Building human capital in the labor economics course

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Labor economics is a course that can engage students, is relevant to their everyday lives, and provides an ideal setting in which to apply key economic principles. Despite its importance and the interesting topics addressed—earnings, employment, education, discrimination, to name just a few—the labor economics course often fails to provide an enjoyable experience for students. Failure is not inevitable, but making the course a rewarding experience requires effort and a bit of imagination.

It is argued in this chapter that a successful course should not march through or be bound by a textbook. Nor do instructors need to reduce human behavior to some ultrarational form not recognized by any student who has had a job. Course content ought not be determined by what is easily tested using multiple-choice, computational, and graphical questions. What I do recommend is that instructors adopt a broad organizing framework that will accommodate most course material and provide students with simple but important “take-away” concepts. Learning requires students not only to attend and listen in class, but to read, write, and question. Students understandably desire certainty and want to “know answers.” Instructors can provide students with certainty about the structure and expectations of a course, but at the same time make clear that answers absent qualification are rarely good answers. Students need to embrace some degree of complexity and ambiguity, not with frustration but with curiosity and at least a little enthusiasm.

In what follows I develop these themes, first by showing how the labor economics course can be organized around a flexible demand-supply framework, second by suggesting emphasis on important but simple-to-learn “take-away” concepts, and finally by offering my views on how a course might be taught. Although there is some discussion of pedagogy, emphasis is given to course content. As may already be evident, the tone of this chapter is “personal” in that it describes how I think it best to teach a course based on my values and experience. Although the focus is on undergraduate labor economics, some if not all of the discussion can be applied to graduate courses.

AN ORGANIZING FRAMEWORK FOR LABOR ECONOMICS

In this section it is argued that the labor economics course is enhanced by adopting a unified organizing framework from which one can develop key themes and create clear-cut links to other economics courses. My preference for the labor course is that it be organized around the demand-supply (DS) framework, wage and employment determination, and allocation of labor resources. An alternative organizing framework is the principle of time use, discussed briefly at the end of this section.
Why the Demand-Supply (DS) Framework?

A succinct description of labor economics is that it is “the study of wage and employment determination in labor markets.” This description has two attractive attributes. First, it is a simple definition that is also comprehensive, being sufficiently broad to encompass most topics and approaches in a labor economics course. Second, because “wages” and “employment” correspond to price and quantity outcomes determined (largely) through labor demand and supply forces, this description implicitly identifies the demand-supply approach as the core organizing framework for the course.

I recommend organizing the labor course around the DS framework for several reasons. First, the framework provides a valuable approach to understanding some of the most important determinants of wages, hours, employment, and the distribution of earnings. The competitive demand-supply model ought not be presented as “truth”—that is, as a mechanical determinant of labor outcomes. But it does provide instructors with a coherent way to frame discussion of the labor market. Regardless of whether an instructor has “tight” or “loose” priors about the competitive model (Reder, 1982), a good labor economics course requires that students develop an understanding of how labor demand and supply influence wages and employment.

A second reason to emphasize (and test) the DS framework is that it is necessary to do so. Although (nearly) all students in a labor economics course have taken a principles course, principles texts relegate labor markets to the end of the micro course and most instructors spend little or no time on the subject. Absent guidance, even students with a good understanding of the DS framework as applied to product markets will have difficulty extending this framework and its principles to labor markets. Such guidance can be provided early in the labor economics course.

Of course many students will not have developed or retained a good understanding of the DS framework in micro principles. Thus, a third reason to emphasize it in the labor course is that it explicitly reinforces what students have or should have learned previously and ties this directly to what they now need to know. Making explicit the links between micro principles and labor economics establishes in students’ minds the belief that what they learn in their courses is broadly applicable and that there is logic to economics and the economics curriculum.

Applying the Demand-Supply Framework to Labor Markets

In this section I identify and discuss examples of how the DS framework can be used to understand wage and employment determination, teach key economic concepts, and tie together micro principles and the labor course. Familiar concepts include shifts versus movements along D&S curves and short versus long run. Fundamental but less familiar concepts are (a) a parallel between product market economic profits/losses and the determination of equalizing (or equilibrium) wage differentials and (b) how the invisible hand narrative regarding efficient resource allocation applies in labor markets. Additional applications are briefly discussed.

