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ABSTRACT

This paper explores the need for a better understanding of the influences of prices and student aid on student enrollment and college budgets. The theory of net price has not been found to adequately explain changes in enrollment. Based on a critical review of recent research on student price response, this paper develops an alternative approach to assessing the effects of prices and student aid. The traditional approach and the alternative approach have different views of students' response to a single net price versus a set of prices and price subsidies, factors in student enrollment and persistence decisions, possible changes over time in student price response, and response to price by low-income versus middle-income or upper-income students. Analysis of the effects of student aid indicates that there is not a universal relationship between aid and first-time enrollment and persistence. The implications of the alternative approach are considered for the evaluation of aid strategies and the analysis of alternative pricing and aid strategies. (Contains approximately 50 references.) (JDD)

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Assessing Pricing and Aid Strategies:
Rethinking Planning and Evaluation Practices

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Assessing Pricing and Aid Strategies:
Rethinking Planning and Evaluation Practices

Abstract

During the past decade net prices have risen, college enrollments have been higher than predicted. These developments indicate that the theory of net price does not adequately explain changes in enrollment. Based on a critical review of recent research on student price response, this paper develops an alternative approach to assessing the effects of prices and student aid. The implications of the new approach are considered for the evaluation of aid strategies and the analysis of alternative pricing and aid strategies.

Assessing Pricing and Aid Strategies:
Rethinking Planning and Evaluation Practices

Higher education has entered a new financial crisis. Public concerns about rising tuitions in the 1980s led to a wave of criticisms of higher education in the national press (e.g. Brimelow, 1987; Putka, 1987), popularizing claims by then-Secretary of Education William Bennett (1986, 1987) that tuitions increased because of greed and were fueled by excessive spending. Private colleges and universities responded to these assertions by emphasizing the claim that cuts in federal grants had influenced the price increases, as many private colleges substituted their own funds for losses in federal revenues (Council for the Advancement and Support of Education, 1987; National Institute of Independent Colleges and Universities, 1987). Public colleges responded by claiming their prices had increased because states had reduced their support (Eisner, 1988; State Higher Education Executive Officers [SHEEO], 1988). Lurking beneath the surface of the college cost controversy were important questions about the effects of prices and student aid, the productivity of colleges and universities, and the return on public investment that went largely unaddressed in these political debates (St. John, in press).

This paper addresses one of these issues, the need for a better understanding of the influences of prices and student aid on student enrollment and college budgets. First, the particular nature of the problems currently facing colleges and universities is considered. Then an emerging approach to investigating the

effects of prices and price subsidies is introduced and compared to the more conventional net-price concept. Finally, alternative strategies for assessing the effects of student aid and pricing strategies are considered.

The Nature of the Problem

Two major forces complicate any effort to understand the effects of pricing and student aid strategies. First, there has been a shift in the structure of higher education finance over the past fifteen years. In the 1980s, a substantial portion of the burden for financing higher education shifted from states and federal government to students and their families (Kramer, 1983), a result of reductions in government subsidies to students and institutions. Second, the net-price approach (assuming students respond to a single net price), the predominant approach used to assess the effects of prices and subsidies, has not provided an adequate basis for assessing the effects of pricing changes on enrollment. Analyses of enrollment trends and pricing changes clearly indicate that enrollments do not behave in a way that can be predicted from changes in net prices (Leslie and Brinkman, 1988; St. John, 1993). These two forces had different effects on pricing practices in public and private colleges.

In the public sector, tuitions consistently rose at a much faster rate than need-based grants, which has meant an increase in the net prices facing students. State grant programs were generally cut, rather than increased, when states cut institutional appropriations (Hines, 1993). Further, throughout

most of the 1980s, the federal government shifted its emphasis from grants to loans, and while Pell grants increased slightly during the Bush administration, total grant dollars did not (College Board, 1992). Consequently, net prices rose in the public sector, yet enrollments in the 1980s (Gerald and Hussar, 1990) were higher than had been predicted a decade earlier (Frankel and Gerald, 1980). In the early 1990s, public colleges and universities have continued to raise tuitions without increases state grants (Hines, 1993). There is evidence that these developments are problematic for low-income and minority students (Associated Press, 1993; St. John, Oescher, and Andrieu, 1992; St. John and Starkey, in press), yet state agencies and public institutions generally lack adequate mechanisms for estimating the enrollment effects of pricing changes and frequently assume prices do not influence enrollment (SHEEO, 1988).

