Proprietary Higher Education and the Labor Market: What Would We Like to Know?

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Abstract: In this paper I discuss various issues regarding proprietary (for-profit) education and the labor market. I assert that proprietary schools are an interesting phenomenon not because of their for-profit status, but because they provide heterogeneous services to a heterogeneous (or at least non-traditional) population. I then discuss various data needs if we are to accurately assess the impact of proprietary education on the labor market.

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The share of for-profit, or proprietary, schools in the market for baccalaureate degrees or above has grown substantially during the last nine years. From 1990 to 1996 (the last year for which national-level data are available), the enrollment in 4-year proprietary degree-granting institutions grew from approximately 59 thousand to more than 130 thousand, an average annual growth rate of 20 percent. During this period, the proprietary school share of enrollment in this sector more than doubled from .7 percent to 1.5 percent. Figure 1 presents these trends in enrollment. Recent enrollment trends from the University of Phoenix, one of the primary suppliers of for-profit baccalaureate education, are at least suggestive that this overall trend has continued since 1996.[1]

Despite this growing (although still small) share, little is known about the interaction between proprietary education and the labor market. One of the major difficulties in studying the relationship between proprietary education and labor market outcomes is a distinct lack of data. While many surveys produced by the U.S. Department of Education identify individuals who received an education from a proprietary school, these data often have insufficient information on labor market outcomes or draw relatively small samples from circumscribed populations. Larger, more representative surveys like the Current Population Survey and the decennial Census do not ask about the "control" status of educational institutions at which surveyed individuals received their degree. Essential questions about

[1] Between 1998 and 1999, enrollment in all University of Phoenix campuses increased by 22%, to a total of 66,783 ("U. of Phoenix Reports 22% Rise in Enrollment," *Chronicle of Higher Education*, 22 October 1999).

the role of proprietary education in the labor market will be likely to go unanswered until additional data can be made available or collected.

The primary purpose of this paper is to stimulate discussion about what can be learned from studying proprietary schooling and labor market outcomes. I first outline why I think proprietary schools are of interest to those of us who study education and the labor market. I then outline three research questions about the likely role of proprietary education in the labor market and discuss, at least broadly, the types of data needed to answer those questions.

I. Why Study Proprietary Education?

There is nothing about proprietary schools, *per se*, that should distinguish them from non-profit schools in terms of their rewards in the labor market. Both types of schools must provide benefits (however measured and including appropriately discounted future benefits) to students that are at least equal to the monetary, non-monetary, and opportunity costs to their potential students or face attracting no students.[2] Moreover, many services at non-profit and public institutions have been "privatized" and are now provided by for-profit entities (Oster 1988), without fundamentally changing the "product" provided by those institutions. Thus, it is more the differentiated product they offer rather than the profit motive underlying their organization that makes proprietary schools potentially interesting.

[2]I will use the term "non-profit" to refer both to private, non-profit and public institutions. Differences within the non-profit sector may arise because public schools usually receive subsidies that allow a reduction in monetary costs to students.

To better understand the nature of proprietary education, we need to think about education as a "bundle" of goods with different attributes. Some of these attributes pertain to the core "investment" nature of education: e.g., curriculum, quality of faculty, pedagogical and "delivery" methods. Some pertain to consumption or quasi-consumption aspects: e.g., geographical location, quality of residential facilities, presence or quality of athletic teams. Some may have both investment and consumption aspects: e.g., high-speed Internet access.

Proprietary schools are likely to an educational "bundle" that is substantially different from their public or non-profit private counterparts. Proprietary schools, to this point, have not tried to replicate the highly complex and comprehensive educational bundle offered by (for example) Princeton or Williams. They have largely tailored their educational bundle to meet the demand for educational services by non-traditional students (i.e. adults) for services that may not be provided by traditional institutions. Although they are not unique in doing so, proprietary schools have "unbundled" some aspects of a traditional, elite baccalaureate education. This market-driven approach has led to proprietary schools to provide courses at times and locations that are more convenient for adults, to provide courses through non-traditional means (e.g. distance learning), and to specialize their curricula (Marchese 1998).

