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Learning from Closed Institutions: Indicators of Risk for Small Private Colleges and Universities

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Introduction

For small colleges and universities, risks to their financial health have become a chronic issue in the aftermath of the financial crisis of the early 2000s. Small colleges and universities tend to be among – or at serious risk of joining – the one-third of higher education institutions that face financial statements significantly weaker than before the recession (Selingo, 2013). "Expenses are growing at such a pace that colleges don't have the cash or the revenue to cover them for much longer," says Jeff Denneen, Partner at Bain & Company and head of the management consulting firm's Americas Higher Education practice. "A growing number of colleges are in real financial trouble."

Many of the problems surrounding declining revenues can be attributed to issues stemming from enrollment struggles. Moody's 2012 Tuition Survey recognizes that **e**nrollment declines tend to be concentrated in colleges with smaller total enrollment, weak selectivity/yield rates, high tuition dependence, small endowments, and soft regional demographics. Furthermore, private colleges and universities with small enrollments fall among the 97% of the country's 1,600 institutions with endowments less than $1 billion (National Association of College and University Business Officers and Commonfund Institute (2013). The economic recession has put a strain on endowments, which, on average, reported losses during the 2012 fiscal year (FY2012). This renders small institutions even more tuition-dependent as they have little cushion against unexpected revenue shortfalls through alternate revenue sources (Van Der Werf, 2002).

On average, five private 4-year non-profit colleges and universities have closed per year over the last ten years, with as many as 9 institutions closing in 2009 (The *Digest of Education Statistics* 2013). What lessons can we learn from the closure of these institutions? What are the key indicators that were common to these institutions? This paper examines the literature and institutional data on small colleges and universities that closed over the last ten years, seeking to identify the contributing factors to institutional failure and present these as risks to the financial health of small institutions.

Challenges to Small Institutions

The challenges faced by small colleges and universities are presented in the extant literature primarily as case studies. While the literature does not examine recent institutional closures in great detail, the snapshots provided succinctly captures the reasons for their closure. The *Chronicle of Higher Education* highlights the challenges faced by:

- Urban College of Boston, 2012 – "600 students", "financial troubles", "failed merger with Endicott College", "$250,000 deficit" (DeSantis, 2012);
- Antioch College, 2007 – "dwindling enrollment and expensive campus maintenance", "small endowment of $36.2 million", "annual deficit of $5-million for several years" (Carlson, 2007; Fain, 2007; Jaschik, 2007);
- William Tyndale College, 2004 – "college was running out of money and could not operate past December 31", "cannot maintain an enrollment high enough to make ends meet", "292 students" (Gravois, 2004);
- Trinity College, 2000 – low enrollment with "225 returning undergraduates", "endowment is only about $700,000", "cumulative operating deficit of $2.7-million, and its long-term debt stands at about $5.6-million" (Van der Werf, 2000).

The literature indicates that low enrollment, low endowment levels, high debt and deficit positions, and deferred maintenance were challenges common to small colleges and universities at the time of their closure.

Low Enrollment

Falling enrollment is a real threat for these institutions since tuition, fees, and room and board generally account for two-thirds or more of their revenue (Chabotar, 2010). Falling matriculation figures reduce overall tuition revenue, a situation institutions need to be wary of given that net tuition revenue in recent years has either been flat or falling at 73% of colleges (Selingo, 2013).

Low Endowment Levels

The deleterious effect of tuition-dependence becomes magnified when institutions are also endowment-dependent. Small institutions depend on endowment and fund-raising as major alternate sources of revenue. Private giving to American colleges in FY2008 was reported at $31.6 billion according to findings of the annual Voluntary Support of Education (VSE) survey. The following year demonstrated a decline of 12% in total giving, the steepest decline in the survey's 50-year history (Chabotar, 2010). However, the February 2013-released VSE survey indicates that philanthropic giving to U. S. colleges and universities grew by a modest 2.3% percent during FY2012 with total giving reaching $31 billion, nearly recovering to the FY2008 level (Council for the Advancement and Support of Education, 2013).