It is important to provide a quick overview of demand and supply in the labor market at the start of the course. This provides students with a look at where they are headed and establishes links between what they have seen applied in product markets with
what they will be using to understand labor markets. Even elementary discussion of the demand and supply axis labels will be informative. Labor “quantity” is measured on the horizontal axis, but during the course it will sometimes refer to individual work hours, sometimes to employment in a homogeneous market (say, workers in some occupation and skill level in a metropolitan area), and sometimes to aggregate employment as seen in the macro principles course. Labor “price” is shown on the vertical axis and designated by $W$, which reflects both wage and non-wage compensation. A wage for labor services differs from a product market purchase price. Purchase of, say, a hamburger provides the buyer with ownership rights and broad discretion in use of the burger, short of harming others. In the labor market, that is called slavery. The wage is best thought of as a contractual price for labor services. Individuals retain ownership rights to their stock of human capital, which affects the willingness of individuals and firms to invest in skill acquisition.

All students will recall that the distinction between shifts and movements along demand and supply curves largely determined their first exam grade in micro principles. Emphasizing this distinction early in the labor course may not excite students, but it will capture their attention. Instructors know this drill well. Changes in the wage represent movements along demand or supply. Shift factors for labor demand include output $q$, which enables the instructor to emphasize that labor demand is derived demand, and the price of other factors (not only capital but other labor, so that early in the course one introduces capital-labor and labor-labor substitution). For supply, shift factors can include wages in other markets (occupations and/or location), costs of acquiring the appropriate skills, attractiveness of the job, and population size. A homework assignment or in-class exercise can reinforce this basic theory.2

Perhaps the most fundamental topic tying labor economics to micro principles is determination of equilibrium wage differentials, requiring discussion of resource movement, the invisible hand, and economic efficiency.3 Addressing the important question of “why wages differ” parallels the approach students have seen when learning about the competitive equilibrium in product markets. First, one differentiates short- and long-run time horizons, the latter being the time period over which individuals can acquire training and move to alternative markets. Long-run wage differentials in competitive labor markets (say, for occupations by metropolitan area) result from labor supply shifts that reflect the costs of acquiring skills and from the utility or disutility associated with working conditions or other attributes tied to a job and location (workplace safety, income and employment risk, location, timing of work, etc.). If individuals had identical preferences, natural abilities, and opportunities, long-run labor supply curves would be horizontal, everyone requiring the same equilibrium differential for any given job/location. Differences in preferences, ability, and opportunities create upward-sloping supply curves. For example, some persons would be willing to acquire the skills to be an accountant for $30,000 a year even though most others will not or cannot do so at $60,000. In this way, long-run equilibrium wage differentials across individuals and jobs are determined by the interaction of labor demand and labor supply.

For students, the most engaging portion of this narrative concerns efficiency and the invisible hand. Technology and other determinants of labor demand and supply constantly change so that one is always groping toward but never arriving at long-run equilibrium. Long-run adjustments in labor markets require the acquisition of new
sets of skills (whose principal cost is time) and moving to new locations. At any point in time, workers in some occupations and locations earn wages above their long-run opportunity costs; that is, above-normal returns or “economic profits” on their human capital and location investments. Others (including the unemployed) are earning below normal returns (suffering “losses”). Just as in product markets, economic “profits” and “losses” signal resource movement. Individuals, particularly the young, will train for (via decisions on college-going, area of study, occupation, etc.) and move to markets with good wage and employment opportunities. This process continues until above-normal returns are squeezed out. In occupations and locations where wage and employment opportunities are poor, there is exit among some existing workers and fewer persons train for or move to these jobs/locations. Such decisions eventually lead to normal returns on workers’ human capital investments and, in some cases, the disappearance or near extinction of some occupations, industries, and job locations. This is the invisible hand at work in labor markets, automatically attracting (decreasing) human resources in those activities and locations where they are most (least) highly valued. More so than in product markets, the labor adjustment process requires time and can be accompanied by considerable social costs such as long-term unemployment and income loss.4

There are numerous other but less fundamental DS applications that instructors can teach. Obvious examples are use of the DS framework coupled with discussion of elasticities to examine the predicted employment effects of minimum wages and the effects of immigration on wages and employment. Although the basic analysis is simple, the small employment effects associated with minimum wages and modest effects on low-skill wages resulting from immigration require that instructors stress that each of these applications involves more than just movements along static labor demand curves. A DS application that is valuable but requires some time is payroll tax incidence and the effects of mandated benefits on wages, employment, and efficiency (Summers, 1989).