Proprietary schools are an easily-recognizable manifestation of increasing heterogeneity in the higher educational marketplace – a process that has been going on since at least the 1960s. The rise of for-profit schools in the four-year college and beyond market is really just a symptom of this growing diversity in the education market.[3] Yet we should

[3]Winston (1998) makes this point nicely.

be cautious about generalizing about "proprietary institutions" just as we should be cautious about generalizing about "public universities" or "liberal arts colleges." Institutions within each type may offer a diversity of "bundles." Our goal should be to understand how the diversity of educational methods affect labor market outcomes.

In the rest of this paper I will try to outline several areas where we might fruitfully examine how proprietary institutions interact with the labor market and discuss the data needs for each area. What is really at the base of these suggestions, however, is a desire to understand how heterogeneous educational experiences affect the labor market outcomes of heterogenous individuals. Proprietary schools are a good place to start, but they are by no means the only institutional type that can, or should, be a part of these inquiries.

II. Wage Returns to Proprietary Education

One of the primary areas of interest with regards to proprietary education and the labor market is the wage returns to receiving a proprietary education. There is an extremely large literature on the returns to education, with a substantial amount of debate about the exact magnitude of the causal effect of an additional year of education.[4] For the most part, this literature treats completed years of education as homogeneous, in part because the available data do not contain especially detailed information about the nature of education received.[5]

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[4]See Willis (1986) for an extensive survey of earlier literature on the returns to education, and Card (1995, 2000) for a more recent summary of the "new" estimates of the returns to education. Bound, Jaeger, and Baker (1995), Bound and Solon (1999), and Bound and Jaeger (in press) take a somewhat critical view of some of these "new" estimates.

[5]Kane and Rouse (1995) utilize transcript data in the NLS72 to distinguish between credits taken at two-year and four-year schools, but this type of study is by far the exception.

We cannot, in general, rely on existing data sets if we want to learn about the wage returns to for-profit schooling.[6] Large data sets like the public-use microdata samples of the U.S. Census or the Current Population Survey (CPS) collect reliable information on educational attainment (highest grade or degree completed) and earnings, but provide no information on the "control" of the institution from which the highest degree was received. Other data sets, particularly those produced by the U.S. Department of Education, do provide information on for-profit status of institutions that sample individuals have attended, but these data sets suffer from a variety of problems for studying the return to proprietary schooling. First, they are typically limited to a particular cohort of high school or college graduates. This in itself is not a barrier to estimating the returns to education. Proprietary-school attenders tend to be older than the typical college student, however, and none of the Department of Education data survey a sample of individuals at a sufficiently late age to fully capture the population of likely proprietary school attenders.[7] Second, because proprietary school graduates still represent perhaps only 1 percent of earned baccalaureate degrees, the sample sizes available in these data sets are small enough that we are unlikely to observe sufficient numbers of proprietary school graduates to estimate the returns to with any precision.

It will be possible to generate some initial estimates of the returns to a proprietary education using The National Survey of College Graduates (NSCG), which is jointly

[6]The Appendix Table 1 presents a summary of some of the data sets that have been used to estimate the returns to education.

[7]The cohort from the National Longitudinal Survey of the High School Class of 1972 (NLS72), while currently old enough to perhaps observe proprietary school attendance, was last surveyed in 1986. Proprietary schools were a relatively limited phenomenon prior to 1986 and the cohort was only approximately 32 years at that time..

administered by the Census Bureau and the National Science Foundation. Drawn from a sample of the 1990 U.S. Census long-form responders who reported receiving a B.A. or better, the NSCG contains information on the degree history of more than 200,000 individuals. While not yet publicly available, information on the "control" of institutions attended by sample individuals will be released sometime in late 1999. These data contain information from the Census long form on demographic characteristics and earnings. The follow-up survey in 1993 asked which institution an individual received their degree(s) from as well as some family background information. While the NSCG does not contain a measure of ability (e.g. scores from the Armed Forces Qualifying Test), it will allow us for the first time to get a representative picture of who receives a degree from a proprietary school as well as estimate the wage returns to those degrees. These data will be used in my future work on the returns to proprietary degrees.

