

**The Economy and Higher Education
Forum for the Future of Higher Education**

The Brookings Institution

Washington, DC

February 21, 2014

The Labor Market and Higher Education

Tony Carnevale is Director and Research Professor of the Georgetown University Center on Education and the Workforce. Between 1996 and 2006, Tony Carnevale served as Vice-President for Public Leadership at the Educational Testing Service (ETS). While at ETS, he was appointed by President George Bush to serve on the White House Commission on Technology and Adult Education. Before joining ETS, he was appointed by President Clinton to Chair the National Commission on Employment Policy. He founded the Institute for Workplace Learning (IWL) between 1983 and 1993, and while there was appointed by President Reagan to chair the human resources subcommittee on the White House Commission on Productivity.

Key Observations

The government is systematically disinvesting in the young and systematically

investing more in consumption by older generations. This will be change.

After the 1980, 1981 recession, the economy began to restructure radically and very rapidly. The wage premium of college graduates over high school graduates began to rise rapidly and steeply.

The economy now requires higher education or post-secondary education to ensure entry into the middle class.

More and more higher education is about employability, about whether the post-secondary education you get will allow you to have wages that justify the costs.

This development demands a fundamental reorganization of higher education to improve overall efficiency and deliver consistent quality.

We're headed for a system that will look more and more like a network structure in which measured outcomes will be much more important.

More and more higher education institutions are going to be asked to unbundle

the services they provide, and to assign value to the unbundled services.

Career development is necessary, and it is relatively easy to measure.

A lot of these reforms will benefit people who are advantaged and prepared to take advantage of new systems and structures.

The better higher education gets, the more it's going to be stratified.

Eighty percent of the white kids are going to the top 468 colleges and more than seventy percent of the black kids and the Hispanic kids are going to two year colleges and open admission four year schools.

High schools need alternative curriculums, such as career and technical education curriculums.

Kids are more likely to graduate from high school and go to college if we give them alternatives.

**The Economy and Higher Education
Forum for the Future of Higher Education**

**The Brookings Institution
Washington, DC
February 21, 2014**

The Labor Market and Higher Education

Tony Carnevale, Director and Research Professor of the Georgetown University Center on Education and the Workforce

Barry Bosworth, Senior fellow in the Economic Studies Program at Brookings

MR. BOSWORTH: It is a pleasure to welcome Tony Carnevale. Tony is director of the Georgetown Center for Education in the Workforce. The last time we had the privilege of working with Tony was at our 2008 Aspen Symposium when he presented a very thought-provoking paper on higher education opportunity and

jobs. Tony has continued to pursue research in this area and has over the years published some of the most important works in the field. His most recent report, "Failure to Launch", tracks employment and earnings for recent college graduates and older Americans over a thirty year period ending in 2012. Tony?

MR. CARNEVALE: I'm going to be talking about what I think will be going on with higher education over the next several decades. Let me start at the beginning. I think higher education as an institution is in a state of flux. We're in an economic recovery, which is very good news. One hopes it continues and if it does that will be very good news for higher education, graduates and students; their prospects are better than those who aren't. That is pretty clear I think. But in terms of public support for higher education there's going to be a good deal of difficulty ahead. After we're done with the budget fights, and we return to something like regular order, the more serious business

of making budgets will begin again. It will be a more deliberate process than it's been, but that's not entirely good news for our education. There is a fairly large elephant in the room, or donkey, if you prefer. We're in a situation where we are systematically disinvesting in the young, and systematically investing more and more in consumption by older generations. That is the arithmetic of our future over the next twenty to thirty years.

I think there will be change. It's hard to know whether higher education becomes one of those untouchable programs because it becomes a core element in Democratic party and Republican party politics as they chase young female minority voters--especially Hispanic voters--or whether higher education is subject to constant revision in small bites. If the Congress is smart they'll move to two-year budgeting. You only want to give bad news every two years instead of every year in the appropriations process. I think there will be an urge to depoliticize budgeting, especially for

members in the House. If we could find a way to do three-year budgeting, I think it would work best for all concerned.