Private colleges and universities, in contrast, responded to reductions in federal grants and rising public tuitions by competing more vigorously for prospective students. They have increased tuition to make improvements in academic programs and student services, and increased internal allocations to grants for students who cannot pay full price (Hauptman, 1990a & 1990b). Both of these strategies helped private colleges compete for students. Private colleges continue to allocate large sums to grants under the assumption that aid encourages enrollment (Hossler, 1984; Hossler, Bean and Associates, 1990; Jackson,

1978), but often lack adequate mechanisms for assessing the effects of their aid strategies on enrollment. These practices compounded financial problems at some private colleges and universities.

An underlying problem for both public and private institutions is that the basic construct used to formulate financing strategy -- the theory of net price -- does not adequately explain recent developments in higher education enrollment and finance. While an alternative construct -- a differentiated-prices approach (Dresch, 1975; Hearn and Longanecker, 1985; St. John and Starkey, in press) -- seems to be emerging, there is an apparent need for more institutional research on the effects of various price and financial-aid strategies, as well as for more deliberate experimentation with alternative approaches to financing higher education.

Alternative Approaches to Financing Higher Education

The aim of this paper is to help policy makers and analysts formulate new approaches to higher education finance, based on well-designed analytic and planning studies. A crucial aspect of this task, therefore, is to suggest an alternative to the net-price concept.¹ The origins of net-price theory and its application in higher education policy, the emergence of an alternative way of conceptualizing the relationship between prices and student-enrollment decisions, and compares the

¹ The text in this section (p. 5-12) is adapted from St. John and Starkey (in press).

assumptions of both ways of viewing the relationship between financial strategies and enrollment are summarized below.

The Traditional Approach

The concept of net price is embedded in human capital theory, which is integral to most public finance strategies in higher education. In Human Capital Theory, Gary Becker (1964) argued that: "Generally, the most important cause of differences in opportunities [to attend postsecondary education] is the availability of funds" (Becker, 1975, p. 107). He further argued that scholarships and loans are "funds for accessibility" (p. 107). Thus the assumptions that students respond to a single net price and that reductions in net price for some populations can improve access were embedded in the original conceptualization of human capital theory. The Higher Education Act of 1965, enacted about the time Becker's book was first published, included major new loan and grant programs aimed at increasing access to higher education by providing new funds to students with financial need.

The net-price assumptions were routinely carried forward without being questioned. The student-demand studies conducted in the early 1970s (e.g. Corazzini, Dugan, and Grabowski, 1972; Radner and Miller, 1975) carried forward the assumption that students respond to a net price. The reviews of these studies generally concluded that low-income students were more price responsive to tuition than higher income students (Leslie and Brinkman, 1988). Starting in the early 1970s, a series of planning models (Herzlinger and Jones, 1981; National Commission

on the Financing of Postsecondary Education, 1973) was developed so that the federal government and states could assess the relative tradeoffs between funding institutions (providing a tuition subsidy for everyone who attends public institutions) and funding need-based student aid programs (reducing prices for those who were thought to be the most price responsive). In the 1970s and 1980s, several attempts were made to improve the way price-response coefficients were derived from the student-demand studies (e.g. Jackson and Weathersby, 1975; Leslie and Brinkman, 1988). And while the number of studies included in these meta-analyses gradually expanded, an alternative to net price was seldom considered.

An Emergent Approach

An alternative conceptualization of the way postsecondary students -- and prospective students -- respond to prices is emerging. In his criticisms of the early student-demand studies, Stephen Dresch (1975) argued that students could respond differently to student aid than they did to tuition; that change in the amounts of aid available could change the ways students respond to tuition over time; and that there could be differences in the ways students respond to prices in enrollment and persistence decisions. However, there was not sufficient research at the time to test these alternative assumptions.