While the NSCG will permit a first look at the returns to receiving a proprietary baccalaureate, it will not answer all the interesting questions with regards to earnings and proprietary schooling. Because many proprietary-school attenders are adults who are returning to school after having spent time in the work force (possibly after attending college for some time), their educational experience may be significantly more heterogeneous than traditional-age students'. For example, a proprietary-school attender may have attended a non-profit 2- or 4-year school for 1 year, returned to the work force, received some employer training outside a degree-based program, and then attended a proprietary school to finish their degree. This variety of experience may not be well-measured by simply recording the type of school of the terminal degree.

Proprietary-school attenders may also be more likely not to complete their degree. Figure 2 shows the number of Bachelor's and Master's degrees awarded by proprietary schools from 1990-1996, along with the proprietary share of all Bachelor's and Master's degrees. The trend for degrees awarded is not nearly as dramatic as the enrollment statistics presented in Figure 1. This suggests that 1) proprietary school attenders may be likely to drop out of college, 2) proprietary school attenders may be transfer to more traditional schools, 3) proprietary school attenders aren't enrolled (*de facto* or *de jure*) in degree programs. Because the NSCG samples only individuals with a Bachelor's degree or better, it may miss a significant share of the individuals who attend proprietary schools.

Our knowledge of the role of proprietary schools in the labor market will likely only expand significantly if we collect additional data. Broadly speaking, these data should:

- contain information on enough proprietary school attenders and graduates so that we can estimate labor markets returns with sufficient precision
- contain information on high school graduates, 2-year, and 4-year non-profit school attenders and completers so that we can measure returns to proprietary school in relation to a variety of "control" groups.
- collect transcript data to accurately capture the heterogeneity in educational experience rather than rely only on self-reporting. In particular, we should not rely on individuals to self-report that they went to a proprietary institution.
- collect information on family background and "ability" measures
- they should collect detailed work history data so that we can accurately separate the wages returns to education from the wage returns to experience

- they should collect detailed work-related training information so that we can accurately separate the wage returns to education from the wage returns to firm-specific training.

The first two of these issues relate to the sample frame from which any data should be drawn. Because proprietary school graduates represent less than 1 percent of the population of Bachelor's degree holders, relying on purely random or geographically stratified randomly sampling (as do all of the conventional surveys used to study the returns to education) will likely not produce enough proprietary school attenders and graduates unless the overall sample size is very large (on the order of several hundred thousand). Given the detailed information that we would like to collect, such a large survey infeasible. Rather, I think it makes sense for researchers to forge a cooperative relationship with proprietary educational institutions to identify previous attenders and graduates. A sufficiently large random sample could then be drawn from within this population. Sampling from the population at large could provide the comparison groups, although designers of such a survey would want to think carefully about the appropriate comparison groups to assure that they were present in sufficient numbers to give sufficient power in statistical tests. Developing a cooperative relationship with proprietary institutions will be necessary as well, if we want to collect transcript information.[8]

It is hard to be sure of the truth without data (unless one is an economic theorist), but it is likely that proprietary-school attenders may be highly selected on both observable (e.g.

[8]There is some evidence that proprietary institutions are relatively unresponsive when presented with requests for transcripts. In the High School and Beyond post-secondary transcript study, only 50.4 percent of 752 "private, for-profit" institutions provided transcripts. Many of these institutions may be non-degree granting or 2-year institutions, however. See Table 6.1 in Zahs, *et al.* (1995).

age) and potentially unobservable (e.g. "ability") characteristics. If we want to attempt to estimate the causal impact of attending a proprietary school on wages, we would be well advised to collect information on both family characteristics and some measure of ability (e.g. the AFQT).[9] While this information will surely not fully address the selectivity issue, it is unlikely that fully exogenous instruments (correlated with choice of school type and quantity of schooling, but uncorrelated with wages) can be found which would allow us to identify a true causal effect.