For instructors who discuss earnings inequality, a “suspect list” for rising inequality can be organized into demand, supply, and institutional factors. Leading suspects include (a) demand shifts due to skill-biased technical change – the job task SBTC associated with Autor et al. (2003); (b) slow growth in the supply of college graduates relative to demand (losing the “race” between education and technology); (c) demand shifts from increasing trade and globalization; (d) supply shifts from immigration affecting the lower tail of the wage distribution; (e) declining real minimum wages, particularly during the 1980s; and (f) declining private sector unionization, the link being that unions compress wages across and within job positions.

Although I recommend the DS model as the organizing framework for most labor economics courses, a time use/labor supply approach provides an alternative framework for courses populated primarily by economics majors, especially if intermediate micro is a prerequisite. Such a course would make heavy use of indifference curve analysis to address labor supply topics such as labor force participation, hours worked, time spent in home production and leisure, the effects of government policies and programs on labor supply, retirement decisions, household formation, and the changing roles of women and men (for example, age at first marriage, fertility, production specialization versus consumption complementarities in households, women’s catch-up and subsequent overtaking of men in college-going, and the gender wage gap). My reluctance to adopt this
approach is that, for most undergraduate students, mastering indifference curve analysis requires a substantial time investment in and outside the classroom, crowding out topics and analyses that are arguably more valuable. Most of the topics mentioned above can be adequately addressed absent mastery of indifference curve analysis and identification of income and substitution effects. Heavy reliance on indifference curve analysis provides an easy way to test and sort students based on ability. It may be less effective in enhancing students’ knowledge and understanding of labor markets.

‘TAKE-AWAY’ CONCEPTS STUDENTS WILL RETAIN FROM YOUR COURSE

It is difficult to know what students take away from a course. Nonetheless, it is essential to identify key concepts that are important, easy to learn, and likely to be retained by students. Concepts in the principles course such as opportunity costs and gains from trade stick with students, even if the subtleties of comparative advantage are not fully comprehended. In this section, “take-away” concepts for labor economics students are identified. The first three are important, simple, and require little class time, while the latter two are more complex. Some of these concepts are obvious once understood, but are not so widely appreciated. The list below is intended to be illustrative and not definitive.

The Principal Cost of Human Capital is Time

Labor courses rightly emphasize the importance of human capital. I stress that acquiring skills typically involves learning-by-doing and requires time, with few available shortcuts. Information or society’s stock of knowledge is a readily available non-rival good, all the more so following growth of the Internet. Although abundant information is freely available (think MIT class lectures online), understanding such information (that is, adding to one’s human capital) is difficult, requiring a lot of time and hard work. One reason to stress this simple point is that it is important and likely to stick. A second is that your students are put on alert that learning and a good return on their college education requires considerable time and effort in and out of class.

The Principal Source of “Wealth” is Human Capital

Wealth is generally measured by the stock of financial assets. Asset wealth is very unequally distributed, with the top 1 percent of households holding most wealth and a large share of households having close to zero or negative wealth. The principal source of “wealth” for virtually all students and their instructors, however, will be their embedded stock of human capital. It is their knowledge, skills, motivation, and lifelong learning that will enable them (at least on average) to generate a reasonably good stream of income over their lives. The good news is that the distribution of human capital (and resulting earnings) is far more equally distributed than is asset wealth. Persons with a large amount of asset wealth cannot easily increase their human capital since they face the same time constraint as do you and your students.⁵
Jobs are Not Fixed and Worker Flows are Large

A natural inclination is to view the labor market as static with a fixed set of jobs in number and type (occupation/industry). Such a view leads to misleading conclusions. Immigrants working in the US displace natives on a one-for-one basis. Delayed retirement by older workers decreases employment of younger workers by roughly equivalent amounts. Entry of women into the labor force in the 1970s and 1980s necessarily decreased the employment of men. Technology that largely eliminates some occupations, say telephone operators, type setters, bank tellers, and reservation agents, decreases total employment. And in months when total employment is largely unchanged, few new jobs have been created and few lost. Each of the above statements is incorrect.