A series of recent research studies seems to support Dresch's arguments. First, recent studies that examined the effects of a set of prices, rather than a single net price, have

found that there are differences between the price-response coefficients for tuition and student aid (McPherson and Schapiro, 1991; St. John, 1990b). Second, recent national persistence studies indicate that students are responsive to prices in their persistence decisions (St. John, Oescher, and Andrieu, 1992). Third, a recent study that compared the accuracy of using a single price-response coefficient for net price in predicting enrollments to the accuracy of using price-response measures that differentiate for tuition and different types of student aid, as well as for income, concluded that the differentiated measures were more accurate (St. John, 1993). Indeed, the analyses using the differentiated measures help explain why the increase in net price during the early 1980s did not have a negative influence on enrollment (St. John, 1993). Further, there is some evidence that the differentiated price-response measures could be useful to institutions interested in examining alternative pricing strategies (St. John, 1994).

Comparing the Alternative

The two alternative approaches to conceptualizing the relationship between prices and enrollment (first-time enrollment and persistence) are summarized in Table 1. The basic assumptions of the two approaches differ in at least four ways. First, regarding the ways students respond to prices, the traditional approach assumes that students respond to a single net price, while the emergent approach assumes that students respond to a set of prices and price subsidies. In the

traditional approach, net price frequently was assumed to be tuition minus grants (Leslie and Brinkman, 1988). Accordingly, loans were not considered prices, but a mechanism that allowed students to delay paying for their net price. Thus, there was an inherent problem with this net-price assumption -- it ignored the fact that students could respond to loans as well as grants, a

Table 1 About Here

possibility even Gary Becker acknowledged in the original edition of Human Capital Theory (Becker, 1964).

In contrast, the emergent approach assumes that students respond to a set of prices and price subsidies. Accordingly, researchers and policy makers do not presuppose that any single type of price or subsidy is more influential than another. Rather, the relative importance of various types of prices and subsidies is determined by the choices students actually make, which could be influenced by a wide range of factors, including student background and aspirations. Research using this approach consistently finds that loans, as well as grants and tuition, have an influence on persistence (Andrieu and St. John, 1993; St. John, 1990b; St. John, Oeschler, and Andrieu, 1992). Further, since enrollment projections that used these differentiated measures are more accurate than the projections that used the net-price approach (St. John, 1993), it would appear that the alternative assumption merits serious consideration by

institutional researchers and policy makers.

Second, the two approaches also differ relative to their implicit assumptions about the similarities between enrollment and persistence decisions. The traditional approach assumes that price-response measures are applicable to both. Before 1990 there had been two primary types of price-response studies: cross-sectional analyses of first-time enrollment by individual students (e.g. Jackson, 1972, 1988); and time-series analyses of the relationship between enrollment levels and tuition charges (e.g. Corazzini, et al., 1972; McPherson and Schapiro, 1991). The former usually only considered first-time enrollment and the latter usually examined total fall enrollment. When the coefficients for these studies were standardized (Jackson and Weathersby, 1975; Leslie and Brinkman, 1988; McPherson, 1978), it was automatically assumed that there was one single net price because the coefficients estimated in these studies were based on this assumption. Thus, those who developed standardized measures carried forward the net-price assumption.

In the emergent approach, the prospect that there may be differences in the ways students respond to prices in their first-time enrollment and persistence decisions is left open. This alternative assumption is based on the recognition that the early demand studies did not explicitly consider persistence and, therefore, the similarity between first-time enrollment and persistence could not be assumed; rather it needed to be tested (Dresch, 1975). The initial research on price response in

persistence considered year-to-year persistence and found that students were more responsive to student aid than to tuition (St. John, 1990b), which was similar to another recent study of first-time enrollment (St. John, 1990a). However, more recent research (St. John and Starkey, in press) indicates that students are more responsive to tuition than to student aid in their within-year persistence decisions. This more recent finding again calls into question the assumption that the same price-response measures automatically can be applied to both persistence and enrollment.

Third, the two approaches differ in their assumptions about whether there could be changes over time in student price response. The traditional approach implicitly assumed there was an ultimate (or universal) coefficient that price response did not change. Indeed, the explicit intent of meta analyses was to develop universal price-response measures. In contrast, the emergent perspective assumes that price-response measures could change over time, as a result of policy changes, labor market changes, or changes in student choice. The most recent standardized price-response measures (Leslie and Brinkman, 1988) are derived from the student-demand studies conducted on populations that made their enrollment decisions before the Pell grant program was implemented. Since this measure is higher than price-response measures derived from more recent studies (McPherson and Schapiro, 1991; St. John, 1990b), it appears that Dresch's counter argument is feasible.

