Surviving and Thriving:
The Adaptive Responses of U.S. Four-Year Colleges and Universities during the Great Recession

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ABSTRACT

Press reports and industry statistics both give incomplete pictures of the outcomes of the Great Recession for U.S. four-year colleges and universities. To address these gaps, we conducted a statistical analysis of all articles that appeared in Lexis-Nexis on a sample of more than 300 U.S. colleges and universities during the Recession years. We identify four clusters of institutional responses, which we label "consumer service," "market search," "growing and greening" and "the complete arsenal." Overviews of actions taken in each of these clusters provide qualitative texture and evidence of senior managers' intentions. Our findings are broadly consistent with organizational theories emphasizing divergent institutional logics, but we question the extent to which the fourth of our clusters can be characterized as a coherent adaptive "logic," and we add an emphasis on inter-organizational stratification as an influence on adaptive responses.

The financial collapse of 2008-09 led to the most severe economic downturn in the United States since the Great Depression of the 1930s, earning it the title of "the Great Recession" (hereafter the Recession). States cut appropriations to public higher education institutions by as much as 19% (Desrochers & Wellman, 2011), and endowments in private institutions plummeted by as much as one-

third (NACUBO, 2010). In this paper, we argue that neither higher education industry reports nor government statistics provide a fully satisfying account of the outcomes of the Recession for U.S. four-year colleges and universities. While adverse consequences of the Recession were evident at nearly every institution, most colleges and universities also developed approaches that allowed them to weather the storm and often to emerge in a stronger position. One contribution of this paper is to provide a more complete picture of the consequences of the Recession than either industry press reports or government statistics alone allow.

Drawing on the theory of institutional logics, the paper also contributes to theorizing about adaptive change in higher education institutions. Institutional logics are forms of problem-solving that link sets of integrated actions to coherent legitimating narratives (Thornton & Ocasio 2008). *Convergent logics* have legitimacy among multiple types of actors within organizational fields. For example, Gumport (2000) described a shift in research universities from "collegial" to "industrial" logics of program development, and Thornton (2004) identified a shift in academic publishing from a "professional" to "market" logic. Organizational studies have also shown the existence of *divergent logics* competing for power and attention in organizational fields (Thornton & Ocasio, 2008; see also Bastedo, 2009), as well as conflict of logics within organizations (see, e.g., Thornton, Jones & Kury, 2005).

A contribution of this study is to identify three institutional logics that guided adaptations to the economic challenges of the Recession and a fourth that reflected a less well-defined and less well-integrated approach to adaptation. These approaches emerged from a cluster analysis we conducted based on 93 coded activities that colleges and universities undertook following the economic crash of September 2008. We drew the more than 300 institutions in our sample from the Institutional Data Archive (IDA) data base, and their activities were captured through a search of all articles about them that appeared in Lexis-Nexis between October 2008 and

July 2012. We label these four approaches "consumer service," "market search," "growing and greening" and "the complete arsenal." We question whether the latter represented a coherent institutional logic and consequently raise the issue of whether institutional change is invariably guided by institutional logics. The approaches we identify found appeal in institutions of different types, indicating that the narratives and practices developed for navigating through the Recession were not exclusively shaped by traditional divisions. At the same time, we find some significant differences by organizational type in the approaches adopted. The paper consequently also contributes to theory by linking the appeal of the four approaches to specific locations within the structure of inter-organizational stratification in the higher education field.

The Great Recession in Press Narratives and Government Statistics

We examined higher education industry press coverage of the Recession from October 1, 2008, when the first stories began to appear, through June 30, 2012.[i] Members of the higher education industry press tended to interpret the consequences of the Recession as severe, even devastating, for U.S. colleges and universities (see, e.g. Kelderman 2009, 2011a; Lederman 2011; Medina 2012). The view that the public sector was especially troubled and in need of reform became conventional wisdom among influential higher education journalists and policy reformers (see, e.g., Hamermeth 2011; Meristois, 2012; Selingo, 2013; Wildavsky, Miller, & Carey, 2011). These commentators forecasted that rising costs for students, combined with stagnant or declining instructional quality, would soon lead to the transformation of higher education delivery through the adoption of online courses and programs (see, e.g., Christensen & Eyring, 2011; Selingo, 2013; Wildavsky, Kelly, & Carey, 2011). Because national press reports can be influenced by journalists' interests in depicting dramatic developments (Boydstun, 2013) and by policy makers' use of events to promote the

solutions they favor (Kingdon, 1984), we cannot rely exclusively on industry reporting to understand the consequences of the Recession.

By contrast, research relying on government statistics showed that most four-year colleges and universities did not fare as badly during the Recession as reports in the higher education industry press suggested. This research emphasized the slightly higher operating budgets per student found in later years of the Recession, the increase in enrollments at many institutions, and a net increase in faculty salaries (Desrochers & Wellman, 2011). Our own analysis of Integrated Post-Secondary Education Data Systems (IPEDS) data, comparing data from before the Recession (AY 2005-06) to the most current IPEDS data (AY 2012-13), finds several more pronounced positive changes (see Table 1). Controlling for changes in the Consumer Price Index for all four-year colleges and universities,[ii] we found that mean faculty salaries for the ranks of associate, assistant and professor all increased during the Recession (by 6%, 5%, and 5.5%, respectively). Average staff size (identified as all full-time, non-faculty, and non-medical school employees) also increased by 13%. Mean endowment levels, measured as institutional assets at the end of the fiscal year, more than doubled thanks largely to the growth in endowments for schools whose endowments were low at the beginning of the period. Mean expenditures on instruction per full-time equivalent enrollment grew by about 8%. These advances were greatly aided by the 31% increases in average tuition and fees during the period, as well as growth of international and out-of-state enrollments. We also found some adverse consequences of the Recession; the share of faculty with part-time status, for example, increased by 3%. Among the variables we examined, with few exceptions private colleges and universities showed proportionately greater improvements by the end of the period, AY 2012-13, than public institutions (see Table 2).

Table 1. Recession Era Changes in Colleges and Universities Enrollments and Finances

	N	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average Change 2005-2012
Salary: Professor	**1336**	85261.11	86656.81	86904.79	90038.31	89090.51	87555.35	87192.86	89878.91	5.50%
		(23282.66)	(23929.64)	(24262.59)	(25669.12)	(25347.61)	(25130.81)	(25381.31)	(26583.91)	(11.75)
Salary: Associate Prof.	**1349**	67543.63	68538.08	68706.10	71088.96	70081.61	68876.36	68437.12	70439.51	4.74%
		(14063.18)	(14469.46)	(14666.15)	(15371.55)	(15217.41)	(14902.08)	(14965.16)	(15530.83)	(12.45)
Salary: Assistant Prof.	**1335**	57519.78	58336.36	58441.59	60538.33	59943.69	59048.55	58873.23	60633.54	5.65%
		(11111.4)	(11527.74)	(11478.77)	(12222.16)	(12122.22)	(12121.63)	(12222.74)	(12772.3)	(11.02)
Staff Size	**1458**	750.27		780.91		811.54		815.59		13.24%
		(1525.65)		(1581.38)		(1694.92)		(1715.74)		(32.93)
Average Tuition & Fees	**1443**	15924.57	16528.92	17050.39	18055.94	18536.23	18830.32	19354.97	19958.79	31.44%
		(9915.23)	(10317.22)	(10622.24)	(11223.23)	(11401.42)	(11473.2)	(11662.93)	(11984.27)	(97.77)
International & Out of State Enrollment	**1461**		31.49		32.06		32.02		33.27	1.79%
			(25.67)		(25.60)		(25.54)		(25.66)	(9.40)
Percent Part-Time Faculty	**1602**	41.03		42.13		43.01		43.96		2.93%
		(21.78)		(21.65)		(21.41)		(21.13)		(12.79)
Endowment (000,000)	**1250**	254.33	304.43	298.01	231.80	246.70	280.82	278.75	302.70	172.24%
		(1427.44)	(1696.15)	(1697.52)	(1247.83)	(1302.8)	(1474.53)	(1444.86)	(1542.24)	(1665.14)
Instruction Expenditures per FTE	**1255**	11656.13	12009.72	12238.81	12691.33	12521.53	11924.53	12022.32	12193.42	8.40%
		(16261.9)	(17092.6)	(17716.41)	(18875.16)	(18961.15)	(16835.01)	(17557.39)	(17831.62)	(23.75)

Note: Financial variables adjusted to 2013 value using Consumer Price Index. Salary is average salary of FT faculty on 9 month equated contracts. Out of state and foreign enrollments are the share of first-time freshmen with that residency status. Average change is average percent change at each institution (e.g., (2013 value-2006 value)/2006 value) for all variables except Out of State Enrollment, Foreign Enrollment, and Part-Time Faculty, where they are whole percentage point changes between start and end years. Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Human Resources component, Instructional staff/Salaries (IPEDS-S:06-12); Human Resources component, Fall Staff (IPEDS-F:05-11); Institutional Characteristics (IPEDS-F:05-12); Enrollments: Residence and migration of first-time freshmen (IPEDS-F:06-12); Race/ethnicity, gender, attendance status, and level of student (IPEDS-F:05-12); Finance GASB 34/35 (IPEDS-FY:06-13) and FASB (IPEDS-FY:06-13).