I emphasize that labor markets are dynamic, with large flows of jobs destroyed and created. If wages are reasonably flexible, the number of jobs roughly expands to the size of the labor force. Entry of women into the labor market in the 1970s and immigrants in the 1990s and 2000s was associated with large increases in employment (jobs) and not wide-scale unemployment. In any given month, including one with little net change in employment, there are several hundred thousand jobs lost (destroyed) and several hundred thousand created. The most notable feature of the US job market is the degree of churning, with immense numbers of jobs destroyed in good times and new jobs created in bad times. This is Schumpeter’s “creative destruction” at work.6

Micromotives and Macrobehavior: An Application to Discrimination

An important theme in economics, widely associated with Nobel laureate Thomas Schelling (1978), is that it is often difficult to infer individual preferences based on aggregate outcomes or to infer aggregate outcomes based on individual preferences. Schelling’s famous example is neighborhood segregation. He shows that even with relatively weak preferences about the race of neighbors, complete segregation often occurs and neighborhoods can “tip” from all white to all black, or vice-versa. Absent knowledge of the choice mechanism (that is, absent an appropriate model), one is likely to infer (incorrectly) that highly segregated neighborhoods result from strong racial preferences.7

Gary Becker’s taste theory of discrimination provides a vehicle showing the potential disconnect between micromotives and macrobehavior. His employer taste model predicts that there cannot be wage differences for similarly productive white and black workers if employers maximize profits. If there were, employers would increase (decrease) hiring of black (white) workers until there was no difference. In a competitive environment, profit maximization trumps prejudice. Although the macro outcome is the absence of market wage discrimination, it may be wrong to infer that employers do not have or act on their discriminatory tastes (micromotives). As racial wage gaps between workers become small, it is no longer costly for employers to act on their prejudice, so many will discriminate in hiring. The market equilibrium is one in which the many non-discriminating employers (relative to the pool of black workers) employ black workers at wages similar to white workers. Prejudiced employers discriminate in hiring without cost. Absent theory, one cannot readily infer micromotives based on the market outcome nor predict the macro outcome based on knowledge of micromotives.

The scenario described above is not just theoretical. Two distinct empirical literatures
on discrimination appear to produce inconsistent conclusions. “Audit” studies send out “equivalent” black and white job applicants (or applicants for mortgages or apartments). The general finding is that black applicants receive fewer job offers than white applicants (offer rates are low for both groups). Such evidence offers clear-cut evidence of hiring discrimination. Yet a large literature on wage differences concludes that racial wage gaps are small (not zero) in studies with detailed controls for skill. The Becker model reconciles these seemingly inconsistent results. Incidents of discriminatory hiring may be widespread, but such discrimination need not produce large wage differentials given sufficiently large numbers of non-discriminating, profit-maximizing employers.

Applications of General versus Specific Human Capital

An easy concept for students to learn and remember is general (transferable) versus firm-specific (non-transferable) skills. The general-specific distinction is used to examine who bears the cost of training, how wages rise with experience and diverge from marginal revenue products, and the implications for hiring, labor hoarding, and layoffs in response to demand shocks. Two simple applications increase the odds that students will continue to apply this concept following graduation. Students are concerned about jobs following graduation and sometimes ask for advice. In class I advise students to avoid placing undue weight on salary offers and instead consider (a) whether skills they will acquire will be transferable and (b) the extent to which their training will lead to future wage growth and interesting employment opportunities. Students instantly understand the logic of such advice. They need to be reminded that this is an application of Becker’s theory of human capital. A second application works best for classes that include older students, many of whom have tuition paid by their employer, seemingly at odds with Becker’s theory wherein employers do not bear general training costs. Discussing when and why employers “pay” tuition for general training engages students and provides a nuanced application of Becker’s theory (Acemoglu and Pischke, 1998).8

In short, there are numerous “take-away” concepts that are valuable and easy-to-learn. Instructors who look for them will find them.

