

College Graduates -- Labor Markets:
Dancing on the Edge of Chaos

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Change is all around us! Since the mid 80's, in particular, economic restructuring has occurred at a rapid pace. We can hardly miss the news reports, the political debates and the corporate struggles. In fact, many of us have more than read about these changes; we have lived them. Whether prowling the halls of Congress and government agencies in Washington D.C., counseling displaced workers, coaching new graduates, or making adjustments in our own sails, the changes have and will continue to roll upon us. We each have our own view on how these changes influence us individually and as a society. In the few moments I have with you today, I would like to share my thoughts on how these changes have affected college graduates and the pressing need for better labor market information, even as the processes and structures continue to evolve.

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Our economic structure, now being labeled the boundaryless organization, provides new insights to global competitiveness, to gaining market shares and to uphold the enlightened principles of total quality management. In the process the hierarchical structure that was appropriate for the production processes of the 1920s to 1960s was smashed; replaced by clusters of small organizations. Reich use of the web as a symbol of the new emerging structure is appealing because it lends itself to a dynamic depiction of the environment. A web holds together a system of nodes through fine filaments which can be simple to quite elaborate. Webs are respun daily and never look the same. In a dynamic system nodes can be attached to multiple webs. In other words you have this kaleidoscope of evolving, complex systems that to the outsider look chaotic and unfriendly.

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At the same time, the workplace has begun to undergo alterations in expectations and labor contracts. Employment has historically been built upon loyalty (long periods of service) in return for annual pay increases, hierarchical career movement, consistency in job tasks, individual work assignments, annual (if ever) performance review, and supervisor management. This entire contract with labor from blue collar to clerical through management is being rewritten daily. Today loyalty and long time service is out; instead employees are valued for their knowledge and skills, pay is based on performance and skill acquisition, autonomous teamwork replaces single function assignments, and performance evaluations are given instantaneously. For the individual, periodic movement to new organizations while be required to improve one's position; accompanying these movements will be periods of unemployment. Unemployment will take on a much more positive connotation as these lulls will allow a person to appraise skills and prepare for the next transition.

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Thus, both the structure of organizations and the structure of the workplace can be viewed as nonlinear, or what has been dubbed the edge of chaos. For college students emerging from a highly

linear educational system; being advised by a placement system still clinging to the good days made possible by the large hierarchical organizations; and having been counseled with career strategies that are based on stage models that no longer exist (today many people with multiple years of work experience are at the same stage as new college graduates). The conflict stems from the clash between antiquated hierarchical thinking and non-linear systems in place today.

Challenges

The transition into the workplace has become the major challenge for college graduates (any worker for that matter). With the Fortune 500 only hiring the minimal number of replacements as possible (actually have not increased hiring since 1979), students are stymied because the traditional doors they have passed through are now only opened to the anointed "stars". Where are the doors into the web? Because webs continually change it is hard to pinpoint where doors are and which doors will open? The challenge for students is to design a road map ^{that directs them toward} to the jobs they desire. This activity no longer requires a national atlas (except for a few truly national colleges and universities) but a set of local maps to labor markets most frequented by graduates from their institutions.

The challenges on assisting student transitions are further complicated by an alternative agenda quickly moving to the forefront on college campuses. This agenda is being driven by a need for institutional accountability as required by accreditation requirements for outcome assessment by regional associations, Student Right to Know legislation, and the Perkins Act. Throw these requirements into the pot, and the need for a better understanding of student transitions from college to work magnifies in intensity.

Information on Student Outcomes

Information about student outcomes flows in from various sources. Primarily it is left up to the individual institutions to track their students. This information can be supplemented by data from agencies such as Bureau of Labor Statistics and National Center for Educational Statistics.