Table 2. Recession Era Changes by Institutional Control

	Public Institutions				Private Institutions				*t*-Value
	N	**2005-06**	**2012-13**	**Avg. Change**	**N**	**2005-06**	**2012-13**	**Avg. Change**	
Salary: Professor	526	91664.53	96069.56	4.65%	810	81102.84	85858.81	6.06%	-2.15*
		(18376.16)	(21777.61)	(8.88)		(25128.15)	(28588.82)	(13.26)	
Salary: Associate Prof.	527	71971.28	74002.17	2.80%	822	64704.98	68155.42	5.98%	-4.62***
		(10888.95)	(12704.91)	(7.86)		(15103.21)	(16710.8)	(14.52)	
Salary: Assistant Prof.	523	61159.46	63677.78	4.16%	812	55175.5	58672.78	6.62%	-4.00***
		(9308.39)	(10796.5)	(8.36)		(11544.14)	(13545.48)	(12.34)	
Staff Size†	589	1227.16	1309.21	8.98%	1107	391.53	438.79	15.50%	-3.90***
		(1897.61)	(2097.84)	(18.02)		(1102.69)	(1278.02)	(38.39)	
Average Tuition & Fees	543	6066.72	7959.16	35.44%	900	21872.14	27198.56	29.04%	1.23
		(2473.98)	(2772.91)	(24.74)		(7739.13)	(9289.34)	(119.53)	
Percent International & Out of State Enrollment††	547	16.31	17.93	1.62%	914	40.57	42.46	1.89%	-0.53
		(15.37)	(16.35)	(6.33)		(26.30)	(25.83)	(10.83)	
Percent Part-Time Faculty†	569	19.03	20.19	2.69%	1038	19.32	18.48	3.07%	-0.56
		(7.26)	(8.59)	(9.19)		(22.24)	(18.28)	(14.39)	
Endowment (000,000)	449	107.93	181.21	968.79%	801	336.39	370.81	133.66%	2.33*
		(405.06)	(672.09)	(443.88)		(1752.3)	(1856.75)	(102.32)	
Instruction Expenditures per FTE	429	9273.06	9152.56	8.14%	826	12893.83	13772.75	8.53%	-0.28
		(10162.58)	(4931.45)	(21.40)		(18544.45)	(21526.43)	(24.89)	

Notes: †2012-13 data incomplete/missing; used 2011-12. ††2005-06 data incomplete/missing; used 2006-07. Financial variables adjusted to 2013 value using CPI. Avg. Change is average percent change at each institution (e.g., (2013 value-2006 value)/2006 value) for all variables except Out of State Enrollment, Foreign Enrollment, and Part-Time Faculty, which represent whole percentage point changes between start and end years. Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, Human Resources component, Instructional staff/Salaries (IPEDS-S:06-12); Human Resources component, Fall Staff (IPEDS-F:05-11); Institutional Characteristics (IPEDS-F:05-12); Enrollments: Residence and migration of first-time freshmen (IPEDS-F:06-12); Race/ethnicity, gender, attendance status, and level of student (IPEDS-F:05-12); Finance GASB 34/35 (IPEDS-FY:06-13) and FASB (IPEDS-FY:06-13).

We also examined available IPEDS statistics over a 25-year period that included two other recessionary periods (1991-1992 and 1999-2000). We examined trends in faculty salaries, staff sizes, tuition and fees, percent international and out-of-state enrollments, percent part-time faculty, and instructional expenditures per student.[3] When we examined patterns across the three recessionary periods, we found only a few trends across IPEDS four-year colleges and universities that consistently coincided with all three recessions or their immediate aftermaths: Inflation-corrected mean faculty salaries grew across all three ranks (assistant, associate, and full professors) immediately following recession periods. Mean staff sizes flattened for several years following recessions and grew only very slowly (see Appendix A). Many variables of interest, such as endowment, could not be tracked across the 25-year period due to inconsistent measurement.

Although government statistics are more reliable guides than higher education industry press reports, they too fail to provide a fully satisfying account. IPEDS does not include data relevant to many changes during the Recession period. For example, IPEDS does not collect data on changes in benefit structures, online courses, or sustainability efforts. Government statistics are also not responsive to the distinctive approaches that institutions develop to navigate disruptions caused by events like the Recession. They cannot identify these approaches or provide the texture necessary to understand how they unfolded in practice.

By addressing these gaps, this study provides a more complete picture of change during the Recession period. We rely primarily on quantitative analysis using a broader set of variables than can be found in government statistics. We also illustrate the actions and rationales of college and university managers in each of the four clusters using examples of concrete actions and quotes from articles in the Lexis-Nexis database. This combination of quantitative analysis

bolstered by concrete illustrations helps us to understand more fully the actions managers took and the pathways they pursued to meet the challenges of the Recession.

Case studies can provide a deeper understanding of change on specific campuses than Lexis-Nexis data (see discussion section). However, case studies are typically limited to, at most, a handful of cases (see, e.g., Gumport 2002). Thus, intensive case studies, by nature, must sacrifice coverage for depth. The Lexis-Nexis data base allows for broader coverage and consequently the prospect for greater representativeness and better balance than case studies. The Lexis-Nexis data base is also superior to surveys of presidents and provosts as a window into the consequences of the Recession. Surveys of presidents and provosts during the Recession period suggest that senior leaders of public colleges and universities emphasized the negative consequences of the Recession, perhaps in the hope of encouraging greater public and private support for their institutions (Green 2011). In spite of its limitations (see below), the Lexis-Nexis data base provides a broader window into what happened on a wide range of campuses than other existing databases can.

Data and Methods

Database and Coding Procedures

We coded all non-duplicated stories that appeared in the Lexis-Nexis database for a sample of more than 300 four-year colleges and universities, coding 93 separate variables. We used data from all English-language newspapers, news wires, and press releases, drawing on some 3,300 sources. No other database can provide as much textured detail on events at so many colleges and universities. We restricted the search to documents published between October 1, 2008, the first date that press reports began to emerge about the Recession, and July 1, 2012, the

beginning of the fiscal year when most colleges and universities began to emerge from the Recession.[4]

Although it allows us to examine institutional actions not available through alternative databases, Lexis-Nexis has three limitations as a source of data. The first is the more extensive coverage of higher-status than lower-status institutions. In the Lexis-Nexis data a moderate correlation existed between prominence, as measured by Barron's selectivity index, and the number of codes for an institution (r=.25). Lexis-Nexis sources also provide better coverage of higher education institutions in some localities than in others. These differences are not necessarily related to the size of media markets; instead, some local newspapers, including some student-run newspapers, were very active in reporting on the local campus while others were not. A third limitation, characteristic of all press reporting, is that not all changes find their way into print. These limitations have led us to focus more on similarities in the behavioral profiles of institutions and the approaches their leaders expressed than on counts of specific actions.

We searched using key terms related to 13 broad areas about which we could not capture complete data from IPEDS or other sources: 1) administrative reorganization, 2) capital projects, 3) maintenance, buildings and grounds, 4) employment and salary, 5) benefits, 6) online learning, 7) teaching loads, 8) class sizes, 9) affordability, 10) sustainability, 11) admissions policies, 12) the development of consortia, and 13) curriculum requirements. Within each of these broad categories, we coded numerous specific activities. As a reliability check, we also coded some activities collected by IPEDS, such as changes in tuition and fees, changes in staffing levels, changes in faculty salary levels, and changes in enrollment. (See Supplemental Table 1 for a detailed description of each activity coded and the search terms we used to identify activities.) We counted only activities that were reported as officially approved and as having

occurred during our search period; we did not count activities that were reported as planned or anticipated. We relied on a conservative approach to quantifying the information, coding only whether or not an activity occurred sometime during our search period. Thus, the final codes were binary: "1" if reports existed that the activity had occurred during the period and "0" if no reports existed of its occurrence. We did not attempt to code the number of occurrences, the sequence of occurrences, or the magnitude of the changes.