It is unclear whether small colleges and universities are the direct beneficiaries of these philanthropic increases, particularly given that the VSE results indicate the continued decline in the percentage of alumni who contribute to their alma mater. The percentage of alumni participating in their alma mater's annual giving campaigns in FY2012 fell 0.3 percentage points, and the average alumni gift declined 1.4 percent. This could be especially detrimental to small institutions that rely on fewer alumni for gifts than larger or public institutions. During the first six months of FY2012, the New York Stock Exchange dropped 11.2 percent. This sharp drop, along with relatively high rates of unemployment among recent college graduates, may have limited the ability or willingness of individuals to participate in campus fundraising efforts (Council for the Advancement and Support of Education, 2013). Indeed, alumni giving, which accounts for about one quarter of the aforementioned $31 billion in total giving, fell by approximately $100 million during this time.

Debt and Deficit Problems

The literature recognizes a liquidity crisis as another common challenge faced by small institutions. Years of over-commitment to capital and associated operating expenses have worsened their financial positions. Denneen and Dretler (2012) of Bain & Company provide a good summary of the situation. They point out institutional struggles with falling equity ratios (equity in relation to total assets), increasing expense ratios (expenses in relation to total revenues), increasing liabilities, and increasing payments to debt service. These poor financial indicators are reflective of an embedded assumption in higher education "that the more [institutions] build, spend, diversify and expand, the more they will persist and prosper." Instead, the rapid expansion of capital facilities and over-commitment to operating expenses puts a major financial strain on these institutions, particularly as revenues decline and these commitments take up an increasing share of institutional budgets. In Figure 1 below, provided by *The Economist*, these rapidly increasing expenses are illustrated with debt, interest, and property, plant, and equipment (PPE) payments rising faster than core mission related expenses such as instruction.

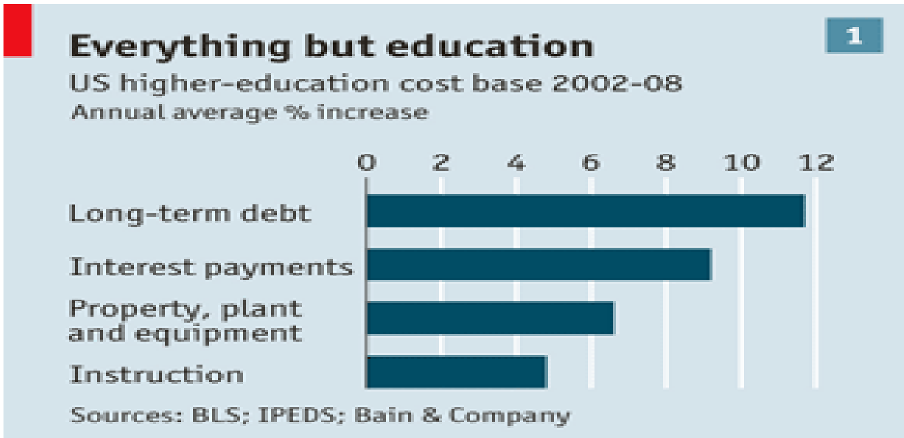

Figure 1: Annual increases in expenses for higher education
Source: The Economist (2012, August 4).

Deferred Maintenance

Deferred maintenance compounds the financial problems for many institutions through expenses associated with deteriorating facilities. When these institutions added to infrastructure they already could not support, major financial strains were created. This combination of expenses on deteriorating facilities coupled with rapid expansion consumes a large portion of available resources for an institution.

When Antioch College closed its undergraduate education programs in 2007, its Chancellor Tullise Murdock, admitted that "deferred maintenance [had] gotten out of hand" on the 200-acre campus and that the university could no longer "shore up the college" with revenue from the other campuses (Fain, 2007).