But I do think that there's something more fundamental going on here than tight budgets for higher education. I think higher education is going through a set of changes that we've seen before in other institutions, essentially in all the other institutions in American society since about 1983. After the 1980, 1981 recession, the economy began to restructure radically and very rapidly. The economy we knew between 1946 and 1973 was an American industrial economy that dominated the world, one in which we were the very best at making standardized goods and services at least cost. That was until the 1970s when we began to have problems both with our productivity rates and with quality, which is what the business community noticed. It is no accident that the first award the government ever gave for business practice was not a productivity award; it was the Malcolm Baldrige Quality

Award. Our quality problems, especially in things like chip production, were really pretty bad. But after 1983, the economy began to restructure, and the way we knew it was restructuring was that the wage premium of college graduates over high school graduates began to rise rapidly and steeply. We went from about a thirty-nine percent wage premium in the late seventies before the 1980-1981 recession, to an eighty-four percent wage premium by about 1992 or 1993. We have stayed relatively flat since then, with small declines in low wage jobs; a lot of the increase in the wage premium for college educated students was the result of declining wages for high school educated workers.

By comparison, in the 1970s almost seventy percent of American workers had high school or less. Most of those were in the middle class, including a lot of high school dropouts who worked in American industry, especially if they were in union led industries. Now we live in an economy where sixty percent or so of the jobs require at least some

college, and where the wage premium is high and has remained high. That is, even the recession hasn't knocked it down very much. The wages of lower income workers stabilized so the college wage premium dropped a few points. When you add in the cost of healthcare for college graduates it looks like the wage premium stayed about the same. When you get a wage premium that goes from the high thirties to the mid-eighties, it means employers are chasing skill. And in the American system skill is, in some way, certified by college degrees or years of college and so on.

The economy now requires higher education or post-secondary education and training of various kinds-- certificates, industry-based certifications, A.A. degrees, and other forms of degrees--to ensure entry into the middle class. And that shift in the economy has made all the difference. We now live in a time when the core mission of higher education is to allow people to live fully in their time and be free from public dependency or material necessity. But the

public dependency and material necessity part has become more important. That is, the economic mission has become more important because if you can't find work, if you don't become employed, it's a very difficult to live fully in your time.

The mission of higher education remains the same. I think it endures. But conditions have changed. More and more higher education is about employability, about whether or not the post-secondary education you get, or the training you get, will allow you to become employed, whether it will allow you to have wages that justify the costs, whether or not you're working in the field in which you studied. These kinds of considerations have become paramount in the higher education dialog. What this cries out for is some sort of fundamental reorganization of the way we do higher education. Having never run anything very large in my life, I don't have a clue about how you reorganize and rebuild higher ed. But there are people in this room who do.

But what I see in other industries is a very common model that has reigned supreme since the eighties when the restructuring of American institutions began. At that time we had two forms of industrial organization that were dominant. One, which was very productive, was vertically integrated hierarchies such as General Motors and U.S. Steel. You'd send in sand and rubber and metal in one door and at the other end, a few days later, a car came out. That vertically integrated structure was very powerful in producing standardized goods at least cost. It led us to world domination after World War II.

But there was another model that we weren't quite so proud of, although it worked pretty well, that is now more associated with health care and education. And that was a very fragmented structure. It had excellence here and there. There were good and bad doctors, good and bad hospitals, good and bad teachers, good and better colleges, good and better physics programs. But that structure couldn't produce

consistent quality or efficiency overall.

And neither of those structures was able to produce what modern consumers wanted as they became wealthier. They didn't just want standardized goods at least cost. They wanted quality, variety, customization, convenience, novelty, speed of innovation. It wasn't just about the pizza getting there within fifteen minutes, but being able to use the ATM on your own time. And, to a certain extent, there was an increasing focus on institutions' public responsibility. That if you didn't hire a diverse staff, if you excluded African Americans, Hispanics and other minorities, you would get sued.

So there is a fundamental shift, and most people who study this describe an institution that is more a network. It is making the car with a thousand different parts that all fit together, with a thousand parts made in a thousand places. And at the same time the institution is engaging the consumer more. These network systems were largely driven by information

technology. We began to see this network apparatus grow very rapidly, first in manufacturing, then in private services, and now perhaps higher education and in health care -- two highly fragmented service industries that have difficulty with overall efficiency and with delivering consistent quality.