We drew a sample of 311 colleges and universities from the Institutional Data Archive (IDA).[5] IDA is a depository of data on 385 U.S. four-year colleges containing more than 2500 variables collected at five-year intervals from AY 1970-71 through AY 2010-11. Data for IDA is drawn from 21 separate datasets. IDA includes a very wide range of data on sampled institutions from financial records and presidents' backgrounds through library holdings and the proportion of students who live in fraternities and sororities (see Brint et al. 2011). The IDA institutional population is based on a stratified random sample of four-year colleges and universities in which weighting can be applied to represent the population as it existed in 2000 when the IDA sample was first drawn. The sample used in this paper included a sizable number of institutions in each of IDA's four tiers: (1) selective colleges and leading research universities (N=53); (2) other selective colleges and research-doctoral universities (N=89); (3) master's-granting comprehensive institutions (N=88); and (4) non-selective baccalaureate-granting institutions (N=81). From the 311 coded institutions, we eliminated 23 for which no codes existed, leaving a final sample of 288 institutions. Means for institutions represented in both the original sample of 311 and the reduced sample of 288 were not significantly different from means in the full IDA sample of 385 with respect to control, highest degrees offered, enrollment distributions, or selectivity.[6]

Data Analyses

Our first analysis consists of counts of the most common activities reported during the Recession. Because of limitations in the data, caution should be used in the interpretation of these counts. They are indicative of common actions, but they are, at best, approximations for the relative frequency of the actions undertaken.

Our second analysis utilizes cluster analysis to group institutions based on the coded activities. This analysis allowed us to identify patterns in institutional actions during the Recession. We ran the cluster analysis on all 288 colleges and universities across all 93 activities and 13 broad categories. Because all variables were binary, we used a partition cluster-analysis method in which the institutions were broken into a specified number (represented as *k*) of clusters based on their proximity to the mean values of each cluster. We used the Jaccard coefficient to determine proximity because it ignores values of zero in the data when grouping institutions into clusters. Using this approach, starting means for each cluster are determined by the values in each variable for *k* number of institutions.

We selected the number of clusters by running a set of 13 cluster analyses, each with a different number of clusters (i.e., values of *k* ranged from 3 to 15). We then estimated a Caliński and Harabasz (1974) pseudo-F index for each cluster analysis, and graphed these estimates according to number of clusters. This index signifies the relative distinctiveness between clusters, with the set of most distinct clusters having the highest pseudo-F value. Since cluster results may vary depending on which institutions start the analysis, we ran each set of 13 cluster analyses 18 times using different start points and generated graphs using these alternative random start points to confirm our choice of the number of clusters. Some random start points favored three-, five-, or six-cluster solutions, but a four-cluster solution was most frequent across

the 18 cluster analysis sets we conducted, including in the analysis with the highest pseudo-F value.

We use results from the iteration of the cluster analyses that produced the highest pseudo-F value as the base for our reported findings. In 10 of the 18 repetitions using different start points, we found high levels of overlap between random draws and this best-fitting model. In eight cases, we found results that failed to replicate closely. In most of these latter cases, we found less consistent distinction between the two smaller clusters, which we have labeled "consumer service" and "market search." Depending on the start point, these two clusters sometimes merged or divided in ways that varied from the highest pseudo-F value result. Nevertheless, in reporting results, we treat these two smaller clusters as distinctive based on the preponderance of evidence.

Because IDA oversamples larger and more prestigious institutions, we do not attempt to draw inferences about the size of the four clusters in the population of U.S. four-year colleges and universities. Rather we use them to discuss the primary organizational logics influencing the actions of college and university administrators and the relationship of these logics to locations in a stratified and segmented organizational field. We illustrate differences in these logics by providing examples of actions taken by managers located in each cluster, and the rationales they used to justify their actions.

Our third analysis employs multinomial logistic regression to examine the institutional characteristics associated with each cluster in the best-fitting solution. We used a parsimonious model to predict cluster location. The independent variables in this model included: (1) institutional size (logged undergraduate headcount enrollment in 2010), (2) institutional control (coded as a binary public vs. private not-for-profit distinction), (3) highest degree (coded as a

three-category doctoral-granting, masters-granting, and baccalaureate-granting distinction), and (4) endowment (logged end-of-year endowment in 2011). (For mean values for each cluster, see Appendix B.) We chose these variables because previous research has shown that institutional capacity (as measured here by enrollments), institutional mission (as measured here by control and highest degree awarded), and financial strength/reputational standing (as measured here by endowment) are the most consistent influences on organizational change in U.S. four-year colleges and universities (see Brint et al., 2012). The addition of other independent variables sometimes associated with patterns of organizational change (such as proportion of liberal arts degrees awarded and region) did not significantly improve the model fit.

Results

Count Data

The items included in our coding that paralleled IPEDS were consistent in direction with the IPEDS findings. The Lexis-Nexis data revealed large proportions of institutions reporting increases in tuition (67% of cases) and fees (35% of cases), as well as enrollment growth (18% of cases). Cost savings were often associated in these data with salary freezes and pay caps (27% of cases). Data not coded in IPEDS indicate other cost savings actions taken by significant numbers of institutions, including changes in structure of benefits (28% of cases), growth of online courses and degrees (28% of cases) and development of new consortia relationships related to academic degree programs, shared purchasing, shared digital services, and/or joint capital projects (34% of cases).

These data also brought out the impressive amount of capital spending reported even during the worst years of the Recession and the prevalence of environmentally sensitive development. Lexis-Nexis count data showed 77% of institutions reporting new capital projects,

64% specifically reporting new buildings and 49% reporting major renovations. (By contrast, slowed or cancelled capital projects were much less common, reported in about 20% of cases.) Although this capital spending may seem counter-intuitive, lower interest rates and lower construction pricing in bids by struggling contractors may have created incentives for capital spending in tough economic times. The count data showed frequent development of sustainable and "green" systems accompanying this construction growth, including green construction (39% of cases), Leadership in Energy and Environmental Design (LEED) construction (31% of cases), increased alternative energy sources (33% of cases), and green transportation systems (hybrid and electric) (31% of cases). The data also indicated efforts by institutions to maintain socially progressive approaches to financial aid allocation. More than one-third of the institutions (34%) reported specifically on increased aid accompanying higher tuition, and 20% reported separately on increases in need-based aid.

Cluster Analysis

The best-fitting cluster analysis (pseudo-F=21.58) identified four approaches to the challenges of the Recession. In each case, administrators made at least some painful cuts while at the same time attempting to place their institutions in a stronger position to weather the Recession and to thrive during and following it.

Consumer service. The first cluster was composed of 54 institutions (19% of the sample) and included a high proportion of the least prestigious institutions in the sample. Administrators of institutions in this cluster focused on catering to students' interests in convenience, flexibility, and low cost. For example, 13% of these institutions reported smaller tuition increases than they implemented in pre-recession years, and 11% had frozen tuition. Moreover, 9% of the institutions in this cluster reported tuition decreases. Twenty-two percent of the institutions

reported expanded online learning, compared to 8% and 6%, respectively, in the second and third clusters. Growth of online courses typically reflected efforts to offer greater flexibility to student consumers at a reasonable price. Cameron University President Cindy Ross highlighted this focus on catering to student preferences: "Students have been the heart of Cameron's mission from the very beginning, and students continue to guide future planning" ("Regents Approve $46 Million Budget," 2009).

Several of the institutions demonstrated their commitment to serving their student consumers through maintaining affordability. Recessionary budgets led to tuition increases; however, in many instances, senior administrators were quick to point out that the increases were comparatively low by state standards. For example, following a nearly 8% tuition increase, Kentucky Wesleyan President Cheryl King noted "…We've worked hard to make going to college at KWC as affordable as possible... It just costs more to do business these days…Still, we're well behind the tuition increases our state's public colleges have seen in recent years" (as quoted in Campbell 2009a). Similarly, senior administrators at Cameron University sought to downplay the college's 5.5% tuition increase in 2010-11 ("Cameron University Initiatives Planned," 2010), with evidence of offsetting efforts to enhance affordability. These emphases included publicizing the low amounts of indebtedness of Cameron students and launch of a new "CU $upports You" program to increase aid for students with financial need ("University Launches 'CU $upports You'," 2009). At Shepherd College, a proposed tuition increase led the Board of Governors to delegate to President Suzanne Shipley the "authority to decrease, but not to increase, the amount of tuition…" ("Shepherd Proposes No Increase," 2010).

The schools in the consumer service cluster also focused on offering students course offerings they would find attractive. For example, Kentucky Wesleyan increased the number of

courses it offered, including several off-campus courses in exotic locales, while at the same time expanding their online courses. Dean Clayton Daniels identified the College's motivations: "Students want to complete their education as quickly as possible and at as low a price as possible...We're working…to accommodate that" (as quoted in Campbell, 2009b). In 2011, Shepherd College reduced the number of credits required for a bachelor's degree from 128 to 120 in an effort to make college more efficient while reducing tuition costs and student debt levels ("Shepherd Makes Curricular Changes," 2011).