Finally, the traditional approach has held the assumption

that low-income students are more responsive to price differentials than middle- or upper-income students. However, it is a logical extension of Dresch's argument that this might not always be the case, that it would depend on the combination of prices students with different means actually face. At the very least, this assumption merits scrutiny. A recent study of first-time enrollment by students in the high school class of 1982 found that: middle-income students were more responsive to loans than to tuition, while low-income students were more responsive to grants than to tuition (St. John, 1990a). This finding could have been influenced by the availability of loans for middle-income students in the early 1980s.

The two conceptions of student price response also have different implications for basic research and policy analysis. If the traditional assumptions are held, then basic research on student price response would only occasionally be needed, standardized measures could be universally applied, and enrollment and budget projections would fit into a linear planning process by adjusting enrollment estimates for changes in net price. However, if the emergent assumptions are held, then these analytic processes suddenly become much more complex -- and interesting. More frequent research would be needed to determine whether student price response had changed as a result of changes in finance policy (tuition changes and student aid awards), the demand for educated labor, or student choice. Further, price-response measures would need to be crafted to fit a particular

context, given that new policies could influence the ways students respond to price. This means that the process of analyzing the effects of financial policies on student choice would need to be recursive, with a series of planning and evaluation studies "constantly calling upon their own results or elements for the development of new results or elements" (Longstreet, 1982, p. 148).

This review of prior research seems to support the emerging conception of student price response, a conclusion also supported by a study that compared the net-price and differentiated-price approaches in an analysis of the effects of aid on persistence (St. John and Starkey, in press). It compared three alternative ways of specifying price variables in a within-year persistence study: net price (tuition minus grants); net cost (total cost minus total student aid); and differentiated prices (tuition, grants, loans, and work). All three approaches were used to examine persistence by low- and lower-middle-income students, as well as by all students. The analyses strongly indicate that students respond to a set of prices, rather than to a single net price, which further supports the emergent perspective.

Assessing Pricing and Aid Strategies

The emerging approach to assessing the effects of student aid and pricing strategies has implications for analysts in institutional research and planning offices, budget offices, and state agencies, as well as for presidents and budget officers in higher education. The remainder of this paper considers the

implications for the evaluation of the effects of financial aid strategies and the analysis of alternative financing strategies.

Evaluating Financial Aid Strategies

Student financial aid provides institutions with a potential mechanism for reducing the negative effects of tuition increases on enrollment. Without student aid, it is doubtful that any institutions, including the most elite and the least costly, could maintain student populations from diverse income backgrounds. Recent research indicates that living costs explain about twenty percent of the attrition in higher education (Lyn, St. John, and Starkey, 1994). Thus, the subsidy of living costs would seem necessary to maintain enrollment by low-income students, even if the direct charge of attending could be eliminated.

Given that the federal government has backed off its historic commitment to subsidize the costs of students with financial need (St. John, in press), it may be necessary for institutions to invest in student aid, as a series of recent studies indicate. Indeed, it appears that the public colleges and universities, which are more dependent on government student aid, do not provide sufficient student aid to promote first-time enrollment (Somers and St. John, 1993) or persistence (St. John, Oescher, and Andrieu, 1992). In contrast, private colleges and universities, which have invested more of their own resources in student grants (St. John, 1993), do not appear to have the same

problem: they seem to provide sufficient aid to promote persistence (St. John, Oescher, and Andrieu, 1992). Further, when public colleges invest substantial resources in grants, their initial aid offers are positively associated with first-time enrollment by accepted applicants (Somers, 1992). These developments provide prima facie evidence that institutional investment is necessary in the new financial context.

But how do institutions know when they have invested enough? Or too much? Or if the types of aid strategies they are using are working as they were intended? Recently workable models for institutional research on the effects of student aid have been proposed and tested (St. John, 1992). These models, with information from admissions, student aid and student information systems, yield results that are similar to studies on access and persistence. Similar to national studies, sometimes these analyses yield results that indicate aid offers and amounts are positively associated with first-time enrollment (Somers, 1992; Somers and St. John, 1993) and at other times yields results that aid is negatively associated with first-time enrollment (Somers and St. John, 1994).