To better understand the mechanism by which individuals choose a proprietary school over a more traditional school, data should also be collected on the perceived educational available to individuals in the sample. What factors led them to choose a proprietary institution? Were they even aware that the institution was for-profit? What other schools and courses of study did they consider? How strong is the link between obtaining a degree at a particular proprietary school and receiving a job with a particular employer? Did the student know this at the time they started attending the proprietary school?

One hypothesis about the role of education in the labor market may be particularly important for proprietary school attenders. Spence (1973) hypothesizes that individuals may invest in education merely to signal their (innate) productivity to employers, but education does not, in itself impart any productive skills. While this strong version of the signaling hypothesis has not found support in the literature (i.e. most studies find some support that additional years of schooling impart productive skills), there is evidence of wage returns to

[9]The econometric issues of omitted "ability" or other variables in estimating the returns to education are well-known. See Willis (1986) for a summary.

diploma receipt, conditional of years of schooling completed (see, for example, Jaeger and Page 1996). The relative importance of human capital investment versus signaling for proprietary education is an important empirical question, and one which may have different answers than for non-profit education.

Ideally, we would like observe labor market outcomes both before and after the choice to attend proprietary school. It is difficult, however, to identify which individuals will be "at risk" to attend proprietary school. Moreover, given the timeliness of the proprietary school issue and researcher's desire for data now rather than 10 years from now, however, the best we can hope for is likely to be a retrospective survey for much of the work history and training information. Going forward, researchers should consider collecting a panel for some or all of the respondents, particularly individuals who are just starting their proprietary schooling. One important research issue is the interplay between "formal" schooling and training. The lines between these two may be particularly hard to discern for proprietary school attenders – especially those who do not complete a degree. Proprietary education may also play an important role for individuals who are "retraining" for a new occupation.

III. Proprietary Education as Substitute for Training

The human capital framework (Becker 1975) on which much of the economics of education in the labor market is based distinguishes between "general" (broad, generally applicable skills and knowledge) and "specific" (firm- or occupation-specific knowledge) human capital. Traditional-age college attenders and older students differ in their degree of labor market experience. In particular, older students are more likely to be attached to a

specific firm or occupation, having possibly already made some investment in acquiring firm-specific or occupation-specific human capital. Because proprietary schooling is marketed to adults, the link between current and future occupation to be much stronger than for graduates of non-profit schools.

While many firms have a long tradition of subsidizing education (particularly graduate training in business) for their employees, it is an open question as to what degree proprietary education is a substitute for training. The difference in trends of enrollment and degree receipt in Figures 1 and 2 could be explained by firms using proprietary schools as training vehicles, with students never intending to complete a degree.

One avenue for researching the relationship between proprietary education and training would be to survey firms who subsidize the costs of attending proprietary schools or who purchase outright the services of proprietary schools. In non-profit schools, the link between specific employers and the curriculum may be relatively weak. Because proprietary schools are more market driven, they may tailor their curriculum to large employers in their immediate area (Raphael and Tobias 1997 discuss how the University of Phoenix tailors its teacher curriculum to state-specific teaching certificate requirements). A firm survey would be designed to explore the strength of the links between proprietary schools and local employers. Issues to address:

- do firms require their employees to attend proprietary schools to receive a subsidy?
- how much do firms contract with proprietary schools to provide training?
- how much can firms dictate the content of courses taught by proprietary schools?

- do firm that subsidize (or purchase) proprietary schooling purchase less or more of intra-firm training? outside training?
- is proprietary schooling a prerequisite for promotion?

IV. Inside the "Black Box"

I started the paper by discussing why proprietary schools are an interesting phenomenon – not necessarily because they are run for profit, but because they provide a different bundle of educational goods than traditional schools. We have many anecdotes to suggest this is true, but little systematic evidence. While it is hard to imagine that taking classes on Sundays or in a shopping mall has any significant causal impact on wages, other "treatments" may not be so benign. For example, are "distance learners" as productive as observationally equivalent students who learned the same subject in a traditional classroom? Do students who graduate from highly specialized degree programs succeed as well in occupations outside their speciality as those who degree was more broad-based?