The institutions pursued collaborative relationships to provide additional opportunities for flexibility to their students. Kentucky Wesleyan, for example, developed new consortia arrangements with companies, other colleges, and non-profits. The "Wesleyan Fellows" program, a work-study/internship hybrid begun in 2009, explicitly sought to satisfy student demand for "real life" and "practical" educational experiences (Campbell, 2009c). To provide a streamlined path to degrees and credentials, Shepherd College pursued collaborations and strengthened articulation agreements with several nearby community colleges.

Market search. The second cluster included 39 institutions (14% of the sample). Within the cluster, 54% of the institutions reported significant staff layoffs on their campuses, the highest percentage from among the four clusters. The institutions in the cluster also showed relatively high counts of salary and hiring freezes, faculty reductions, and reduced funds for travel and professional development. Staff layoffs and salary freezes were not the only forms of retrenchment. Delta State delayed library purchases and put off repairs to several buildings (Pettus, 2009). Elmhurst College deferred the renovation of some capital projects, including the presidential residence ("Welcome Our Senior Friends," 2009). At South Dakota State, class sizes

were increased and some low-enrollment academic programs were eliminated, including Physics and Engineering Physics (”South Dakota State University,” 2011).

Efforts to grow enrollment played an important role in administrators’ efforts to stabilize the finances of their campuses. "I am encouraged and energized by this increase (in enrollment)…” Mark Roberts, the president of the conservative Christian Oral Roberts University said. “We will continue to engage new markets and recruit the best Christian students from around the world. ORU's best days are ahead and I am excited to be a part" (”Letter to the ORU Family,” 2009). To raise revenue Elmhurst College added curricula for senior citizens (”Welcome Our Senior Friends,” 2009). Central Washington added curricula in popular environmental areas (”High Demand Programs,” 2008), and South Dakota State opened the first architecture school in the state, supported by donations from the state’s architectural community (”New Architecture Department,” 2010). Compared to institutions in the first and third clusters, the institutions in the market search group were also more likely to report development of new master’s and joint degree programs as ways to build into new markets.

These institutions sought to expand revenue sources in other ways as well. Relative to the other clusters, a comparatively large proportion reported ending need-sensitive admissions policies and decreasing admissions of low-income students. Campus assets were also turned to economic advantage. Central Washington operated Washington’s only geodesy laboratory, which utilized roughly “350 continuously operating, high-precision global positioning systems in the Pacific Northwest to monitor the movement of the earth, earthquakes and sea levels” (Central Washington University, 2010a). President James Gaudino proposed using the system to benefit commercial agriculture, stating that the university could operate the laboratory as a business (Central Washington University, 2010b).

Entrepreneurial rhetoric was common among leaders of the institutions in this cluster. Central Washington President Gaudino said, "There [are] no regular business processes to absorb cuts this deep… Business-as-usual isn't going to work" (as quoted in Central Washington University, 2009). Facing additional budget cuts the following year, he said, "We need to maximize and diversify our revenue streams…We have to be self-sufficient (and) more entrepreneurial" (Gaudino, quoted in Central Washington University, 2010b). Commenting on an expansion of summer programs intended to create new revenues, Elmhurst College President S. Alan Ray observed, "If this sounds like I'm running a business, it's because I am…Bricks and mortar, salaries, revenue, marketing: strip away the ivy and you'll find it all there…We are committed to a distinctively non-profit model that is rooted in community, learning, and service. But we're also a business. (The) recession has only made…us more aware of it" (as quoted in Elmhurst College, 2010).

Growing and greening. The third cluster included 66 institutions (23% of the sample). The institutions in this cluster were able to locate funds to grow and to market themselves as green campuses, a form of strategic investment that at once reduced expenditures through greater efficiency and served as a springboard for attracting additional favorable publicity in the future. Compared to the institutions in the first and second clusters, these institutions were more likely to report new construction (53%) and renovations (35%). In addition, virtually all (99%) reported engaging in at least one activity related to campus sustainability. For example, 42% reported green construction, 36% reported LEED construction, 46% reported increased use of alternative energy sources, and 41% reported installation of energy efficient systems or technology.

Institutions in this cluster were able to continue capital projects, often through aligning them with sources of funding associated with green initiatives. For example, DeSales University paid for over one third of its new student union with a $7 million redevelopment grant from the state (DeSales University, 2011). The state legislature granted Eastern Oregon University funds for the specific purpose of energy efficient upgrades (Renovations, 2009). Private colleges relied on donors to become greener. Macalester College generated all of the $7.7 million required to fund the construction of a new instructional building through private donations (Macalaster College, 2009). Although the building was approximately 15% more costly to build for sustainability, President Brian Rosenberg noted the college had received some gifts "…precisely because we are building a very efficient building" (as quoted in Macalaster College, 2009).

Sustainability initiatives were typically described as strategic investments that would save the institutions money in the long run. For example, The University of Central Oklahoma's Sustainable Forensic Building reduced water use by 36% (University of Central Oklahoma, 2010b). Macalester's new Markim building was projected to use 80% less energy than a typical building of its size (Jossi, 2011). The institutions also took smaller steps to save money through sustainability initiatives. DeSales College installed low-flow showerheads that decreased water usage by 10% and held competitions in the residence hall to motivate energy and water use reductions (McNamara, 2011). UCO converted used cooking oil to fuel campus vehicles (University of Central Oklahoma, 2010a) and created a "sustainability month" to encourage the campus community to "turn off the lights in their offices and classrooms" (University of Central Oklahoma, 2009). UCO Executive Vice President Steve Kreidler touted these efforts as "…lean, cost-saving practices that… allow [us] to continue offering a quality educational experience to students" (as quoted in State of Oklahoma, 2009).

The leaders of these institutions used green projects to burnish their campus's reputations for environmental responsibility. The University of Central Oklahoma, for example, released numerous press releases celebrating environmental awards from organizations like the Sierra Club and the Environmental Protection Agency. When discussing the new Platinum LEED building President Rosenberg of Macalester College said, "It is like our front door to the community and we wanted to do it right" (as quoted in Macalaster College, 2009: 2). Macalester went so far as to create a website so that community members could track energy use and carbon emissions on campus.

The complete arsenal. The fourth cluster included 129 institutions (45% of the sample). While this cluster was, by some measure, the largest in our sample, we caution against assuming that it would also be the largest in the entire population of four-year colleges and universities. IDA oversamples selective colleges and universities, and these institutions were more likely than others to adopt a wide range of actions in response to the recession. We describe these institutions as using "the complete arsenal" of responses because they were disproportionately represented across nearly all of the coded activities. Eighty-nine percent of the campuses reported increased tuition, 64% reported increased fees, 85% reported new buildings, and 76% reported new renovation projects. These institutions were also most likely to make changes in employee benefits. Fifty-two percent reported of benefit changes, including 17% that reduced overall benefits and 23% that attempted to reduce costs by offering new retirement incentives. All ten institutions reporting larger teaching loads were clustered in this group. In addition, more than one-fifth reported increased international admissions. Over half reported expanding their consortia activities, including 44% that developed new joint degree programs. In each case, these proportions were higher than those found in other clusters.

Campus leaders encouraged a sweeping approach to meet the challenges of the Recession. Utah State University President Stan Albrecht set the tone for his university's response: "I would like to present what I believe is an optimistic, promising, progressive, and forward-looking - but very honest - view of the university…This means that there will continue to be profound changes to how we do business, and this will extend very much into our future…Our proposed approach will be to address this reduction [in state budget cuts] through a combination of new revenues and additional budget cuts" (as quoted in "Stan L. Albrecht," 2009). In 2009, University of Connecticut President Michael Hogan emphasized, "Everything is on the table…to try to preserve the quality of undergraduate education" (as quoted in Merritt, 2009).

Because of their size, many of the institutions in this cluster faced larger challenges in sheer dollar terms than institutions in the other clusters. By the end of 2009, Stanford University, for example, had laid off almost 500 people and frozen 50 faculty searches after a nearly 30% decline in its endowment (Sanders, 2009). At the University of California, Berkeley more than 150 middle managers were laid off on the recommendation of consultants called in to create efficiencies (Bain & Company, 2010). At the University of Arizona, sharp cuts in state subsidies led to hundreds of staff layoffs and to a nearly 24% increase in tuition for in-state students (Duda, 2011). The University of Arizona also increased the out-of-state enrollment cap from 30 to 40% in another effort to increase revenue (Fain, 2009).

Presidents at most institutions set targets for cuts and allowed units to determine how to meet those targets. For example, the Provost of Stanford University requested all schools and administrative units to propose budget reduction scenarios of 3%, 5%, and 7%. Cuts were then allocated differentially based on review of the proposals by the University Budget Group

(Stanford Report, 2008). In other cases, senior administrators mandated across-the-board cuts and allowed unit heads to determine how to make them. "Our immediate challenge is how to most prudently reduce spending…while sustaining as little negative impact as possible," Western Kentucky University President Gary Ransdell said, "How divisions choose to make the…cuts is entirely up to those who lead their respective (divisions)" (2011).