This means that the way the results of evaluation studies are interpreted is a critical aspect of the assessment process. Just as the net-price approach assumed that there was a universal relationship between price and enrollment, analyses of the effects of student aid have historically assumed that there is a universal relationship between aid and first-time enrollment and

persistence (e.g. Leslie and Brinkman, 1988; Pascarella and Terenzini, 1991). If this assumption is held, then the analyst is essentially assuming that institutional analyses of the effects of aid would not yield information about the viability of local strategies, but rather provide insight into a universal phenomenon. However, if the emergent assumptions discussed in the previous section were held, then it would be possible to interpret results as related to the effectiveness of a specific aid strategy being used. In this case the crucial issue is how to interpret negative coefficients for aid variables in evaluation studies. Clearly a negative coefficient for an aid variable in a well specified regression model means that the aid strategy is not working well. The issue then becomes how to find a reasonable explanation for why the aid strategy is not working as it was intended. Sometimes negative coefficients could be an artifact of the aid packaging strategy. For example, Somers (1992) found that large merit scholarships were significant and positive in first-time enrollment in an urban public university, but significant and negative in persistence. Her interpretation was that large grants were effective in attracting high ability students, but apparently the environment was not sufficient to hold them, in spite of the money. In this case, the negative coefficient was an artifact attributable to factor other than student aid.

However, there are also instances when the negative coefficients for aid variables have been attributable to unmet

need. For example, when living expenses were added to a persistence analysis that included prices and price subsidies, in the final step of an analysis of persistence using a national data base, Lyn, St. John and Starkey (1994) found that the coefficients for aid variables shifted from being negative to neutral or positive. In this instance, the negative coefficients for aid were apparently attributable to unmet need, which, in this instance, suggests that the amount of aid students received was insufficient. Unfortunately, institutional researchers do not always have information of the actual living costs of students. Therefore, analysts undertaking evaluations of aid strategies must wrestle with these complexities when interpreting the results of their studies.

One further note about the use and interpretation of the result of institutional studies. While it is possible to generate price-response measures for aid variables from institutional studies, it appears that these results are not directly translatable into elasticities that can be used to estimate the effects of aid increases. National research indicates that students do respond differently to student aid than they do to tuition (e.g. St. John and Starkey, in press), an issue discussed above. This means that price-response measures generated from institutional studies of student aid, or even of net prices, are useful in evaluating aid strategies, as indicated in the discussion above, but not in generating price-response measure that can be used to assess alternative aid strategies.

Analyzing Pricing Strategies

So what types of approaches should be used to estimate the enrollment effects of pricing strategies? This question has a slightly different answer for estimating the effects of prices than for student aid. Institutions can not assess the direct effects of tuition in a cross-sectional analysis of first-time enrollment or persistence, unless the amount of tuition charged varies, which is not the case in most colleges and universities. Therefore, it simply is not possible to generate price-response measures for tuition from most institutional data sources. The alternatives are to use a cross-institutional study, such as the one being conducted by Pat Somers (1994) or a national study.

It is possible to derive cash-flow elasticities from national studies, an approach that has recently been used. For example, St. John (1994) used price-response measures derived from national studies (St. John, 1990a & 1990b) to calculate cash-flow elasticities² and estimate the effects of range of tuition and aid strategies in five case-study institutions. And Trammel (1994) used price-response measures derived from national studies to assess the effects of a within-year tuition increase. Both of these efforts appear to have generated reasonable estimates of the enrollment effects of price changes. Trammel's (1994) estimates were within about five percentage points of actual enrollments and St. John's analyses (1994) seemed to

² The term "cash-flow elasticities" was used by St. John (1993) to refer to distinct elasticities for aid variables, especially loans and work, that were not true price subsidies.

reflect actual developments in similar settings.

However, both of these analyses carefully calculated tuition elasticities based on the characteristics of the populations being studied. St. John (1994) calculated elasticities based on the percentage of the college populations in the case-study colleges with high, medium and low need.³ Trammel (1994) estimated elasticities based on the percentage of the college population who were traditional college-age undergraduates, nontraditional-age undergraduates, and graduate students, using price-response measures that had been developed for these populations. This requires a careful review of possible price-response measures to identify measures that adjust for the populations.

