financial aid awarded.

Table 2. Coding of Federal Policies

Beginning Year	Ending Year	Federal Policy	Policy Code
1959-60	1964-65	No Policy	0
1965-66	1971-72	Higher Education Act of 1965	1
1972-73	1977-78	Education Amendments of 1972	2
1978-79	1985-86	1978 Middle Income Student Assistance Act	3
1986-87	1991-92	1986 Reauthorization of Higher Education Act	4
1992-93	1996-97	Higher Education Amendments of 1992	5
1997-98	1997-98	Taxpayer Relief Act of 1997 & Need-Based Educational Aid Antitrust Protection Act of 1997	6
1998-99	2004-05	Higher Education Amendments of 1998	7
2005-06	2006-07	Higher Education Reconciliation Act of 2005	8
2007-08	2013-14	The College Cost Reduction and Access Act of 2007	9

Table 3. Coding of Economic Shifts

Beginning Year	Ending Year	Economic Shift	Economic Code
1959-60	1979-80	Pre economic shift 1	1
1980-81	1982-83	Recession: 10% unemployment rate	2
1983-84	2006-07	Post economic shift 1	3
2007-08	2009-10	2009 The American Recovery and Reinvestment Act of 2009	4
2010-11	2013-14	Post economic shift 2	5

We also ran an analysis of variance (ANOVA) to identify factors associated with changes in institutional aid awarded. In the ANOVA, (see Table 4), we found that economic shifts and federal policy shifts (without taking into consideration student enrollment increases or decreases) appear to influence institutional aid per student significantly. These results are consistent with the results of the box plots.

Figure 1. Student Enrollment by Institutional Aid per Student (dollars)

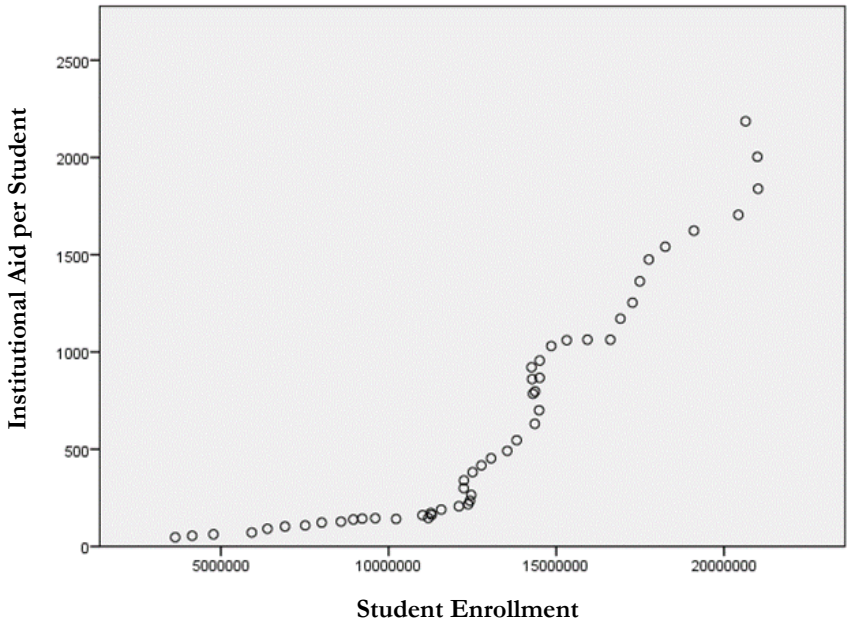

Figure 2. Distribution of Institutional Aid per Student and Student Enrollment During Different Federal Policy and Economic Shifts