Responding to the climate of expectations, unit heads sometimes developed efficiency and revenue enhancement measures on their own, based on their unit's priorities, opportunities, and the resources available to them. For example, in 2011, Iowa State University's Admission Office cut costs by allowing students to self-report their grades (Caffrey, 2011). In the same year, the University of Arizona's Office of Instruction and Assessment (OIA) promoted a unit-developed initiative to add online courses funded through an approved increase in the student instructional technology fee (Shelton, 2011). Under the leadership of an entrepreneurial dean, the engineering college at the University of California-Riverside embarked on an aggressive campaign to find corporate sponsors for research, with the support but not under the direction of senior campus leaders (University of California, Riverside, 2012).

Multinomial Logistic Regressions

We used the complete arsenal cluster as the reference category for our analysis of the characteristics of institutions located in the four clusters. It was the largest of the four clusters and included nearly all of the large, high-status institutions in the sample (see Table 3). In spite of their differing resource dependencies, we found both large public and private universities in this cluster. Each of the three smaller clusters included higher proportions of financially insecure colleges and universities, as measured by the endowment variable. The coefficients for endowment were lowest in the consumer service cluster and were significantly higher in the

growing and greening cluster than in the consumer service cluster. Institutions located in the consumer service and growing and greening clusters were significantly more likely to be drawn from among private colleges and universities than those located in market search and complete arsenal clusters. Because the consumer service cluster included many of the financially weakest institutions in our sample, this finding suggests that a bottom stratum of private colleges faced very difficult circumstances during the period, even though private colleges as a whole tended to fare better than public universities during the period.

Some scholars have argued that the U.S. higher education system is composed of several smaller organizational fields (such as liberal arts colleges, religiously-affiliated colleges, occupational colleges, and research universities) (see, e.g., Clark 1987). If so, similar responses to the Recession might be expected to prevail within these segments. In our study, institutional responses to the Recession were partly consistent with this view. Lower-status institutions and private institutions did tend more often to adopt distinctive approaches to navigate the Recession. However, we found no clear differentiation among other segments and strata in the system; some liberal arts colleges, for example, could be found in each of the clusters, as could master's- and doctoral-granting institutions. In addition, some of all types of institutions were found in the complete arsenal cluster.

Table 3. Characteristics of Institutions Located in Four Clusters

Variables	Cluster 1 Consumer Service	Cluster 2 Market Search	Cluster 3 Growing & Greening	Cluster 4 Complete Arsenal
Log Enrollment (2010)	0.80	0.41*	0.56	Reference
	(-0.57)	(-2.13)	(-1.58)	
Log Endowment (2010)	0.42***	0.58**	0.72*	
	(-4.74)	(-2.97)	(-2.01)	
Institution Type (Base: Doctoral/Research)				

	Masters	2.29	1.02	5.61*
		(0.99)	(0.03)	(2.27)
	Baccalaureate	2.27	0.62	2.67
		(0.80)	(-0.49)	(1.07)
Control (Base: Private)				
	Public	0.03***	0.24*	0.10***
		(-4.92)	(-2.03)	(-3.55)

Note: Sample size reduced due to missing data. Reported as exponentiated coefficients; z-statistics in parentheses. N=263. Log likelihood=-266.27. X^2=149.59 (15). * p<0.05, ** p<0.01, *** p<0.001

We examined the financial circumstances of institutions in each of the clusters for clues about why college and university leaders pursued distinctive strategies. The variety of threats to complete arsenal campuses were greater on average than those experienced by other campuses in the sample. Average professorial salaries across all three ranks were higher at complete arsenal institutions than at institutions in the other three clusters. Staff sizes were an average of five times larger. In addition, the mean percent of part-time faculty was lower than in the other institutions. Perhaps most important, mean declines in endowment were much larger in absolute dollar terms. These financial circumstances may help to explain why the leaders of campuses in this cluster were motivated to implement a full range of tools to cut costs and to improve efficiency and revenues. By contrast, average tuition and fees were higher at the "growing and greening" campuses than at institutions in the other clusters. This favorable market condition may have helped to fuel the sense of optimism we saw in the statements of leaders of these institutions, and, in some cases, tuition dollars clearly also provided funds for improvements to physical facilities. The consumer service institutions stand out for the difficulty of their financial circumstances. Average professorial salaries were lower than those of campuses in the other three clusters, mean instructional expenditures per student lower, and mean percentage of part-

time faculty higher. With little give in their budgets and little prospect of attracting new sources of revenue, it is not surprising that a redoubled emphasis on serving student consumers as responsively as possible may have been the only viable option many leaders of these institutions perceived. (For details on the financial circumstances of institutions in each of the four clusters, see the Appendices.)

Discussion

While we recognize that adjustments in the wake of the Recession created organizational weaknesses and lower quality in some units and departments, our study focuses on the under-appreciated strengths of colleges and universities during a period in which college education has become an entry-level credential for desirable jobs. None of our institutions failed during the period, and, according to some key indicators, such as educational expenditures per student, the majority emerged from the Recession stronger than before. Managing in difficult times is a feature of every organizational environment and most college and university leaders had the flexibility and resources to manage effectively.

Our findings are valuable primarily as a window into what colleges and universities did to survive and thrive and how they articulated the paths they intended to follow. Very few institutions in our sample simply fell into a defensive posture in the face of state budget cuts and declining endowments. Institutions did take defensive measures in response to these changes, but, in addition, college and university leaders also tried to take advantage of the Recession to place their institutions on a financially and symbolically stronger footing. Higher education is an important and growing sector of American life – and the actions of leaders of colleges and universities for the most part reflected this reality. Even in the face of the severe economic repercussions of the Recession, many expressed a sense of optimism. This optimism was

undoubtedly due in part to the continuous, if uneven, growth in postsecondary enrollments over time. It undoubtedly also reflected the well-known counter-cyclical relationship of higher education to the economy (see, e.g., Craig 1981). When jobs are scarce, more young people will seek credentials to improve their positions in the labor market. More generally, challenging economic times can provide a range of opportunities for educational institutions, including lower construction costs, opportunities to reorganize benefit packages, and access to government stimulus funds.

Contributions of the Study

Within this context, our study makes four contributions to understanding the outcomes of the Great Recession for U.S. four-year colleges and universities.

First, we show that some important developments during the Recession cannot be captured using higher education industry press reports or government statistics alone. Among areas of change not reported IPEDS we found high levels of construction, significant growth of consortia, expansion of online presences, and high sensitivity to the ethos of sustainability. The broader scope of data collection in this paper is important because, like industry press reports, government statistics lend themselves to reification in so far as they are the most accessible types of information available to the public and to scholars.

Second, we identify four common approaches for surviving and thriving during the Recession. The consumer service approach combined relatively low tuition growth with campus efforts to be as attractive as possible to students by developing new, student-centered curricula and by making attendance as convenient and flexible as possible. This was a path pioneered by the community colleges in the 1960s and 1970s (Brint & Karabel, 1989). The market search approach, by contrast, favored thinking and acting more entrepreneurially. These colleges raised

tuition and expanded their markets through online education or by leveraging college assets to attract more students or for use by outside entities. This was a path vigorously promoted by managerial consultants (Coopers & Lybrand, 1995) and a handful of enterprise-oriented institutions (Clark, 1998) during the 1990s. The third (and heretofore less chronicled) approach, which we have called growing and greening, focused on environmentally friendly construction and growth policies. This approach has origins in the work of United Nations development economists in the 1980s, who first championed the ethos and practices of sustainable development (UNWCED, 1987). Some college and university administrators found the opportunities to publicize their campus's environmental responsibility, while competing for federal and state sustainability funds, a particularly appealing path. The largest proportion of institutions in our sample did not follow a single approach or adopt a distinctive rhetoric. Instead, they used a wide variety of tools in their toolboxes to cope with the disruptions caused by the Recession under the general mandate to cut costs, improve efficiencies, and enhance revenues.

Third, we offer as revision of current organizational theory related to institutional logics. Our findings are broadly consistent with the emphasis of organizational theorists on the development of divergent institutional logics during periods of economic uncertainty. However, we question the extent to which a distinctive "logic" of response held in most institutions in the largest of our four clusters. It can be argued that "budget cuts, efficiency measures, and revenue enhancements" is a distinctive logic of response, but there are problems with such an interpretation. As much as central administrations set the tone and some of the ground rules, administrative unit heads also followed directions that reflected their own values, opportunities, and resource bases. These actions may have aggregated at the campus level to adoption of a full range of responses, but they do not necessarily reflect a campus-level logic to "try everything."