We cannot answer questions like this without specific knowledge of the curricula and teaching methods encountered by students. In conjunction with the survey of individuals proposed above, a curricula and methodologies survey of proprietary (*and* non-profit) institutions would yield a great deal of useful information about what goes on inside the "black box" of education production. As professional researchers we probably have a good idea about what goes on in the classroom in an elite research university or liberal arts college. Moreover, the learning environments at traditional 4-year institutions are probably roughly similar, in part because their faculty were trained at a much smaller group of elite

institutions. Proprietary schools are likely to be substantially different from the institutions with which we are most familiar.

There are other measures of the inputs into the production of education that might have an impact on labor market outcomes. Faculty credentials (quality of Ph.D. or other highest degree, publications), quality of facilities (both traditional technologies like libraries, and newer technologies like multimedia classrooms and computer labs), and traditional measures of school quality like class sizes, faculty/student ratios, and faculty salaries all plausibly affect the amount of learning that goes on in college. Much of this data could be gathered from public sources, and would complement a survey of curricula.

Both approaches aim to shed light on the nature of education production. While none of the information gathered would be peculiar to proprietary schools, differences between proprietary and non-profit schools would shed light on potential differences in labor market outcomes.

V. Discussion and Conclusions

One area on which I have not touched but where the model of proprietary schools may have an impact is the market for college educators. The University of Phoenix relies almost exclusively on adjuncts (Strosnider 1997). Much of the teaching in its teacher education program is done by practitioners (Raphael and Tobis 1997), who likely do not possess a doctorate. While the increase in the share of college instruction performed by adjuncts is a phenomenon that predates and is much broader than rise of proprietary schools, few, if any, non-profit institutions rely so heavily on adjunct teaching. The complete lack

of a research requirement for faculty at most proprietary schools may hasten the creation of a two- (or more) tier system of higher education in which faculty at elite schools do less teaching but conduct more research and faculty at less selective schools are engaged entirely in teaching. To the extent to which we believe teaching and research are complementary activities, this change may serve to increase differences between elite and less selective institutions even further.

We know very little about how proprietary baccalaureate education (or, more generally, non-traditional higher education given to non-traditional students) functions in the labor market. Because the "usual" surveys do not provide either large enough samples, or information about proprietary schools, we are likely to remain in the dark about this issue without a substantial amount of data collection. I suggested three populations from which we might profitably collect data: individuals, firms, and the proprietary (and other) schools themselves.

I have painted here with a broad brush largely to stimulate discussion about proprietary schools and the labor market. The proposed data collection efforts are large and would require a substantial funding commitment. The heterogeneity of proprietary school students and the heterogeneity of the educational experiences offered by proprietary schools presents a major challenge to researchers.

That challenge is also an opportunity, however. Because proprietary schools may use different methods and serve different populations than non-profit schools we have an opportunity to move beyond measuring the impact of just "credits" or "years of education." Are these non-traditional approaches to education (albeit cost-driven) as skill-enhancing as

traditional methods? The lessons learned from our study of proprietary schools may be applicable to higher education in general.