Scott Carlson (2007) wrote that "after years of ignoring financial realities, Antioch College failed while its more-commercial branches survived. . . . The campus looks almost abandoned. Bricks on buildings are spalling, steel-cased windows are decades old and rusting, and weeds push through cracks on buckling asphalt walkways."

In his article *Neglected Maintenance Contributed to Antioch College's* Woes, Lawrence Biemiller (2007) noted, "Decrepit facilities are partly to blame for the impending closure of Antioch College – and if its trustees do raise enough money to reopen it, they say they'll start by tearing down some of the college's existing buildings and replacing them." "Over the years", he reports, "the college fell far behind on maintenance. The residence halls, with group showers and inconsistent Internet access, are at least a generation behind those at other colleges."

While cutting expenses on maintenance may seem like low-hanging fruit to balance short-term budgets, the neglect can have dire consequences if left unaddressed for too long. As is illustrated in the case of Antioch College, the failure to maintain existing facilities may not only be a deterrent for students and faculty, but it can also be a financial – and potential legal – liability.

Indicators of Risk: the Literature

Given this discussion of private college finance, what are the risk factors for today's small college or university? Despite its importance for higher education, this issue receives scant attention in the research literature. Martin and Samels' (2009) book *Turnaround: Leading*

Stressed Colleges and Universities to Excellence provides the key resource for this discussion. Martin and Samels (2009, pp. 9-20) present a checklist of 20 at-risk indicators to be used to assess institutional stress (Table 1). They state that:

> The following indicators are all components, in differing combinations of a stressed institutional environment. A fragile college or university may not demonstrate all twenty, nor does the presence of three or four guarantee vulnerability. However, a preponderance of these twenty indicators clearly means that an institution has slipped, possibly far, from its founding vision and strength, and that some form of surgery will be required to bring it back to health (p. 9).

Table 1. Martin and Samels (2009) At-Risk Indicators

1. Tuition discount is more than 35%.
2. Tuition dependency is more than 85%.
3. Debt service is more than 10% of the annual operating budget.
4. Less than a 1 to 3 ratio between the endowment and the operating budget.
5. Student default rate is above 5%.
6. Average tuition increase is greater than 8% for 5 years.
7. Deferred maintenance at least 40% unfunded.
8. Short-term bridge financing required in the final quarter of each fiscal year.
9. Less than 10% of the operating budget is dedicated to technology.
10. Average annual alumni gift is less than $75.
11. Institutional enrollment is 1000 students or lower.
12. Conversion yield is 20% behind that of primary competitors.
13. Student retention is more than 10% behind that of primary competitors.
14. The institution is on probation, warning, or financial watch with a regional accreditor or a specialty degree licensor.
15. The majority of faculty do not hold terminal degrees.
16. Average age of full time faculty is 58 or higher.
17. The leadership team averages fewer than 3 years or more than 12 years of service at the institution.
18. No complete online program has been developed.
19. No new degree or certificate program has been developed for at least 2 years.
20. Academic governance and curriculum development systems require more than one year to approve a new degree program.

While Martin and Samels offer a useful set of at-risk indicators, these indicators require some consideration within the context of the individual institution. First, we suggest using institutional history as a benchmark. For example, while Martin and Samels suggest keeping tuition dependence below 85% of total revenues, this may be too high for many institutions who need to keep tuition dependence at a much lower rate in order to stay in operation. Second, we acknowledge Martin and Samels' introduction to their indicators and that certain indicators will take precedence at one institution while another set of indicators may be most important at a different institution. Again, context is important in evaluating the short-term and long-term viability of institutional plans.

In addition to the above indicators, Denneen and Dretler (2012) offer additional suggestions. They state that a college or university might be at risk if bond ratings have recently declined, tuition prices have increased markedly to try to offset changes in enrollment, admissions standards have been lowered, or the number of faculty has been reduced.