Finally, we introduce a theme rarely explored by theorists of institutional logics, the influence of inter-organizational stratification on choice of logics. We found that distinctive institutional logics were associated with specific locations in the higher education field. The lowest-status colleges gravitated toward consumer service or market search actions and rhetoric. Those adopting the growing and greening approach tended to be located in somewhat higher status institutions and, in addition, were more likely to be private, non-profits. These institutions, with their stronger market position and higher tuitions, had a financial base from which to engage in environmentally sensitive growth strategies that helped them to appear forward looking as well as successful. By contrast, the institutions in the strongest position, those in the complete arsenal cluster, were also in many respects the most vulnerable to the economic challenges of the Recession. Their good financial performance (low tuition, high endowments, good salaries), their size (larger enrollments and higher staffing levels), and their educational standards (few part-time faculty) created the conditions that required a multi-faceted response to the Recession. At the same time, larger and more prestigious organizations had access to multiple revenue sources and consequently a greater capacity for organizational flexibility. They were able to search effectively for new markets, cluster functions for greater efficiency, and employ cost saving labor and technology solutions.

Implications for Policy and Research

Our findings have implications for higher education policy. Findings from this study highlight the divergent institutional logics adopted by colleges and universities facing severe economic challenges. These findings can aid the development of policies that address distinctive institutional logics. For example, strategies for helping institutions to improve their adaptive capacities differ somewhat between large public and small private institutions. For large public

universities enrollment growth, tuition increases, and recruitment of out-of-state and international students are keys to surviving and thriving during recessions. If policy makers do not want to encourage these actions, they will need to create incentives for receiving additional state subsidies and/or for efficient use of state funds as a means to encourage affordability. Although private institutions tended to emerge from the Recession in a stronger position than public institutions, small, low-enrollment private institutions were, according to the ratings agencies, the most likely to be exposed to survival threats (see, e.g., Moody's Investor Services, 2013), in part because they do not receive direct state subsidies. Financial responsibility measures have the potential to help these institutions improve their performance before it is too late. The national higher education associations also have an important role to play in helping these institutions. They can do so by disseminating data and narratives about how selected institutions that faced economic challenges succeeded in improving their stability and market position over time.

Our study also has implications for future research on the consequences of recession for higher education institutions. Case studies of adaptive change during periods of economic recession would be particularly valuable extensions of the research reported here. Reviews of campus documents and collections of interview data can deepen scholars' understanding of the means by which institutions navigate economically challenging conditions. Future case study researchers can draw on our work to test hypotheses about patterns and narratives of adaptive change. In addition, our findings can help future researchers to identify important factors to consider when selecting case study institutions. Specifically, our multinomial logit results suggest that future case studies should include three classes of institutions -- wealthy, mid-level,

and struggling – as well as representation from both the private, non-profit and public sectors in each class of institutions.

Notes

[i] Our review of the higher education industry press focused on two major outlets, *The Chronicle of Higher Education* and *Inside Higher Ed.*

[ii] This population includes all Title IV, bachelor's degree-granting institutions with non-missing data in all years between the academic years 2005-06 and 2012-13 and excludes institutions that report for multiple campuses, as well as associates, for-profit, and special-focus institutions.

[3] These analyses are available on request.

[4] Due to resource restrictions, we were unable to code LexisNexis data for years prior to the recession. As a result, we cannot prove that coded behaviors were caused by the Recession. However, financial and behavioral trends observed in IPEDS data, as well as contextual language used in the coded documents, lend support to our assumption that these behaviors are institutional responses to the Recession.

[5] IDA is a compendium of institutional data on U.S. four-year colleges and universities based on a stratified random sample of all four-year colleges and universities in the United States in 2000, excluding for-profit institutions and specialized institutions (e.g., seminaries, business colleges, and art institutes) (for details, see Brint et al., 2011). IDA over-samples more selective

institutions, including both selective private institutions and public flagship institutions. While these institutions are not as numerous in the population as they are in IDA, they enroll a disproportionate number of students and they exercise a disproportionate influence on the higher education field.

[6] We originally intended to code all 385 IDA institutions, but resource limitations prevented us from completing the coding of the last 74 institutions. After we had coded the first 250 institutions and these resource limitations were becoming clear, we chose institutions to provide a proportional representation for institutions in IDA's four tiers. We were forced to compensate at this point for the particularities of how coders had proceeded through their assigned lists. Although this selection process was not (and could not have been) random and consequently does not allow us to make claims to represent the IDA population in our reduced sample, through careful selections we were able to closely match the most important institutional characteristics of colleges and universities in IDA's four tiers.

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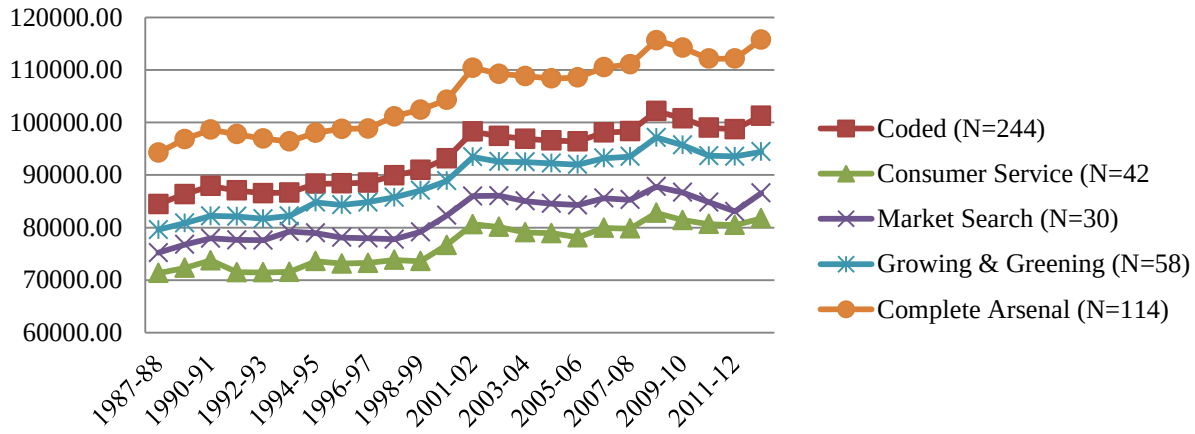
Appendix A
Cluster Mean Values

	Consumer Service	Market Search	Growing & Greening	Complete Arsenal	Total
N	50	37	63	113	263
Enrollment	5005.46	5032.35	4640.08	17699.37	10375.76
	(6133.84)	(5705.86)	(5058.42)	(14626.88)	(12231.20)
Endowment (000,000)	90.88	99.02	244.27	1495.04	732.08
	(259.28)	(173.42)	(644.58)	(4100.35)	(2783.08)
Doct/Res	6.00%	10.81%	6.35%	52.21%	26.62%
	(0.24)	(0.31)	(0.25)	(0.50)	(0.44)
Masters	40.00%	40.54%	44.44%	31.86%	37.64%
	(0.49)	(0.50)	(0.50)	(0.47)	(0.49)
Bachelors	54.00%	48.65%	49.21%	15.93%	35.74%
	(0.50)	(0.51)	(0.50)	(0.37)	(0.49)
Public	24.00%	43.24%	25.40%	64.60%	44.49%
	(0.43)	(0.50)	(0.50)	(0.48)	(0.48)

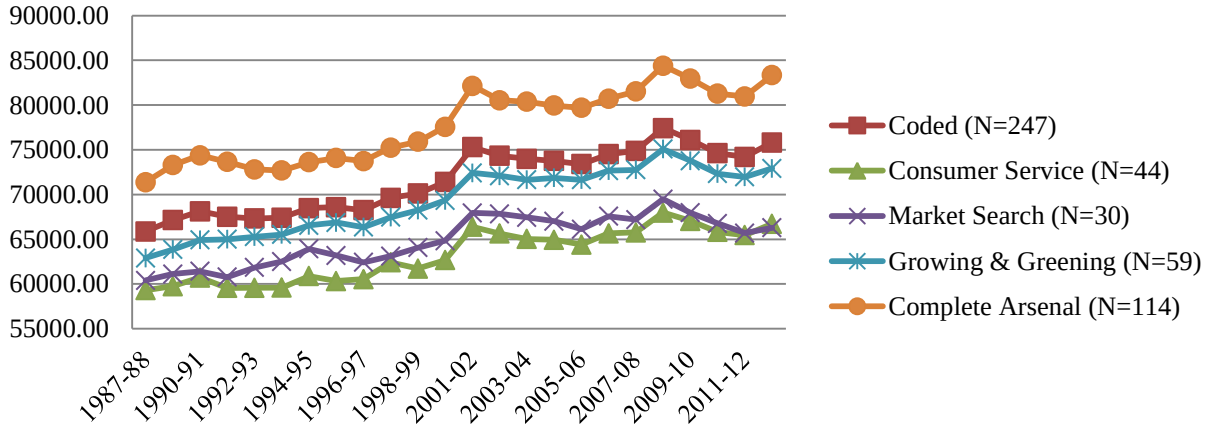
Note: Financial variables adjusted to 2013 value based on the Consumer Price Index. Sample reflects multinomial logistic regression analysis sample. Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, Institutional Characteristics (IPEDS-F:2011); Race/ethnicity, gender, attendance status, and level of student (IPEDS-F:2010); Finance GASB 34/35 (IPEDS-FY:2011) and FASB (IPEDS-FY:2011).