Colleges and universities have no universally accepted rational for collecting outcome information. In some institutions, placement rates, however contrived, are used to sell the college or university to prospective students. Even within an institution departments will market their programs to students based on the success of their graduates in getting a job. At other institutions, follow-up activities are under the supervision of alumni/development offices where the intent is to develop a base of potential donors. A few institutions, a growing number, have housed outcome or follow-up collection in the offices of institutional research with the intent of tying outcomes into

evaluations of curriculum and campus life. Seldom are these intentions merged into one effort; whatever objective takes precedent will influence how the information is collected, analyzed and interpreted. As a result, most follow-up efforts lack a grounding in solid research methodologies and have not gained a vested interest among broad components of campus populations.

Bureau of Labor Statistics provides a broad picture of the employment landscape. However, the information is not consistently provided: there are long gaps between data collection and availability to clients. There are also some problems; principally, the inability of national data (BLS and Census) to acknowledge the existence of the two year college degree. When these group gets merged with "some college" the numbers become meaningless. Probably the biggest difficulty in using federal information stems from the use of occupation rather than academic major. Academic institutions live by their major categories and except where a major has a clear path to an occupation (nursing) the paths are ignored. So what do you do with liberal arts? Federal information implies markets for liberal arts, yet the paths are not clearly articulated. Federal data bases are more useful to general theorists who are building career models because they are not worried about institutional specific aspects of career transitions.

National Center for Educational Statistics provides a real important service by offering longitudinal data bases that can be used to monitor career activities and labor market participation. The new thrust that will revise their current student follow-up survey will be very helpful. Again, similar problems exist with NCES data as with BLS data. It is not specific enough for institutional purposes because it doesn't address the specific labor markets of their students. This data best serve researchers with broader theoretical aspirations.

Data Unto Its Own Island

Out in the sea of labor market information are islands that contain useful information in building a composite picture of labor market activity at the local level. Unfortunately none of it is connected so that an understanding of local labor markets can be obtained. Consider these sources;

1. The University: assume that each university collects follow-up data on its graduates each year. The minimal information collected includes employment status, job title, organization and possibly location. This information can be merged with existing information on students such as academic major, grades, and possibly campus involvement.

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2. Employment Security Commission: collects industry data through 202 reporting system that provides salary and SIC information but does not include occupational data. Occupation can be inferred in some cases from the four digit SIC code. Additional industry is collected every three or four years on occupations in order to make projections on future employment needs. This information can be used to profile occupations within SICs; breakdowns can be provided on certain local labor markets.

While states vary on the type of information collected on labor markets, the description above describes the basic information available in most states and for my purposes in Michigan. Thus, potentially three sets of information exist on separate islands with only the two state employment data bases being connected. The university's data base lack connections to the other two. As a result there is no connection to local labor markets.

Linkages that need to be established must focus on the following set of links:

Academic Major

Occupation

Industry Classification

Labor Market

How these connections become bridges requires coordination between universities and employment security commissions. But initial steps need to be taken by colleges and universities to expand their information on students to match with state labor market data.

Building Bridges

The first step involves overcoming old perceptions about the intentions of state security commissions. Some forty years ago, a plan was devised whereby state employment agencies would operate campus placement offices. This proposal set off a bitter controversy that some have not forgotten. Fortunately, the new actors in these agencies have no memory of these events so the ground is ready for planting new seeds of cooperation.

More problematic are the various intents behind employment security legislation which differ from state to state. In some states it is easier to establish linkages with employment commissions and share data. In others where the legislation is more specific, a number of barriers need to be removed before data can be shared.

Within the university community several activities could be

undertaken:

1. More attention can be given to the type of data that are being collected. While it will depend on the purpose each institution attaches to their follow-up study, more information needs to be available on the labor market paths graduates take.
2. Establish some longitudinal data bases to verify the initially reported data and to determine how active graduates are early in their careers.
3. Solicit cooperation across institutions within a state which would allow for a larger pool of graduates and allow for comparisons across institutions on access to various labor markets.

The public agencies can begin to build bridges from their side by:

1. Opening avenues to share information.
2. Examining ways to present data that are more meaningful to institutions.

Currently, nearly everyone involved in facilitating the transition for college to work is starved for information. Thus, they are likely to use any thing without question. The potential to use erroneous or misleading information is high. This only lends to the frustration of many students looking for employment.