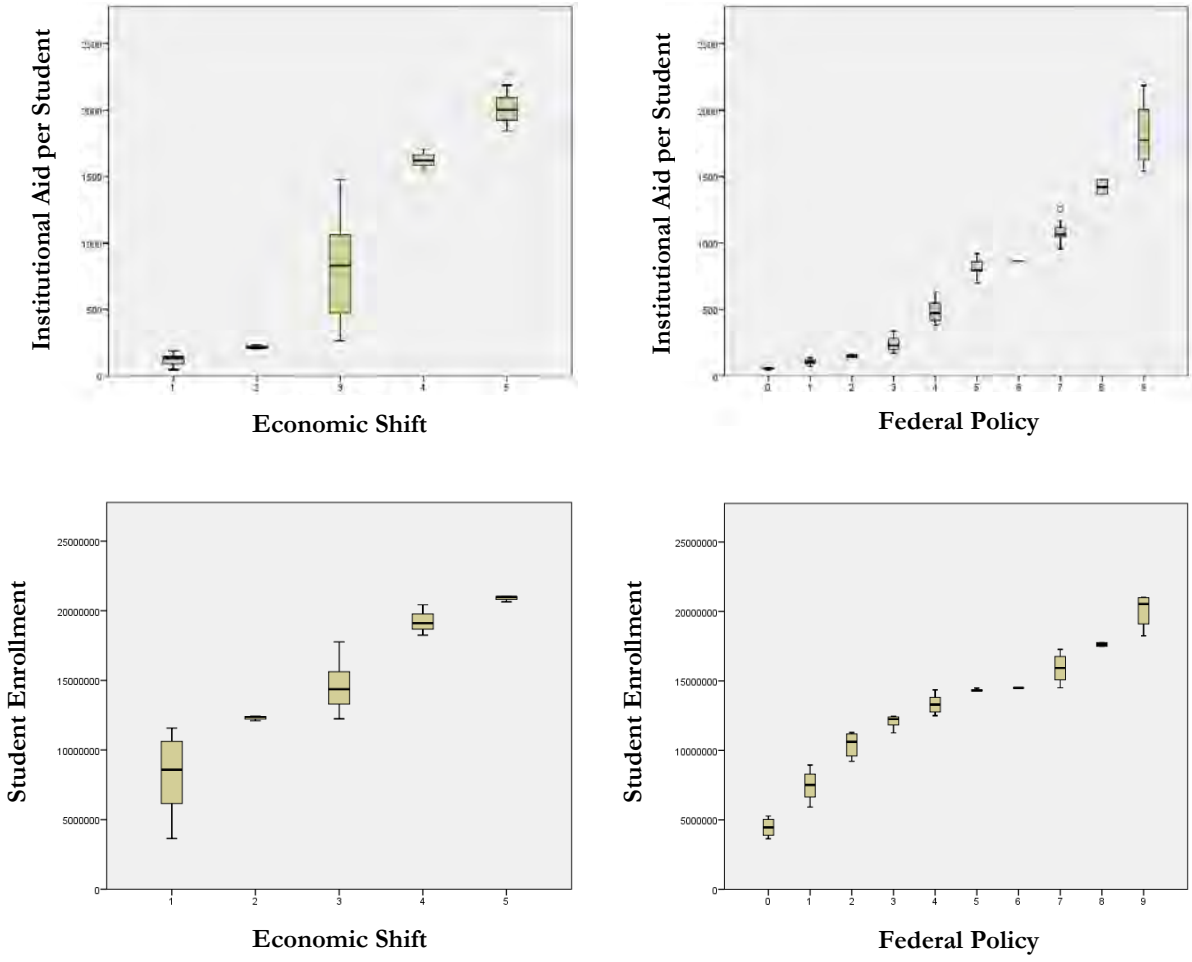

Table 4. ANOVA Analysis for the Main Effects of Economic Shift and Federal Policy on Institutional Aid per Student

	Df	Sum Sq	Mean Sq	F	*p*
Economic Code	4	14504091	3626023	647.14	<0.001***
Policy Code	8	2704432	338054	60.33	<0.001***
Residuals	38	212920	5603		

Notes: ****p*<0.001

Table 5 shows the Tukey Post-Hoc Tests we used to determine statistical differences in the means of groups in our model. The results show that shifts in the economy that we selected are *consistently* associated with institutional aid per student. For example, the comparison between Post-economic shift 1 and Pre-economic shift 1 reveal that there is a significant (p<0.001) difference in institutional aid per student. In addition, the aid was higher by $678.04 during Post-economic shift 1 on average ($611.22), than the Pre-economic shift 1 period ($744.87) with a 95% confidence interval.