Given the evolving state of knowledge about how students respond to price subsidies, the selection of cash-flow elasticities for student aid subsidies is even more complex. More specifically, given that a negative price-response measure for aid variable could mean the aid that was offer was insufficient, elasticities cannot be estimated by adjusting for inflation and averaging across studies. Rather it involves both matching population characteristics and similar aid environments. St. John (1994) used price-response measures that differentiate for the type of aid and income level, which provided flexibility

³ An elasticity is calculated by multiplying a price response coefficient by three, based on the assumption that a third of the population goes to college (Leslie and Brinkman, 1988; McPherson, 1978). In this case a set of elasticities were calculated, based on need levels and different types of prices and subsidies .

in the analysis of a range of aid strategies. This type of adaptation seems necessary, but not entirely adequate. Specifically, it seems desirable to adjust elasticities for aid variables to take into account the differences in the public and private sectors, since there appear to be differences in the ways students in public and private colleges respond to prices. However, sets of elasticities that reflect the conditions in the two sectors have not been estimated and national data bases are not yet available for this type of analysis.⁴ Therefore, analysts are left in the rather ambiguous situation of having to select the best available price response measures.⁵

In spite of the obvious ambiguities confronting the use of price-response measures in the planning and budgeting processes, it appears that their use has advantages over the alternative, which is to ignore price effects. The principal value of such analyses is heuristic, as they illustrate the types of conditions that institutions are likely to encounter under different scenarios. As Trammel's analysis indicates, even the most

⁴ The National Postsecondary Student Aid Surveys did not include information needed to estimate price-response measures, except for within-year persistence. Therefore, analysts must await the next national longitudinal study in order to develop such estimates.

⁵ Two recent analyses (St. John, 1993, 1994) indicate that the price-response measures developed from studies of the High School Class of 1982 (St. John, 1990a & 1990b), can be used to assess a range of pricing and aid strategies in diverse contexts. However, since these measures are based on data that are now more than ten years old, and therefore do not take into account the financial conditions that currently face public and private colleges and universities, analysts should be cautious about using these measures.

current price-response measures do not yield perfect estimates of enrollment effects. Indeed such a feat would seem beyond current capabilities, given the variety of other factors that influence enrollment in addition to prices.

Conclusions

Given the current financial predicament of higher education, college and university administrators can no longer afford to ignore the effects of prices. The choices institutions make about their pricing and aid strategies have an influence both on enrollment level and institutional finances. This paper has developed an alternative approach to assessing effects of prices and student aid.

The principle value of conducting evaluation and planning studies is that they permit a more informed quality of communication than would otherwise be possible. Two aspects of the communication process merit consideration by policy analysts considering these crucial tasks: communication within the political decision process in which prices and aid strategies are set; and communication with prospective and current students about pricing strategies.

There is heuristic value to those involved in the making of financial decisions of having information generated from evaluation and analytic studies that assess aid and pricing strategies. Evaluation studies can increase our understanding of the effects of past policies, providing they are well designed, executed, interpreted, and communicated. Similarly, analytic

studies that simulate the effects of pricing alternatives must be well crafted and effectively communicated. For policy analysts conducting these studies, this means constructing brief, well-crafted policy memoranda, providing there is ample analytic backup. It may also mean having to explain complex analyses in simple terms when asked to do so.

Communication with current and prospective students also merits consideration. As it turns out, student goals and perceptions of schools have about as much influence on college choice as prices (Hossler, Bean, and Associates, 1990). If an institution suddenly drops prices, as a means of stepping out of the price spiral, they run the risk of losing students because prospective students question the institution's quality. Thus, Rothman's (1994) experience with crafting a public communication strategy at a college that had decided to hold tuitions constant illustrates that it is possible to communicate intentions. However, the communication process should be considered as part of the policy-decision process.