MAKING THE COURSE A GOOD LEARNING EXPERIENCE

This chapter focuses more on course content than teaching methods. Many methods work just fine, if executed well. All require preparation. Several features of my labor economics course are discussed below.

Labor Market Overview

After reviewing the course syllabus, the first class period is devoted to a survey of “important features of the labor market.” Among the broad headings are: employment statistics; dynamic labor markets; earnings and productivity; changes in labor force composition (gender, education, age, foreign-born); technology and sectoral job change (occupation, industry, location); non-wage compensation; earnings inequality; decline of private sector unionism; unemployment; labor regulation; and competition and glo-
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balization in product and labor markets. This overview whets students’ appetite for what will follow, informs students about important course topics and labor markets features, and lets students know that we will make good use of scarce class time.

Beyond Textbooks

As a student I was often excited by something I read, but I don’t recall that “something” ever being a textbook. Textbooks are arguably necessary for the undergraduate course, but instructors can design their own courses and need not march lockstep through a text. Students need to be exposed to varied and compelling narratives that can excite them about issues or the value (and limitations) of economics. My course syllabus includes timely news articles, plus engaging and accessible research articles from the *Journal of Economic Perspectives* (and elsewhere). The latter can be explored by students or used for papers. Students write brief summaries of selected articles. These articles excite students in ways difficult to predict in advance.

Class Assignments and Expectations

Learning is not a passive endeavor; student assignments and classroom interaction are essential. I frequently hand out “queries” at the beginning or end of class. Each asks a question about material we will discuss that class period or next. Students receive credit if they complete a query and their completion tally for the semester contributes to their participation grade. Query topics are typically tested on exams. Queries increase attendance and are an effective learning device. Having thought about a question, students are engaged when it is discussed. Students like being rewarded for attending class and find queries a painless way to learn. Students also receive participation credit when they attend and provide a write-up for designated speakers or when they provide write-ups for articles discussed in class. Although not graded, most students are surprisingly conscientious.

Labor economics students have varying backgrounds and diverse interests and expectations. Many are not economics majors. Intermediate micro is often not a prerequisite for the labor course. Compared to economics majors, business students prefer a course emphasizing personnel economics topics. Social science majors outside economics often prefer a policy-oriented course. Fortunately, labor economics has plenty to offer each type of student. Instructors can select topics and fashion an approach that caters to students’ interests, while still teaching the core principles.

What to Teach and Test?

Economists understand tradeoffs. In all courses instructors must consider the tradeoff between breadth of topics and depth of analysis. It is essential to touch on key insights for the principal topics that make up labor economics. Substantial depth for selected topics, however, is equally important. Concepts and knowledge learned deeply are the ones retained. Time is fixed, but emphasizing important concepts that are quickly learned provides students with a mix of breadth and depth.

What is emphasized in courses is often what is easy to test. These include concepts
readily tested by multiple-choice or knowledge that can be graphically displayed and quickly graded (say labor supply income and substitution effects). Time required for grading is a legitimate concern. And sorting students by grade will differ little using time-intensive versus easy-to-grade exams. But the chief responsibility of instructors is not student sorting (although this is necessary), but to enhance students’ skills, knowledge, and future ability to learn. Among the many paths to such ends, multiple-choice testing cannot rank high. An effective teacher thinks carefully about what students should take away from a course, designs assignments that enhance such skills, and relies on “best-to-learn” rather than “easy-to-grade” evaluation methods.

Certainty or Ambiguity?

Students crave certainty. They like questions with clear-cut answers and teachers who extol the power of economics. But there is value in ambiguity, particularly so in labor economics where actual workplaces look so different from those emanating from frictionless market models. The competitive DS framework helps tell the “big story” and is necessary for understanding labor markets, but not sufficient. For most questions, it is essential to discuss institutions, market imperfections, and behavioral proclivities. Students can appreciate the value of the big-picture DS framework while realizing that deeper understanding requires more knowledge and imagination. Economists know that textbook models are often inadequate to handle the questions at hand. We should not keep this a secret from our students.