I think that is the overarching framework for reform. The early entries in the game are things like MOOCs and the use of technology, but there's a lot more to it than that. There are all kinds of structural changes going on. There is a shift in the policy world which is much more dramatic in health care than it is in higher education, but it's there in higher education.

The new idea is that any Title IV institution must meet a certain set of measured standards, which need to be produced and made available to students. But no one's figured out yet how we're going to make them available to students. There is a somewhat naïve bias on the part of economists that if you make information

available it will be used effectively. I don't agree with that. There's a counseling system missing here.

So I think we're headed for a bumpy ride. I don't think anybody knows quite how to do this or quite what we're doing, but more and more higher education institutions are going to be asked to unbundle the services they provide and to assign value to the unbundled services. Those include socialization of the young, learning to live on your own, and the more general mission of moving people towards individual development -- the intrinsic value of knowledge and general education. And then there is career development, which is the most easily measured thing in the whole kit and caboodle. We can do that with wages and transcript data very easily. There are problems with wage records and transcript data, but they're easily solved. So I think we're headed for a system that will look more and more like a network structure in which measured outcomes will be much more important.

One of the reasons I think we'll do relatively

well in the Congress and elsewhere is because education is a perfect political solution. It allows us to allocate opportunity and upward mobility while respecting individual responsibility because people have to do their own homework and take the tests. So it's a very American solution to our fundamental economic questions about opportunity. I think education is going to get reorganized but how it ends up looking I think is anybody's guess. Thanks.

MR. BOSWORTH: Questions? Comments?

SPEAKER: Does this networking strategy you talked about help reduce the divisions that our system is producing today? Or does it exacerbate that?

MR. CARNEVALE: I think going in it exacerbates them. The better higher education gets, the more it's going to be stratified. Any material improvement in American society generally follows a very particular pattern.

There was housing in the fifties and sixties, K-12 education in the seventies and eighties, and now higher education. The pattern is we increase access, but immediately the stratification of the larger society asserts itself much more effectively. Since the nineties access to higher education is up, but stratification is much stronger and getting stronger. We did one study of new students since the mid-nineties and found that more than eighty percent of the white kids are going to the top 468 colleges and more than seventy percent of the black kids and the Hispanic kids are going to two year colleges and open admission four year schools. Since the 1990s, if you look at the top two hundred colleges, about three to four percent of students came from the bottom income quartile. In the newer data, that's up to five percent.

So the system is stratifying and accountability won't improve that, it will make it worse I think. If you tell me as the President of a college that I've got to have faster time to graduation, higher graduation

and rates, and I've got to make people gainfully employed. If you tell me all that -- and you're going to cut my budget at the same time, or the parents don't want to pay more money, what I need to do is get better students. I need to get more students who can pay the full cost. I need to get students by virtue of their test scores, which in the end is about their whiteness and advantage, to ensure that they graduate on time and don't need to work more than twenty hours a week, and so on and so forth.

In the higher education system, there's an enormous energy to move upstream. About 175 institutions that weren't selective in the nineties are now selective colleges. Two year schools are moving towards B.A's, especially in nursing. One way to look at this is that we improved the quality of the higher education system. But in the process you sort the students much more carefully.

This will occur unless there are explicit policies that say you can't leave people behind, you've

got to have a certain share of your students who are Pell students or something like that -- there are a hundred ways to do it. That is affirmative action small A, and selling that in the United States is always going to be tricky. I don't think it's impossible but it's tricky.

Higher education is valuable. Generally the median wages are very high, although the other issue is that some degrees are more valuable than others. Petroleum engineering is worth a hundred twenty grand a year. A degree in psychology is worth about forty. And the degree level is meaning less and less all the time. You can get a certificate in HVAC - heating ventilation and air conditioning --and make more than about twenty five percent of people with B.A.s. Almost all those people with B.A.s, incidentally, are female and almost all those people with HVAC certificates are male. So there's a gender and race and class dimension to this. And we're seeing now in this latest study we did that the age at which college students hit the

median wage has increased from twenty-six to over thirty years old. The reason we've got lower labor force participation among young people is because we've added a new phase in the life cycle --post-secondary education and training. We're not paying for that phase, or regulating it very aggressively. In terms of efficiency, I think we're going to regulate it pretty aggressively before all is said and done.