Although not as constant as the analysis of economic shifts, Table 5 reveals that several changes in federal policies are also significant. For example, the results suggest that changes introduced in the Higher Education Act of 1998, which cut interest rates on student loans and started the GEAR UP program, are associated with an increase in institutional financial aid. This relationship is intuitive as this federal program is likely to have increased the number of low-income students, which, in turn, may have resulted in institutions providing more need-based financial aid.

Using the techniques employed, it is difficult to discern commonalities among the changes in federal policy that resulted in increases in institutional aid and those that did not. This merits further investigation in follow-up studies. Most of the relationships were positive. The results suggest that the enactment of several of the federal financial aid amendments had a positive impact on the amount of institutional financial aid awarded to students. The one federal policy change that is very different from other revisions to financial aid policy—the Taxpayer Relief Act of 1997, which created the Hope Scholarship, Lifetime Learning Tax Credit programs—appears to have no relationship with changes in institutional financial aid.

Table 5. Tukey Post-Hoc Tests for the Analysis of the Effects of Economic Shifts and Federal Policies on Institutional Aid per Student

		Diff	Lower	Upper	*P*
Economic Code	2-1	97.91	-35.73	231.56	0.242
	3-1	678.04	611.22	744.87	<0.001***
	4-1	1501.5	1367.85	1635.14	<0.001***
	5-1	1887.95	1754.3	2021.59	<0.001***
	3-2	580.13	448.89	711.37	<0.001***
	4-2	1403.58	1228.6	1578.57	<0.001***
	5-2	1790.03	1615.05	1965.02	<0.001***
	4-3	823.45	692.21	954.69	<0.001***
	5-3	1209.9	1078.66	1341.14	<0.001***
	5-4	386.45	211.46	561.44	<0.001***
Policy Code	1-0	54.12	-119.32	227.57	0.987
	2-0	95.06	-82.66	272.79	0.733
	3-0	-105.22	-275.38	64.94	0.554
	4-0	-246.16	-423.89	-68.44	0.001**
	5-0	79.86	-103.69	263.42	0.899
	6-0	134.4	-155.83	424.62	0.861
	7-0	352.54	179.1	525.99	<0.001***
	8-0	686.52	457.07	915.96	<0.001***
	9-0	66.78	-110.95	244.5	0.956
	2-1	40.94	-98.9	180.77	0.992
	3-1	-159.34	-289.43	-29.26	0.007**
	4-1	-300.29	-440.12	-160.46	<0.001***
	5-1	25.74	-121.43	172.91	1
	6-1	80.27	-188.42	348.97	0.99
	7-1	298.42	164.07	432.77	<0.001***
	8-1	632.39	430.87	833.91	<0.001***
	9-1	12.65	-127.18	152.49	1
	3-2	-200.28	-336.02	-64.54	0.001**
	4-2	-341.23	-486.34	-196.11	<0.001***
	5-2	-15.2	-167.39	137	1
	6-2	39.33	-232.15	310.81	1
	7-2	257.48	117.65	397.32	<0.001***
	8-2	591.45	386.23	796.67	<0.001***
	9-2	-28.28	-173.39	116.83	1
	4-3	-140.94	-276.68	-5.21	0.036
	5-3	185.08	41.8	328.37	0.004**

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Table 5–Continued. Tukey Post-Hoc Tests for the Analysis of the Effects of Economic Shifts and Federal Policies on Institutional Aid per Student

	Diff	Lower	Upper	*P*
6-3	239.62	-26.97	506.2	0.11
7-3	457.76	327.68	587.85	<0.001***
8-3	791.74	593.03	990.44	<0.001***
9-3	172	36.26	307.74	0.005**
5-4	326.03	173.83	478.22	<0.001***
6-4	380.56	109.08	652.04	0.001**
7-4	598.71	458.88	738.54	<0.001***
8-4	932.68	727.46	1137.9	<0.001***
9-4	312.94	167.83	458.06	<0.001***
6-5	54.53	-220.8	329.86	1
7-5	272.68	125.51	419.85	<0.001***
8-5	606.65	396.36	816.94	<0.001***
9-5	-13.08	-165.28	139.11	1
7-6	218.15	-50.55	486.84	0.2
8-6	552.12	244.29	859.95	<0.001***
9-6	-67.62	-339.1	203.86	0.997
8-7	333.97	132.45	535.49	<0.001***
9-7	-285.77	-425.6	-145.93	<0.001***
9-8	-619.74	-824.96	-414.52	<0.001***