First Steps

An attempt to link academic major, occupation and labor markets was initiated at Michigan State University. Responses to the university's follow-up effort were provided additional codes for the following information: from job title and a description of job responsibilities an OES title; the employing organization's primary SIC code; and the city or county and state of employment. Merged with existing information on the student's academic major and academic performance, work experience, and relatedness of work to major, the information provided insights into the labor market patterns of recent college graduates.

Several problems were encountered, primarily with proper assignation of the OES codes. The job title provided by responses did not always agree with the responsibilities associated with the job. In most of these cases, the job title suggested higher status than the responsibilities implied. The misuse of the word manager or some variation was prolific. Companies with multiple SIC codes also presented problems; for consistency the primary SIC was used.

Several uses of this information are anticipated. First, road

maps into local labor markets frequented by college graduates can be constructed. With enough observations it is possible to eventually go down to the zip code level. For now a county level will suffice. These road maps will assist graduating student in targeting potential employer for jobs.

Second, comparisons can be made to job profiles prepared by state agencies. For example, the Jobs by Industry: An Occupational Guide lists the major industries that employ certain types of people (classified by job title). A similar profile can be developed for recent graduates. Questions can be posed such as: Do recent graduates entire similar jobs within the same mix of industries as the entire population?

The following profiles for selected majors begins to explore the possibilities that these linkages can provide.

Addressing the Future: Emerging Issues

Other issues related to college graduate employment are emerging quickly behind the concerns over labor market entry. The basic issue is jobs, regardless of their location. High school students proceed to college in increasing numbers. (Ironically, while the percentage attending college has increased, the percent completing college--approximately 50%--has not changed.) However, there is a surplus of college graduates. The Bureau of Labor Statistics estimates that 20% of college graduates occupy jobs that do not require a college degree. This percentage is estimated to increase to approximately 30% by the end of the decade. Currently, the situation is more pronounced because of the state of the economy. However, the mismatch will continue as the number of skilled jobs being created does not and probably will not equal the number of educated individuals available in the labor market. ①

Theory and applied aspects of learning are coming into increasing conflict. As major university faculties have become increasingly research oriented, theoretical aspects of academic disciplines are emphasized over application. Engineers are well studied examples. The National Society of Professional Engineers determined that preparing engineers for the real world was a critical problem. Comparable results were found in an Institute study of the early careers of engineers. The distinction has implications for labor markets which are becoming increasingly dominated by small employers. Small employers apparently prefer applied technical skills over theoretical skills. Some balance needs to be achieved whereby students can gain some appreciation for the world they will enter prior to the moment of transition. ②

Technical skill testing is going to become more prominent in recruiting and hiring. Why? Because there is less trust in degrees which don't reflect how well technical skills are known. Industries will develop test that are site specific. These tests will probably not be textbook driven. Thus, recruiters will focus their efforts on non-technical skills, such as teamwork, ③

communication, initiative, and other highly demanded worker characteristics. In the long-run the shift to industry skill testing may mean that academic major becomes irrelevant. A student can major in any discipline yet still be an engineer with the correct acquisition of technical skills.

Probably the most profound implications of the changing economic structure and the shift to locally driven labor markets (at least perceptually) will frame how careers are defined. What does career mean? It use to mean a series of jobs when viewed over time which provided some consistent focused path. What is emerging is a career based on a series of skills. Without the anchors associated with specific jobs, careers can be referred to as boundaryless.

We return to the central theme of this presentation--How to find a job in the web of today's labor market. Because inefficiencies exist in labor market information, it is very important that people plan for their job transitions. It is the lack of career preparation as students that cause most of the problems at the point of transition. Career planning goes beyond occupation information and labor market data. A person can not pick a job (possibly academic major) by reading through starting salary charts or throw darts at the current "what's hot list." Students need to take time to explore who they are before venturing into more concrete labor information.

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