EDITORS' NOTES

Education is a unique field in that researchers borrow heavily from many different academic disciplines when conducting their work. A quick glance at the faculty in many education departments would reveal individuals who were trained in such diverse fields as law, sociology, anthropology, business, philosophy, psychology, and history, to name only a few. This is largely a result of the many different types of problems and issues that researchers are confronted with in the education arena.

One area in particular that has the potential to greatly inform our understanding of higher education, and hence institutional research, is the field of economics. People often make the mistake of equating economics with business-related professional disciplines such as finance and accounting, which limits their view on the utility of economics for examining education issues. Economics, however, is a much broader discipline that focuses on any type of problem where entities must make decisions about what to do in the face of constraints on their resources such as time and income. Microeconomics is typically divided into two main areas: how individuals make decisions and how organizations make decisions.

Viewed in this way, there are potentially many different education problems to which economic principles can be applied. Economists look at institutions of higher education as organizations that have to make decisions about which students to enroll, how many students to enroll, how much to pay faculty, and so on. Their decisions are affected by the fact that space is required to accommodate students and revenues are needed to pay faculty. Similarly, students are individuals who must decide whether and how much higher education to obtain, where to receive their education, what courses to take, how much effort to put forth in each class, whether they should stay at their chosen institution or transfer, and how long they should take to complete their studies. Students are constrained, however, in terms of the time that they can devote to education and their ability to pay for it. Faculty are also looked at by economists as individuals who must make decisions about where to work and how to allocate their time between research, teaching, and service.

In this volume of *New Directions for Institutional Research,* we provide an overview of the many ways that economic concepts, models, and methods have been, and can be, applied to higher education problems encountered in institutional research (IR). The volume authors are uniquely qualified to provide this perspective because they are all higher education

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researchers who have received graduate training in economics. In addition, collectively they have substantial experience working directly in IR and thus can appreciate the possible connections between IR work and economics. Throughout the volume, we sought to limit the use of mathematics and equations in presenting economic concepts relevant to IR. Nonetheless, when this could not be avoided, care was taken to provide the intuition behind the approaches being used.

As with any other academic discipline, economics has its own language and ways of approaching problems. Terms such as *opportunity costs, demand, supply, prices, subsidies, marginal costs* and *marginal benefits, comparative statics, constraints, externalities,* and so on have specific meanings to economists and yet are often vague and confusing to noneconomists. Economists also rely heavily on higher-level mathematics including calculus, linear algebra, and statistics in their work. Sometimes these aspects of the field make it difficult for noneconomists to understand and appreciate the methods that economists use. To help in this regard, in the first chapter, Michael Paulsen and Robert Toutkoushian provide an overview of key economic concepts, theories, models, and methods that are useful for understanding the material to be presented in subsequent chapters. Chapter One also presents some of the fundamental and essential concepts and models that are used throughout several of the following chapters. For example, the chapters on higher education revenues (Chapter Two), enrollment management (Chapter Four), and faculty (Chapter Five) all rely heavily on the notion of a demand curve.

In Chapter Two, John Cheslock discusses how economists view the revenues of an institution and how this understanding can be useful for institutional researchers. The federal government recently changed its accounting standards for public institutions to mirror the standards that private institutions use. One of the main changes is to report information on net tuition revenue as compared to gross tuition revenue. This change followed from discussions as to whether the dollars previously categorized as scholarship and fellowship expenditures were truly expenditures or actually a discount on revenues. Chapter Two covers the revenue sources for institutions of higher education and relates these to theories of pricing and institutional behavior.

In particular, Cheslock discusses the important role that subsidies play in higher education finance. Both public and private institutions are highly dependent on subsidies—that is, revenues from various nontuition sources—to help cover some portion of the cost of delivering educational services. In the public sector, states have traditionally provided the largest subsidies in the form of state appropriations. Private institutions, in contrast, rely more heavily on private gifts, grants and contracts, and endowment earnings to help subsidize or offset the costs of providing education. In each instance, the price charged to students in the form of tuition and fees can be thought of as the cost of providing education minus the per-

student subsidy from all sources. This economic conceptualization of the relationship among costs, subsidies, and tuition is a particularly useful framework for institutional researchers to understand when they are engaged in discussions with administrators and policymakers about the cause of rising tuition rates, and how to construct performance indicators relating to efficiency.

In Chapter Three on higher education costs, Paul Brinkman focuses on the cost side of the higher education enterprise, that is, how an economist explains the costs that colleges and universities incur in order to provide educational services. As he notes, institutional researchers are uniquely positioned to provide administrators with an understanding of the costs of providing education due to their positions in the administrative hierarchy and their frequent interaction with raw data and data reporting on cost issues for the institution. The economics of costs go well beyond the counting and reporting of expenditures, however, and it is here that significant value added is possible through application of an economic lens. For example, in discussions we have had with administrators, we have found that when they are asked a question like, "How much would it cost to enroll an additional student?" not uncommonly they answer that it was the average cost. However, the marginal cost is a much better construct to use for representing this additional cost; the reason is that many costs, such as library expenditures and administration costs, do not have to increase proportionately when an additional student is enrolled. This distinction can be significant for policymakers to understand, and by applying economic concepts to their work, institutional researchers can help in this regard. Chapter Three addresses the different types of costs in the delivery of higher education services and how economic concepts can be used to understand them. Throughout the chapter, Brinkman relates these concepts and IR to the type of information administrators need.

In Chapter Four, Stephen DesJardins and Allison Bell extend the discussion of revenues from Chapter Two to look specifically at how economic concepts are related to, and usefully applied in, the effective performance of enrollment management tasks. Enrollment management has clearly become a big business within higher education, and institutional researchers are often called on to contribute to their institution's enrollment management efforts or perhaps serve as the enrollment management office. The success or failure of enrollment management efforts can have significant ramifications for an institution, particularly those that are more heavily reliant on tuition revenue to fund their operations. DesJardins and Bell describe how the economic concept of elasticity is a central part of effective enrollment management. They end with a discussion of the economics of price discrimination and how this is used in enrollment management decisions relating to financial aid offers.

In Chapter Five, Robert Toutkoushian focuses on how economic concepts can be applied to labor market issues for faculty. Institutional

researchers are often called on to work with data on faculty and report them in various forms to internal and external audiences. Features of the academic labor market, such as pay differences for faculty in the finance department versus faculty in the history department, can be better understood through the application of economic concepts and models. The chapter begins with a discussion of the four types of activities that institutional researchers perform with regard to faculty. Toutkoushian then examines how economists describe the decision-making process faculty use for allocating their time between activities such as work versus other activities and teaching versus research. This discussion is followed by an explanation of the labor market for faculty and how the forces of supply and demand can affect many of the data elements that institutional researchers observe relating to faculty. The chapter concludes with a focus on the issues surrounding part-time and full-time faculty. This portion builds on work that Toutkoushian has previously conducted to examine how supply and demand factors influence the higher concentration of women among part-time faculty.

Finally, in the concluding chapter, Michael Paulsen and Robert Toutkoushian briefly review the key contributions of economics to IR in the past and the present and then provide some examples and recommendations for expanding the connections between economics and IR through new or extended uses of public sector economics in future IR applications.

Collectively, we hope that these chapters will serve as a solid introduction to economics for institutional researchers, administrators, and other higher education scholars and practitioners who are not trained economists and yet would like to know how certain key economic concepts and theories can be used to enhance their work.

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