Notes: $^{**}p<0.01$ $^{***}p<0.001$

Conclusions

This exploratory study has several limitations. We have not attempted to account for the many other factors that may have also influenced institutional financial aid policies, including the rise of college rankings, the increasing use of merit aid to attract more high-ability students and a diverse student body, the rise of enrollment management and new marketing strategies, the effects of shifts in state aid policies, and changes in the demographic composition of high school graduating classes (such as an increasing number of first-generation Latino students).

Nevertheless, this exploratory study provides some insights into the relationship between institutional and federal financial aid policies. It seems that the answer to the first research question is yes: Federal financial aid policies have had some influence on institutional financial aid policies and expenditures. However, the growth in financial aid expenditures cannot be explained solely by changes in federal financial aid policy. Therefore, for our second research question, the results are mixed. While simple increases or decreases alone in the number of high school graduates do not appear to be associated with increases in institutional financial aid per student enrolled, changes in the economy appear to be strongly associated with changes in institutional financial aid.

The results provide inconclusive support for Resource Dependency Theory (RDT) as a useful theoretical foundation for explaining our findings. Knowing that more financial aid was awarded when student enrollments increased is not an indicator that institutions were using their dollars to acquire or protect important resources or capture more revenue. Without knowing whether aid dollars were going toward merit aid or need-based aid, it is not possible to argue that RDT provides the best theoretical explanation. Similarly, because we do not know whether individual campuses used institutional aid to maximize their ability to capture federal aid dollars, we cannot conclude that association between rising institutional aid dollars and federal aid policies provides support for RDT as a theoretical framework for this investigation. More limited support for our use of RDT comes from the finding that financial aid consistently increased during downward shifts in the economy, which is consistent with the tenants of RDT.

This study demonstrates that, in many respects, we have only scratched the surface of the multitude of factors that may have influenced institutional aid allocations. Perhaps most importantly, in this exploratory study we did not try to control for the rising costs of higher education. Another important limitation to our work is the absence of consideration of the role of college rankings and the rise of enrollment management strategies and how they influence competitive decisions among institutions over time. More attention needs to be given to how each of the reauthorizations, amendments, and other financial aid legislation have influenced institutional financial aid policies. Future research should consider how state financial aid programs might interact with federal aid. Research that treats public and private institutions separately is also warranted. Event history analytic techniques might also reveal causal relationship, though careful thought would need to be given to the time durations, the aggregation or disaggregation of public and private sectors, and the selection of variables.

Two other themes that emerged during our interviews with our financial aid experts merit mention. The first is how the federal financial aid system changed the size, role, and function of institutional financial aid offices. We have good reason to believe these changes were dramatic, but this discussion is beyond the scope of this article.

A second insight from our interviews is more intriguing given interests at both the federal and state level in exerting more influence over the costs and priorities of colleges and universities (Dougherty & Reddy, 2013; Espinosa, Crandall, & Tukibayeva, 2014). Much of the current public policy discourse has focused on the expansion of merit-based financial aid at both private and public colleges and universities. At the same time, the percentage of low-income, first-generation college students with high levels of need has been increasing (Gross, 2014). Provisions of the Economic Opportunity Act of 1964 and the Higher Education Act of 1965 required institutions to submit the equivalent of grant proposals that demonstrated how they planned to increase postsecondary access through their own efforts in order to be eligible for CWS and EOG allocations. Our analyses did not reveal statistically significant increases in institutional aid after the passage of these pieces of legislation. Nevertheless, the idea has instinctual appeal and future analyses of the influence of federal aid policy may yet uncover some relationships during these early years of the Higher Education Act. Clearly, more research is required to understand how federal financial aid policies influence institutional financial aid policies.

Endnote

[1.] One of the two experts requested not to be directly quoted or cited and requested complete confidentiality thus we elected to do this for both individuals whom we interviewed.

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