In another study, Porter and Ramirez (2009) examined institutional closures from 1975-2005 and found that schools with large endowments and greater selectivity of students had the highest rates of survival. Alternatively, they identified the following factors as contributors to institutional closure:

- Wealth: Institutions with a lower endowment per student were more likely to close.
- Enrollments: Institutions with lower enrollments were more likely to close.
- Selectivity: The less selective a college is in admissions, the less likely it is to survive.

Porter and Ramirez' (2009) finding with regard to religion is of particular interest to our study. They found that religious colleges were less likely than secular institutions to close. The researchers speculate that there may be an enrollment advantage: even if religious affiliation means that some colleges have a smaller pool of potential students, those students may be more likely to enroll at a religious institution (Jaschik, 2009; Koon, 2009).

Indicators of Risk: the Data

Within the literature, Martin and Samels (2009) provide the only depth discussion of at-risk indicators, albeit for colleges and universities in general. To elicit information more pertinent to the closure of "small" private institutions, we therefore also approached the data on institutions of this size, looking for insight into why they failed.

Methodology & Data

The data, for the comparative aspect of this report, are drawn from Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics (NCES), housed at the U. S. Department of Education. All institutions receiving federal funding (e.g. federal financial aid) are required to report admissions, enrollment, graduation, and financial information to NCES, which is then published as the IPEDS data center. The data reported for the institutions that closed was drawn from the last year of full reporting to IPEDS, typically 2 years prior to the date of closure. We narrowed our analysis to four-year private institutions and looked for those who reported as closed in the last 10 years, 2004 to 2013. This resulted in 57 institutions, listed overleaf in Table 2.

The data was used to compare institutions that failed to similar institutions throughout the nation that remain in operation. We looked into the descriptive statistics for institutions that have closed and predictably found small enrollments, averaging roughly 250 with a maximum enrollment of just over 1000. Therefore, we again consulted IPEDS and drew comparison groups of similar private colleges and universities. One comparison group included institutions with enrollment below 250 while the other comparison group included institutions with enrollment below 1000. The comparison institutions include the most recent data reported by IPEDS.
We compared these groups, looking for major differences in enrollment, revenues, expenses, and accounting statistics. Unlike the case studies found in the literature, this comparison was cross-sectional, comparing different institutions at a single point in time rather than longitudinally.

Table 2. List of closed institutions since AY2004

Name	Date Deleted from IPEDS	Carnegie	Degree Granting	Undergrad Serving
City University-Los Angeles	2004	Prior Ranking	Yes	Yes
Institute of Paper Science and Technology	2004	Prior Ranking	Yes	No
Mercer University in Atlanta	2004	Prior Ranking	Yes	No
Rosalind Franklin University of Medicine and Science	2004	Prior Ranking	Yes	No
Barat College	2005	BA A&S	Yes	Yes
Christ College of Florida	2005	NA	Yes	Yes
Eastern Baptist Theological Seminary	2005	Religious	Yes	No
St Johns Seminary College	2005	Religious	Yes	Yes
Atlanta College of Art	2006	Art	Yes	Yes
Franklin Pierce College-Graduate and Professional Studies	2006	MA Medium	Yes	Yes
International Institute of the Americas	2006	4yr primary AA	Yes	Yes
Metropolitan College	2006	Special Focus	Yes	Yes
Metropolitan College	2006	Special Focus	Yes	Yes
St Johns Hospital School of Dietetics	2006	NA	No	No
Ave Maria College	2007	BA A&S	Yes	Yes
Puget Sound Christian College	2007	Religious	Yes	Yes
Sheldon Jackson College	2007	BA A&S	Yes	Yes
Southampton College of Long Island University	2007	MA Small	Yes	No
West Virginia University Hospital Department of Nutrition and Dietetics	2007	NA	No	No
Academy For Five Element Acupuncture	2008	NA	NA	No
Antioch College	2008	BA A&S	Yes	Yes
Marymount College of Fordham University	2008	BA Diverse	Yes	Yes
New College of California	2008	MA Medium	Yes	Yes
New York Institute of Technology-Central Islip	2008	BA Diverse	Yes	Yes
Pillsbury Baptist Bible College	2008	Religious	Yes	Yes
St Vincent Catholic Medical Center New York-Brooklyn and Queens	2008	NA	No	Yes
Vennard College	2008	Religious	Yes	Yes
Weston Jesuit School of Theology	2008	Religious	Yes	No
Baltimore Hebrew University Inc	2009	Special Focus	Yes	Yes
Beacon University	2009	Religious	Yes	Yes
Cascade College	2009	BA A&S	Yes	Yes
College of Santa Fe at Albuquerque	2009	NA	NA	Yes
Magnolia Bible College	2009	Religious	Yes	Yes
Rabbinical Seminary of Adas Yereim	2009	Religious	Yes	Yes