Although most students prefer certainty over ambiguity, an instructor providing students with a false sense of understanding does them no favor. Students need to know that some economists and many non-economists approach questions and see the world differently. I am bothered that professors in other fields often bad-mouth economics (and economists) in their classes. I am equally offended when economists disparage other disciplines. The best scholars in other fields are neither stupid nor fools. Some economists are. One can (rightly) emphasize the substantial contribution and power of the economic approach and at the same time make students aware of its limitations and the existence of different perspectives.

AFTERWORD

Economists, particularly labor economists, like evidence. In this chapter, I have discussed the content and approach taken in my courses. But does it work? Based on teaching evaluation scores and student comments, anecdotes, and (most important) knowledge demonstrated by students, I think my approach is a reasonable one. But there is no systematic evidence comparing my approach with other possible ones. My courses are typically less technical and problem-oriented than those of colleagues, but they are perceived as difficult and demanding by students. I never want to disappoint my best students. I make sure that bright and intellectually curious students enjoy and are challenged in the course. These are students that flourish on (or at least tolerate) nuance, uncertainty, puzzles, and alternative perspectives. Not all students appreciate this approach, but I think (or want to think) that most do.
While it is essential that one’s best students are challenged, it is equally important that all conscientious students learn and be rewarded for their efforts. Weaker students may benefit little from approaches that provide high value added for better students. So it is important that one present, test, and reward learning of simple, core concepts in the course.11

Labor economists know, perhaps better than anyone, that human capital (interpreted broadly) is our greatest source of wealth and that learning begets learning. My choices on content and teaching methods are determined by my asking the question: “What material and methods best enable students to learn now and in the future?” Instructors who ask and carefully consider this question will not respond with the same set of answers I provide in this chapter, but they are likely to produce a labor economics course that has high value added for their students.

NOTES

1. Labor chapters in many principles texts are rather mechanical and disappointing, failing to provide the big picture regarding relative wage determination and the invisible hand in the labor market.
2. An overview of labor demand and supply is not routinely included in the introductory chapters of most labor texts.
3. I use the terms equilibrium, equalizing, and compensating wage differentials interchangeably. It’s instructive to explain to students how each term applies.
4. When my younger son was in eighth grade, he had a career day homework assignment that asked him to identify an occupation that he might pursue. Because he knew that my work had something vaguely to do with jobs, he innocently asked: “Dad, what type of job pays well, would be a lot of fun, and does not require you to go to school forever?” Using the logic of Adam Smith, I carefully explained why no such job should exist. He regarded my answer as a thinly disguised refusal to help him with his homework.
5. Becker makes this point in his 1967 Woytinsky lecture (Becker, 1975). Of course, the very wealthy can hire employees rich in human capital.
6. A simple exercise is to go back fifty years to the 1960 Census and compare large industries and occupations then with those today. Some of the older jobs now barely exist, while some important jobs today did not exist in 1960.
7. Economics is often distinguished from other social sciences in that it not only develops models that specify the motives and behavior of individual actors (individuals, firms, etc.), but also model how the actors interact in markets and what equilibrium outcomes arise.
8. A third application informed by the general/specific distinction is to discuss why some companies choose to hire from within and create internal job ladders rather than hire externally.
9. Queries ask questions of the following type. (1) If the wage on your current job doubles, would you choose to work fewer, the same, or more hours per week? Explain? (2) If you are an employer searching for new hires, will you rely on referrals from current employees? Why or why not?
10. If an instructor must use multiple choice questions, take the time to make them good and avoid reliance on test banks. Test banks are often poorly written, provide answers that are sometimes wrong or ambiguous, and often emphasize topics for which it is easiest to write questions rather than there which are most important.
11. Lazear (2006) provides a model in which for “high cost” learners teachers announce the exact requirements in order to concentrate student effort (study to the test), insuring that something is learned. For more able students, an “amorphous” standard, say a lengthy syllabus and vagueness about what will be tested, produces superior learning.

REFERENCES