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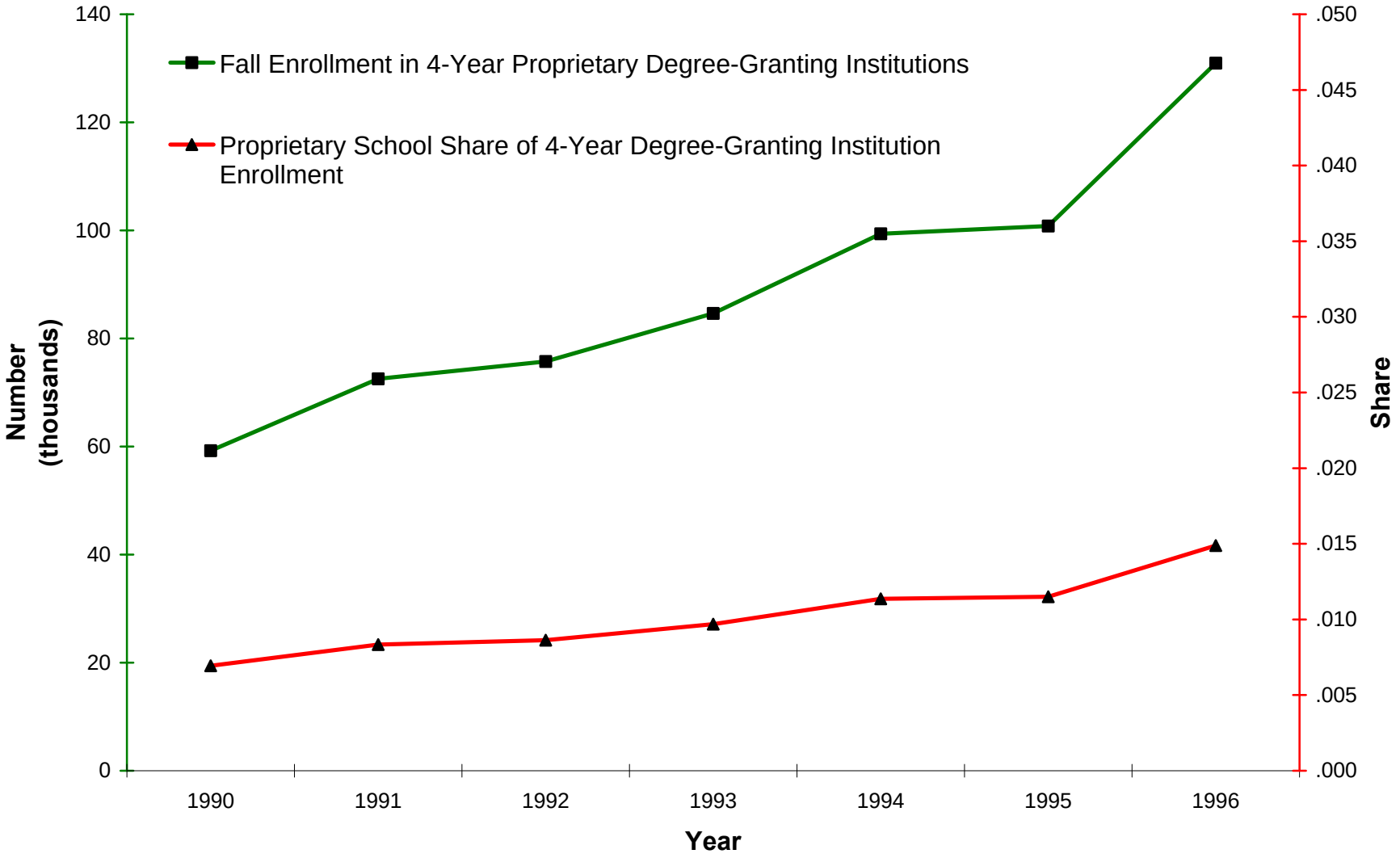
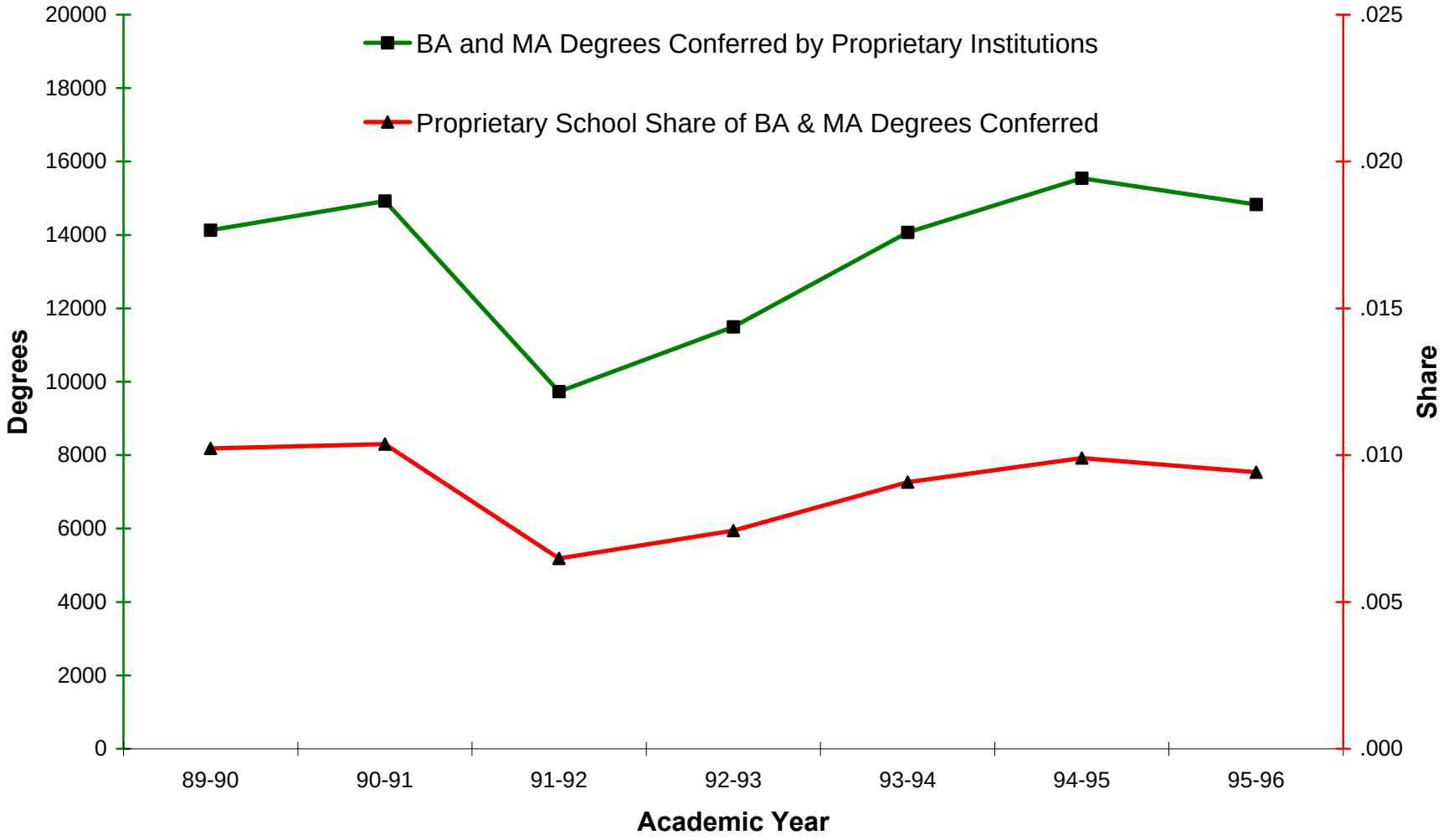
Figure 1
4-Year Proprietary School Enrollment



SOURCE: Digest of Education Statistics, various issues

Figure 2
BA and MA Degrees Granted by Proprietary Institutions
1989-1996



SOURCE: Digest of Education Statistics, various issues

Appendix Table 1
Selected Source Data on Education and Labor Market Outcomes

Source	Sample Size	Cross Section	Panel	Time Frame	Sample Frame	Education Information	Identifies Proprietary Schools?
Census Bureau/Bureau of Labor Statistics							
CPS	60,000 (adults)	Monthly	1 year, half samp	1968-	U.S. civilian, non-institutionalized pop.	Highest grade	No
Decennial Census	1 mil (civ. adults)	every 10 years		1970-	U.S. Population	Highest grade	No
National Longitudinal Surveys							
NLS 72	22,652		73,74,76 79,86	1972-86	1972 senior cohort	Transcripts	Yes
NLSY	12,686		annual	1979-90	14-21 year olds in 1979	Attainment	No
Census Bureau/NSF							
National Survey of College Grads	210,000	1990/93		1990-	U.S. Population with BA degree or higher (drawn from long-form 1990 Census)	BA+ Degrees	Yes (when released)