Table 2. List of closed institutions since AY2004 (continued)

Name	Date Deleted from IPEDS	Carnegie	Degree Granting	Undergrad Serving
Salem Bible College	2009	NA	Yes	Yes
Southeastern University	2009	MA Medium	Yes	Yes
Taylor University Fort Wayne	2009	BA Diverse	Yes	Yes
Taylor University Graduate School	2009	NA	NA	No
Temple Baptist Seminary	2009	Religious	Yes	Yes
Woodbury Institute at Champlain College	2009	BA Diverse	Yes	Yes
Dana College	2010	BA Diverse	Yes	Yes
Jones College-Miami Campus	2010	Business	Yes	Yes
Midwest University	2010	Religious	Yes	Yes
Sage College of Albany	2010	MA Large	Yes	Yes
Southern Catholic College	2010	BA A&S	NA	Yes
Southern New England School of Law	2010	Law	Yes	No
UPMC Presbyterian Shadyside Dietetic Internship	2010	NA	No	No
Wesley College	2010	Religious	Yes	Yes
Ashland University Dwight Schar College of Nursing	2011	Health Professionals	Yes	Yes
Baker College Corporate Services	2011	BA Diverse	Yes	Yes
Baltimore International College	2011	Special Focus	Yes	Yes
Bethany University	2011	BA Diverse	Yes	Yes
Cleveland Chiropractic College of Los Angeles	2011	Health Professionals	Yes	Yes
Hebrew Union College-Jewish Institute of Religion-Cincinnati	2011	Religious	Yes	No
Hebrew Union College-Jewish Institute of Religion-Los Angeles	2011	Religious	Yes	No
McLeod Regional Medical Center School of Medical Technology	2011	NA	No	No
Trine University-South Bend Regional Campus	2011	BA Diverse	Yes	Yes

This approach allowed us to examine the differences between institutions that closed and institutions that remained open rather than looking at a single institution over time. The in-common differences revealed through data analysis provide the basis for the at-risk indicators we propose for consideration by college and university administrators of the small enrollment private institution.

Findings

As seen in Table 2, private institution closures are dominated by two types of institutions: religious institutions and those not classified by the Carnegie Commission (typically non-degree granting institutions). These 14 religious and 10 unclassified institutions make up over 42% of closures during this time. In addition, small bachelor's granting institutions (those classified with a focus on arts and sciences or diverse fields) contribute another nearly 25%.

Table 3 presented on the following page, goes into further detail regarding the comparison groups in terms of enrollment, revenues, expenses, and accounting data. Data for the two comparison groups of institutions are shown in the right two columns. We compared the data