Table 1

Comparison of Traditional and Emergent Approaches to Price Response in Higher Education

<u>Basic Assumptions</u>	<u>Traditional Approach</u>	<u>Emergent Approach</u>
Students Respond to:	A Single Net Price	A Set of Prices And Subsidies
Price Response in Enrollment and Persistence:	Are The Same	Could be Different
Student Price Response:	Does Not Change Over Time as a Result of Changes in Prices	Could Change, as a Result of Changes in Finance Policy, the Labor Market, and Student Choice
Students (and Potential Students) with Different Financial Means:	Respond Differently; Low-Income Students Are More Price Responsive	May Respond Differently Depending on the Actual Prices and Subsidies They Face
<u>Implications For</u>		
Basic Research:	Infrequent Research Needed	Frequent Research Needed
Development of Price Response Measures:	Standardized Measures Can Be Developed and Are Universally Applicable	Must Be Tailored to the Context, Using Most Appropriate Research
Enrollment Prediction:	A Linear Process	A Recursive Process

Source: Adapted from St. John and Starkey (in press)

References

- Associated Press. Big declines in enrollment at colleges. San Francisco Chronicle (1993, December 27), p. A4.
- Becker, G. S. Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education. N.Y.: National Bureau of Economic Research, distributed by Columbia University Press, First Edition, 1964; Second Edition, 1975.
- Bennett, William J. Text of Secretary Bennett's speech on college costs and U.S. student aid. Chronicle of Higher Education (1986, November 27), p. 20.
- Bennett, William J. (1987). Our greedy colleges. New York Times (1987, February 18), p. A31.
- Brimelow, P. The untouchables. Forbes 30 (1987, November), 141-150.
- College Board. Trends in Student Aid: 1982-1992. New York: College Board, 1992.
- Corazzini, A. J., D. J. Dugan, and H. G. Grabowski. Determinants and distributional aspects of enrollment in U.S. higher education. Journal of Human Resources 7 (1972), 39-59.
- Council for the Advancement and Support of Education (CASE). Tuition: The Story and How to Tell It. A CASE Senior Seminar Report, Brown University, October 11-14, 1987.

- Dresch, S. P. A critique of planning models for postsecondary education: current feasibility, potential relevance, and a prospectus for future research. Journal of Higher Education 46 (3) (1975), 246-286.
- Eisner, L. (ed.). A Call for Clarity: Income, Loans, and Costs. Washington, D.C.: American Association of State Colleges and Universities, 1988.
- Frankel, M.M, and Gerald, D.E. Projections of Education Statistics to 1988-89. Washington, D.C.: National Center for Education Statistics, 1980.
- Gerald, D. E., and W. J. Hussar. Projection of Education Statistics to 2001, An Update. Washington, D.C.: National Center for Education Statistics, 1990.
- Hauptman, A. M. The College Tuition Spiral. New York: Macmillan, 1990a.
- Hauptman, A. M. The Tuition Dilemma: Assessing New Ways to Pay for College. Washington, D.C.: Brookings Institution, 1990b.
- Hearn, J. C., and D. Longanecker. Enrollment effects of alternative postsecondary price policies. Journal of Higher Education 56 (1985), 485-508.
- Herzlinger, R. E., and F. Jones. Pricing public sector services: the tuition gap. Policy Science (Spring 1981), 419-438.
- Hines, E.R. State Higher Education Appropriations 1992-93. Denver, CO: SHEEO, 1993.

- Hossler, D. Enrollment Management: An Integrated Approach.
New York: College Entrance Examination Board, 1984.
- Hossler, D., Bean, J.P., and Associates. The Strategic Management of College Enrollment. San Francisco: Jossey-Bass, 1990.
- Hossler, D., Schmit, J., and Bouse, G. Family knowledge of postsecondary costs and financial aid. Journal of Student Financial Aid 21 (1) (1991), 4-17.
- Hossler, D., and Stage, F.K. Family and high school experience influences on postsecondary plans of ninth grade students. American Educational Research Journal 29 (2) (1992), 425-51.
- Jackson, G. A. Financial aid and student enrollment. Journal of Higher Education 49 (6) (1978), 548-574.
- _____. Did college choice change during the 1970s? Economics of Education Review 7 (1) (1988), 15-27.
- Jackson, G. A., and G. B. Weathersby. Individual demand for higher education. Journal of Higher Education, 46(6) (1975), 623-652.
- Kramer, M. Changing roles in higher education finance. In J.P. Merisolis (ed.) Background Papers and Reports. Washington, D.C.: National Commission on Responsibilities for Financing Postsecondary Education, 1993.
- Leslie, L. L., and P. T. Brinkman. The Economic Value of Higher Education. San Francisco: Jossey-Bass, 1988.
- Lewis, G. L. Trends in student aid: 1962-63 to 1988-89. Research in Higher Education 30 (1989), 547-562.