Appendix B
Trend Lines for Clusters, 1987-2012[6]

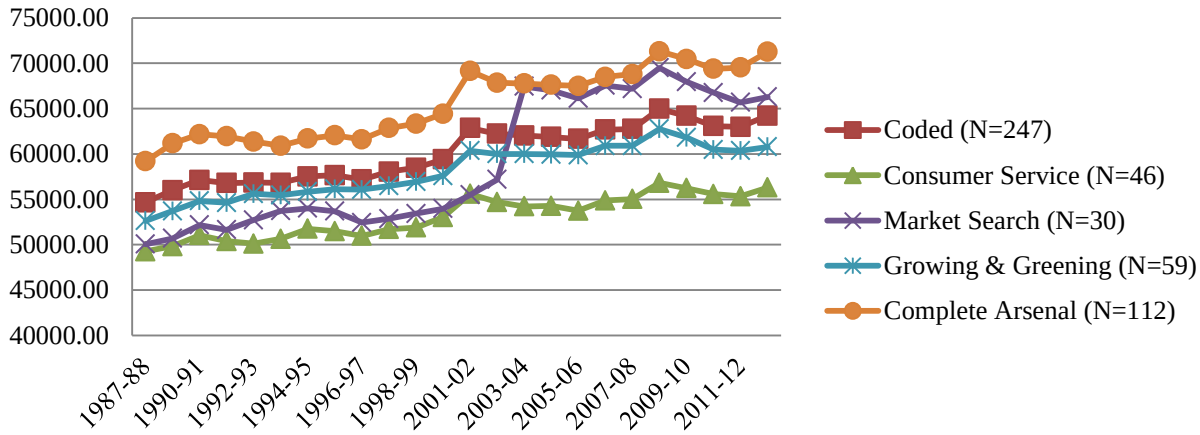
Professor Salaries

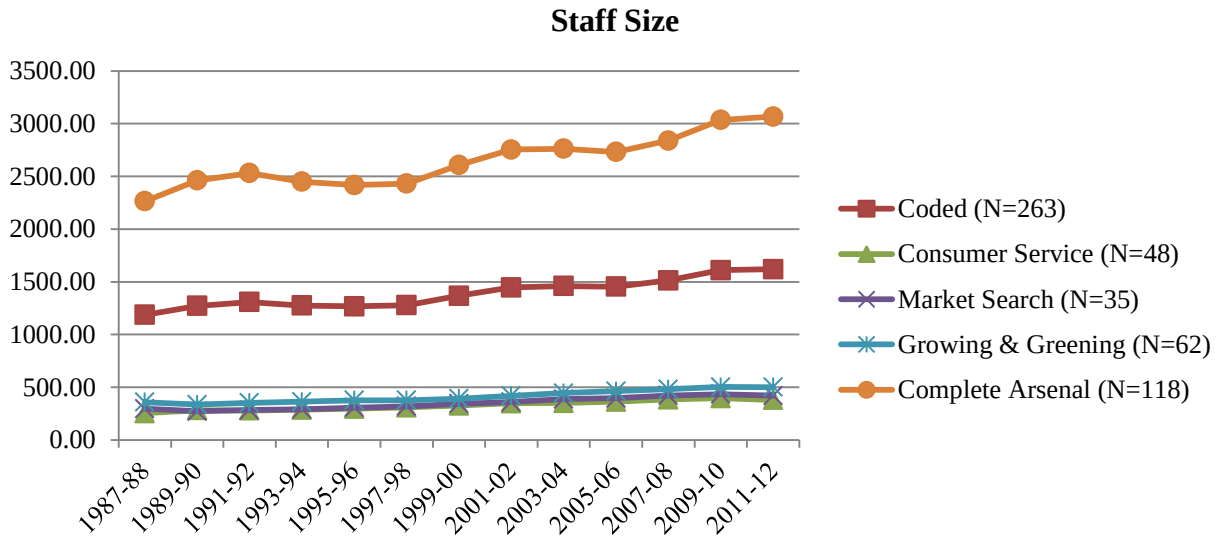


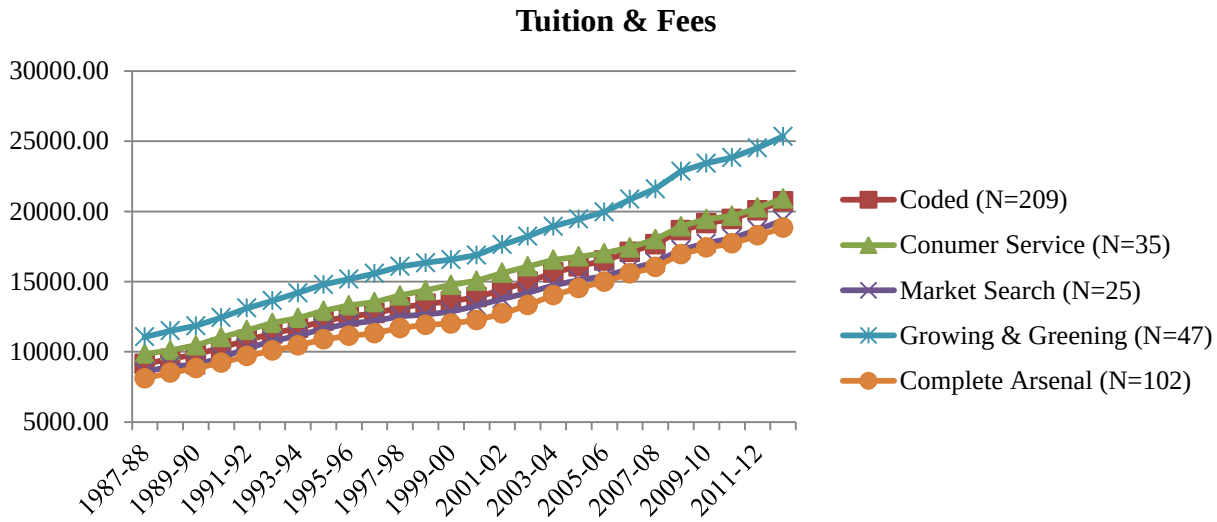
Associate Professor Salaries

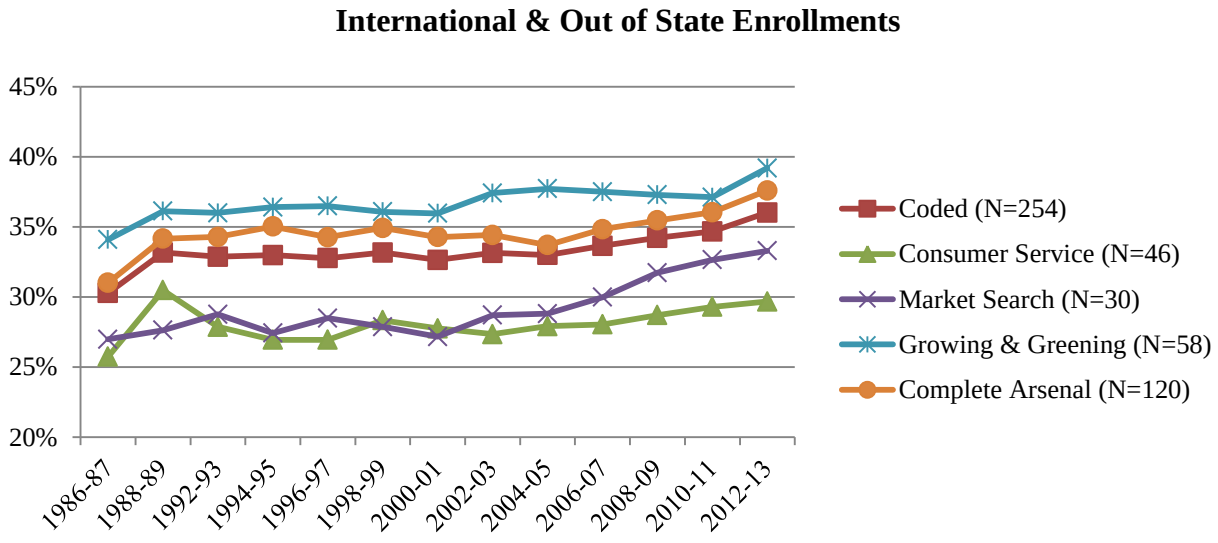


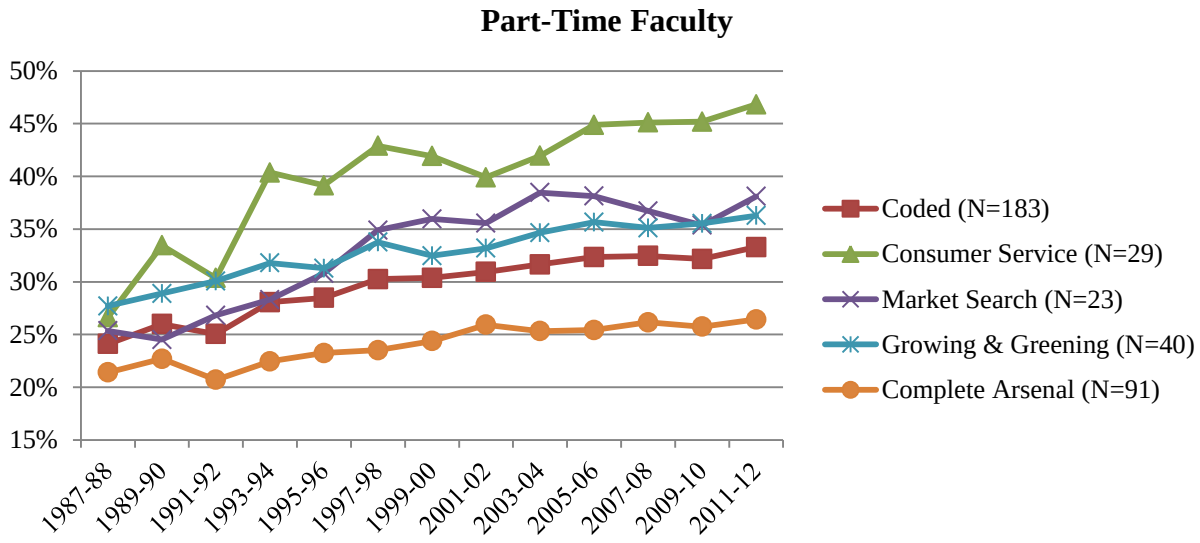
Assistant Professor Salaries

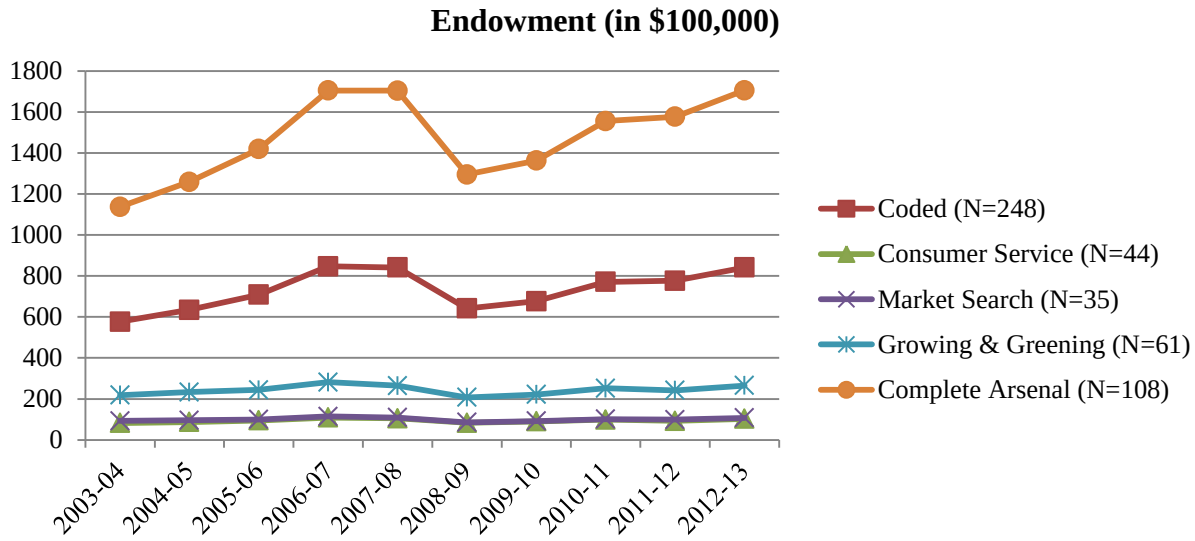


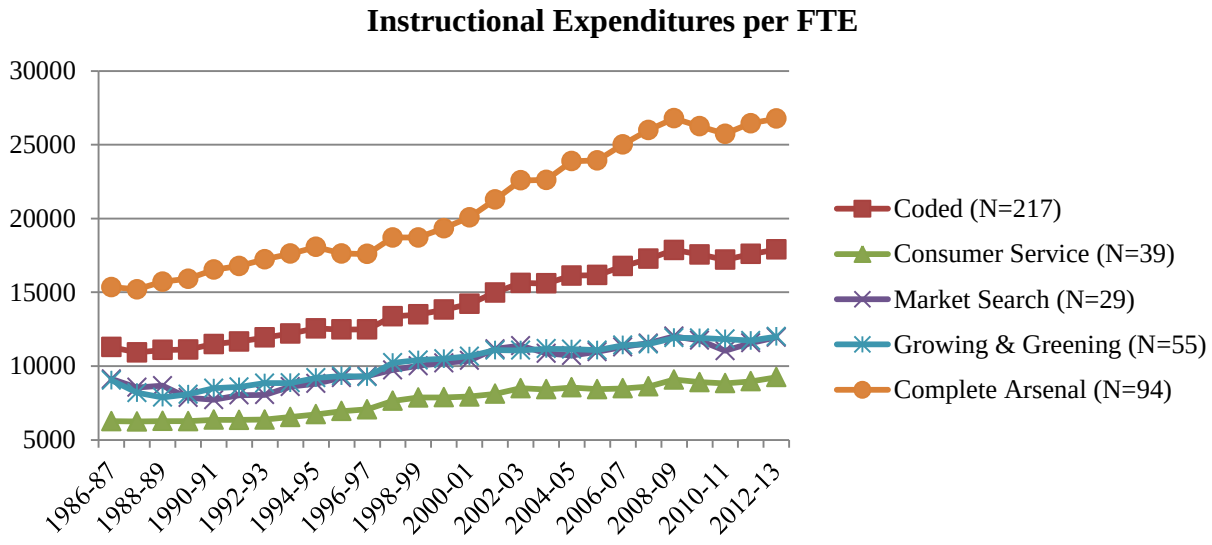

Staff Size
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
1987-88
1989-90
1991-92
1993-94
1995-96
1997-98
1999-00
2001-02
2003-04
2005-06
2007-08
2009-10
2011-12
Coded (N=263)
Consumer Service (N=48)
Market Search (N=35)
Growing & Greening (N=62)
Complete Arsenal (N=118)


Tuition & Fees
30000.00
25000.00
20000.00
15000.00
10000.00
5000.00
1987-88
1989-90
1991-92
1993-94
1995-96
1997-98
1999-00
2001-02
2003-04
2005-06
2007-08
2009-10
2011-12
Coded (N=209)
Conumer Service (N=35)
Market Search (N=25)
Growing & Greening (N=47)
Complete Arsenal (N=102)


International & Out of State Enrollments