Table 3. Descriptive statistics

	Closed	Closed Adjusted*	Enrollment Under 250	Enrollment Under 1,000
ENROLLMENT				
Applicants	224	224	67	559
Admissions	142	142	41	311
Admissions Rate	70.76%	70.76%	77.94%	68.41%
FT Undergraduates	201	201	86	321
PT Undergraduates	72	72	22	80
FT/PT Undergraduate Ratio	2.78	2.78	3.89	4.02
Total Undergraduates	274	274	108	400
FT Graduate Students	66	66	94	95
PT Graduate Students	37	37	33	57
FT/PT Graduate Ratio	1.80	1.80	2.81	1.66
Total Graduate Students	103	103	128	153
Undergrad/Graduate Ratio	2.65	2.65	0.85	2.63
Total Enrollment	377	377	235	553
REVENUES				
Tuition and Fee Revenues	3,058,738	3,426,410	3,289,780	6,636,189
Federal Grants and Contracts	322,838	357,814	537,112	1,577,278
Pell Grants	286,000	313,631	232,454	858,618
Investment Return	241,544	310,239	637,712	2,814,202
Total Revenues	6,075,376	6,910,700	12,500,000	23,200,000
Tuition Dependence	50.35%	49.58%	26.32%	28.60%
EXPENSES				
Other Expenses	1,581,038	1,923,291	293,228	436,570
Total Expenses	6,719,496	7,657,187	11,800,000	20,300,000
Net Income	(644,120)	(746,487)	700,000	2,900,000
ACCOUNTING				
Total Assets	49,600,000	59,100,000	27,400,000	57,000,000
Total Liabilities	13,800,000	16,200,000	10,400,000	17,200,000
Debt/Asset Ratio	27.82	27.41	37.96	30.18
Total Net Assets	35,800,000	42,900,000	17,000,000	39,800,000
Change in Net Assets	(27,513)	15,662	2,201,160	4,265,099
Amortization	1,314,163	1,377,881	88,559	172,251
Long Term Investment	24,400,000	29,500,000	6,255,175	25,100,000
Total Endowment Assets	21,100,000	25,100,000	11,000,000	31,900,000
Change in Endowment Assets	900,000	1,100,000	900,000	4,400,000

*Dollar amounts are adjusted for inflation, based on 2011 dollars according to the Bureau of Labor Statistics.

for these two groups with that of the small four-year private institutions that closed in the last 10 years, 2004 to 2013, looking for major differences in enrollment, revenues, expenses, and accounting statistics.

These statistics lead to the following findings:

Enrollment

- In terms of enrollment, applications at institutions that closed were higher than comparable institutions, on average. However, the admissions rate is slightly lower, though comparable to larger enrollment institutions.
- One of the clear differences is the full-time to part-time enrollment ratio. At institutions that closed, there is a large part-time enrollment when compared to full-time undergraduates. For other institutions, the ratio averaged roughly 4 full-time undergraduates for every part-time enrollee, while this was less than 3 at institutions who failed.
- Graduate student enrollment was similar, but not as drastic, especially when compared to larger enrollment institutions. For the undergraduate to graduate enrollment ratio, institutions that closed had large undergraduate enrollments when compared to their graduate offerings, similar to larger enrollment institutions. However, small enrollment institutions that are still in operation tend to average larger graduate enrollments, likely because of specific degree offerings in law and medicine.

Revenues

- The next major category of comparison was institutional revenues. While overall tuition revenue at closed institutions is comparable to other institutions, tuition per student enrolled is much smaller at only $9,089 per student enrolled as compared to $13,973 at other small institutions and $12,002 at larger institutions.
- This is consistent for the other types of revenues as well. For example, closed institutions reported federal grants and contracts per student less than 40% of what is reported at other small enrollment institutions.
- Investment returns are also quite small. As a percentage of total revenues, investment returns at closed institutions are on par with other small enrollment institutions, but in terms of real dollars, they are small and show great variability between institutions.
- Most importantly, tuition dependency appears highly related to financial viability. Private institutions currently in operation average just over 25% of their revenues coming from tuition. Institutions that failed reported a tuition dependency of over 50%.

Expenses

- For expenditures, the amount spent on services such as instruction and student services was comparable across all three types of institutions.
- “Other Expenditures” was significantly higher at institutions that closed. While the specifics of these expenditures are unavailable, the accounting figures that follow indicate that it may be attributable to capital projects, large interest payments, or a combination of the two.