- Longstreet, W. S. Action research: a paradigm. The Educational Forum (Winter 1982), 135-158.
- Lyn, D.S., St. John, E.P., and Starkey, J.B. The influence of living costs on persistence. Presented at the NASSGP/NCHELP Research Network Meeting, San Francisco, 1994.
- McPherson, M. S. The demand for higher education. In Public Policy and Private Higher Education, edited by D. W. Breneman and C. E. Finn, Jr., pp. 143-196. Washington, D. C.: Brookings Institution, 1978.
- McPherson, M. S., and M. O. Schapiro. Keeping College Affordable: Government and Equal Opportunity. Washington, D.C.: The Brookings Institution, 1991.
- National Commission on the Financing of Postsecondary Education. Financing Postsecondary Education in the United States. Washington, D.C.: Government Printing Office, 1973.
- National Institute of Independent Colleges and Universities. The Truth About Costs in the Independent Sector of Higher Education. Washington, D.C.: NIICU, 1987.
- Pascarella, E.T., and Terenzini, P.T. How College Affects Students. San Francisco: Jossey-Bass, 1991.
- Putka, G. Tracking tuition: why college fees are rising so rapidly. Wall Street Journal (1987, 11 December), p. 27.
- Radner, R., and L. S. Miller. Demand and Supply in U.S. Higher Education. New York: McGraw-Hill, 1975.

Rothman, M. Moving beyond the pricing spiral: The Mills College experience. Presented at the Association for Institutional Research Forum, 1994.

St. John, E. P. Price response in enrollment decisions: an analysis of the high school and beyond sophomore cohort." Research in Higher Education 31 (2) (1990a), 161-176.

_____. Price response in persistence decisions: an analysis of the high school and beyond senior cohort." Research in Higher Education 31 (4) (1990), 387-403.

_____. A framework for reexamining state resource management in higher education. Journal of Higher Education 62 (1991), 263-287.

_____. Changes in institutional pricing behavior during the 1980s: An analysis of selected case studies. Journal of Higher Education 64 (1992): 676-695.

_____. Untangling the web: using price-response measures in enrollment projections. Journal of Higher Education (1993).

_____. Assessing tuition and student aid strategies: using price-response measures to simulate pricing alternatives." Research in Higher Education 34(3) (1994): 301-334.

_____. Prices, Productivity, and Investment: Rethinking Financial Strategy in Higher Education. ASHE/ERIC Higher Education Study (in press).

St. John, E. P., J. Oescher, and S. C. Andrieu. Price response

in within-year persistence by traditional college-age students in four-year colleges. Journal of Student Financial Aid, 22 (1992), 27-38.

St. John, E. P., and J. B. Starkey. An alternative to net price: assessing the effects of price and price subsidies on within-year persistence. Journal of Student Financial Aid, in press.

Somers, P.A. A Cooperative approach to institutional research. Presented at the Association for Institutional Research Forum, New Orleans, LA, 1994.

Somers, P.A. A Dynamic Analysis of Student Matriculation Decisions. Unpublished dissertation, University of New Orleans, 1992.

Somers, P.A., and St. John, E.P. Assessing the impact of financial aid on enrollment decisions. Journal of Student Financial Aid 23(3) (1993): 7-12.

Somers, P.A., and St. John, E.P. The influence of student aid on first-time enrollment: A comparative study. Presented at the NASSGP/NCHELP Research Network Meeting, 1994.

Stage, F.K., and Hossler, D. Differences in family influence on college attendance plans for male and female ninth graders. Research in Higher Education, 30 (3) (1989), 301-15.

State Higher Education Executive Officers Committee on College Costs (SHEEO). Report on the Costs of College to Students. Denver, CO: SHEEO, 1988.

Trammel, M.L. Using national price response measures to estimate the effects of mid-year price changes. Presented at the Association for Institutional Research Forum, New Orleans, 1994.