45%
40%
35%
30%
25%
20%
1986-87
1988-89
1992-93
1994-95
1996-97
1998-99
2000-01
2002-03
2004-05
2006-07
2008-09
2010-11
2012-13
Coded (N=254)
Consumer Service (N=46)
Market Search (N=30)
Growing & Greening (N=58)
Complete Arsenal (N=120)


Part-Time Faculty
50%
45%
40%
35%
30%
25%
20%
15%
1987-88
1989-90
1991-92
1993-94
1995-96
1997-98
1999-00
2001-02
2003-04
2005-06
2007-08
2009-10
2011-12
Coded (N=183)
Consumer Service (N=29)
Market Search (N=23)
Growing & Greening (N=40)
Complete Arsenal (N=91)


Endowment (in $100,000)
1800
1600
1400
1200
1000
800
600
400
200
0
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
Coded (N=248)
Consumer Service (N=44)
Market Search (N=35)
Growing & Greening (N=61)
Complete Arsenal (N=108)


Instructional Expenditures per FTE
30000
25000
20000
15000
10000
5000
1986-87
1988-89
1990-91
1992-93
1994-95
1996-97
1998-99
2000-01
2002-03
2004-05
2006-07
2008-09
2010-11
2012-13
Coded (N=217)
Consumer Service (N=39)
Market Search (N=29)
Growing & Greening (N=55)
Complete Arsenal (N=94)