- Most importantly, however, is the fact that expenses exceed total revenues for closed institutions. Institutions that failed were operating in the red, reporting expenses that exceeded revenues by $644,120 on average – even higher, at nearly $750,000 after adjusting for inflation. Institutions of a similar size reported net income of $700,000, a total difference of over $1.3 million. Institutions with larger enrollments reported net income of $2.9 million. These stark differences are indicative of the financial struggles illustrated in case studies and newspaper reports.

<u>Accounting data</u>

Going into more financial detail, the accounting information provides more specifics about assets, liabilities, and institutional financial portfolios.

- Assets at closed institutions averaged near $50 million with liabilities approaching $14 million at the time of closure.
- While the amount of liabilities is higher than those reported at other small institutions, the debt to asset ratio is lower. Instead, other types of institutions averaged liabilities that were over 30% of their total assets, while institutions that closed only averaged 28%. This would appear encouraging, however the makeup of these liabilities could be problematic.
- Amortization, which includes debt payments, is very high at institutions that closed. This could be due to poor terms on their long term liabilities or too rapid of expansion for capital projects. For example, long term investments at failed institutions was an adjusted $29.5 million, exceeding larger enrollment institutions, and nearly 5 times the amount at other small institutions.
- On the asset side, the change in net assets was negative for institutions that closed – or very small after adjusting for inflation - while other small institutions reported gains of $2.2 million while large enrollment institutions reported increases of $4.2 million.
- In addition, total endowment assets averaged over $25 million at small institutions that failed while only $11 million at comparable small institutions or nearly $32 million at larger enrollment institutions.
- The major difference between the three being that the change in endowment assets was only $1.1 million at failed institutions, similar to the amount reported at other small institutions who report half the total endowment. This resulted in only a 4.3% change at failed institutions while other small institutions reported an 8.2% change and larger institutions reported a 13.8% change.
- These indicators suggest that institutions that closed may have over-expanded too rapidly, taken out debt with poor terms, and/or failed to properly manage their assets.

At-Risk Indicators for Small Four-Year Private Institutions

Based on the findings in the IPEDS comparison of data, the following 10 risk factors are indicated for small private institutions.

1. Institutions with small enrollment are potentially at risk.
2. Religious and non-degree granting institutions are now potentially at risk given the financial circumstances.

3. Institutions reliant on part-time enrollees are potentially at risk and these institutions could benefit from pushing part-time enrollees into full-time status.
4. Rapid expansion of graduate and certificate programs could put an institution at risk if they are not aligned with an intuition's academic and financial portfolio.
5. Tuition per student may be related to financial viability, putting institutions that are inefficient in their tuition setting at risk.
6. Institutions with large tuition dependency are potentially at risk.
7. Large expenses on interest payments put institutions at risk.
8. Large capital expenses without long-term financial stability put institutions at risk.
9. Institutions operating with expenses that exceed total revenues are at risk of failure.
10. Institutions without strong support from private donations and investment returns put a strain on overall revenue diversity that can put institutions at risk.

Discussion and Conclusion

In this study, we sought to investigate the existing data literature and institutional data on small colleges and universities that closed within the last decade. We sought to identify the key indicators that were common to these closed institutions. The ten factors indicated above are consistent with Martin and Samels' (2009) at-risk indicators. They also mirror the three themes most reflective of at-risk behavior found within the literature on institutional closure. First, a high dependence on tuition as a primary source of revenue can be risky. This indicates the lack of a diverse portfolio, making an institution susceptible to fluctuations in enrollment that have the potential to drastically influence total revenues. Second, the flip-side to the tuition revenue coin is enrollment. Small or declining enrollments can put an institution at risk of failure both in terms of revenue and expenses. On the revenue side, small enrollments tend to be associated with lower tuition revenues and smaller amounts of private giving. On the expense side, many fixed and overhead costs are deferred through economies of scale that happen with larger enrollment institutions. When institutions are small, this expense is not minimized on a per student basis, meaning there is room for more students at little additional cost but a lack of demand. Third, payments on capital projects, their associated operating expenses, maintenance, and debt service overall can take up large portions of resources. This recurring long-term expense, much like entitlement programs at the federal and state level, can limit discretionary spending, particularly on mission oriented programs such as instruction.

The at-risk indicators we present above are derived from patterns observed within the *IPEDS* institutional data for the last ten years, 2004 to 2013. They must be considered within the contexts of individual institutional situations and the recent global financial crisis. All indicators will not be relevant to every institution; the list is intended to be informational so that college leaders obtain a holistic picture of the contributory factors to the closures. For instance, the data indicates that religious colleges and universities are potentially at risk. Risk was indicated among the 14 of 57 institutions, nearly 25% of the small religious institutions in our sample. This best finding is significant because of its timing. It represents a stark contrast to Porter and Ramirez's (2009) finding that, for the 1975-2005 period, religious colleges were less likely than secular institutions to close. What our indicator suggests is that a different time-related reality is now at play – for small religious higher education institutions, the magnitude of the recent financial crisis appears to have overridden any 'enrollment advantage' previously synonymous with these institutions. This presents a reality check for all small institutions that have identified with a prior comparative enrollment advantage, be it gender, religion, race, or other demographic.

The data supports calls for part-time enrollees to be pushed to enroll full-time, and for graduate degrees to be offered strategically and in line with mission orientation. These practices are particularly consistent with the situation at Antioch College prior to its 2007 closure where its more commercially-driven graduate programs were relied on to provide a financial lifeline to its failing undergraduate program. Indeed, the IPEDS enrollment statistics indicate that the issue with closure is more than lack of interest or enrollment. Applications and enrollments at the closed institutions are shown to actually exceed other small institutions, on average, but the degree offerings (graduate degrees) and student makeup (part-time enrollment) appear to play a much larger role in determining institutional viability and success.

Institutions with large tuition dependency are potentially at risk. The lack of revenue diversity, particularly in terms of federal grants and contracts and investment return, places institutions at risk of relying too heavily on tuition to support their operations. This, combined with the tuition per student figures and part-time enrollment, implies that these institutions are not being fully supported by their students. Instead, they need to try to convert part-time students into full-time enrollees and look for other sources of revenue to support their operations. In particular, they may be better able to leverage federal grants by improving full-time enrollment rather than focusing on part-time instruction.

Large expenses on interest payments and large capital expenses without long-term financial stability put institutions at risk. If institutions are to survive in the long-term, they must be mindful of both their short-term and long-term needs. While capital projects may seem attractive to boost enrollments, the financial commitment associated with expansion is long-term and can have dire consequences if they take up too large a percent of total resources. Similarly, undergoing capital expansion is unwise if it is done at the expense of existing facilities.

The literature abounds with reports of failed institutions at which expenses exceeded total revenues. According to Denneen & Dretler (2012):

> Universities simply cannot afford to increase costs in nonstrategic areas and take on more debt, if they want to survive. It is imperative that universities become much more focused on creating value from their core. That will require having a clear strategy, streamlined operations, a strong financial foundation, trust and accountability, and a willingness to invest only in innovations that truly create value for the institution. Higher education in the United States is at a tipping point. In its time of need, the leaders of our colleges and universities have a tremendous opportunity to reshape and reinvent an industry that is directly linked to our economic prosperity and the hopes and dreams of millions.

We seek to bring these key indicators of financial health to the attention of college and university administration. The indicators are drawn from small institutions that closed within the last decade. More than any other indicators, these are pertinent in that they reflect current financial challenges facing higher education in this country. While nothing new, the ten risk factors teased out from IPEDS data suggest critical focal points for institutional leadership, the strategies for which need to be fleshed out based on unique institutional features. As institutions move forward in this new economic climate for higher education, we stress that they be mindful of both short-term and long-term plans, mission orientation, ability to adapt, and fiscal responsibility in order to not only sustain their operations, but thrive in the modern higher education environment.

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