SPEAKER: Isn't it a little odd that at the same we're talking about delivering higher education through technology, there's greater and greater demand for that elite residential experience?

MR. CARNEVALE: The high end of the game is still the same; there are selective liberal arts colleges, and these are wonderful four year intellectual summer camps. And people benefit from them enormously, as people, as citizens, and so on and so forth, and they make good wages when they're done. In the case of a

lot of those folks, if you look at the selective three hundred colleges or so, a good forty percent go to graduate school. At the other end of the game, you get very strong labor market connections between graduate degrees and labor markets. If you look at B.A.s, a little more than half get degrees that correspond to a set of occupations. And when you follow the people, they do tend to work in the field. But then there's forty, forty-five percent of the students that take majors that don't end up being in a field. A fair share from selective colleges goes to graduate school - - that's how they get into their field. But if you go down below selective colleges to A.A.s, you have to get occupational preparation and if you don't you're in a lot of trouble. So the more specific the education, the more important that it's tied directly to the labor market. A B.A. in history can get away with a lot more than an A.A. in history, or an A.A. in some occupational role that is not selling.

SPEAKER: When we talk about tying the education to the labor market, we also have to be clear about the time dimension. I am a Dean of one of those colleges that produces funny art historians and historians as well as physicists and economists. And I care a whole lot more about the tie between the skills and the profession readiness and the ability to be creative in the labor market for my students ten, twenty, thirty years out, than I do the year after college. The undergraduate liberal arts degree has changed dramatically over time, even at the elite institutions. We do more exploratory learning where students have to develop skills of learning and synthesis. We do more blended learning. We send more of our undergraduates around the world to make them competent to live somewhere other than on their campus. I dare say it will benefit a lot of them to be trained to be creative and leaders, and not necessarily to be trained to do the job that they can be hired for tomorrow.

MR. CARNEVALE: But we do have data from the American Community Survey that liberal arts degrees do not catch up to engineers.

SPEAKER: Sure, but we're among the first generations to not know exactly what the economy will look like in terms of the job structures years from now. I'm not saying I know what that answer is, but I know I'm preparing people for a knowledge economy in a way that past education didn't have to do.

SPEAKER: As you said, education has very inconsistent quality, with inconsistent practices in lots of places. Are there areas where people should try to develop best practice consistencies across the industry that are not getting attention right now?

MR. CARNEVALE: I think the first thing that people need to do is get better information. If I were running a higher ed institution I'd want the wage

record and transcript data of all my students as far back as I could get it. I'd want to know which program succeeded most and which didn't. I'd also want to know who learned something and who didn't. Now that's trickier. I think that will take us a long time. Some kinds of learning are more easily measured than others. That is, we could probably get an agreement about what an HVAC degree ought to look like. Whether we can get an agreement about what an English literature degree ought to look like, I think that's just not productive. But I do think that information is crucial here and will continue to be more and more. We have to find out how to measure the outcomes.

With maybe half the B.A.s, maybe forty percent of the A.A.s, and half the certificates, there is a fairly specific knowledge domain that you could specify and make a test.

SPEAKER: What about the problem of student access to systems or programs in high school?

MR. CARNEVALE: All of this is predicated on a successful K through 12 education system. We know that privilege is made up of a set of fairly complicated mutually reinforcing factors -- many, many, many, many of them. And we know that the lack of privilege works the same way -- very complicated. There is no little green pill that fixes it. The human capital attending to the disadvantaged is, I think, woefully inadequate in the United States. In the end, I suspect a lot of these reforms will benefit people who are advantaged and prepared to take advantage of these kinds of new systems and structures.

One thing I do believe about high school education has to do with this controversial business of the common core. In 1983 we decided, as a nation, to provide a solid academic preparation for every young American K through 12. We weren't going to send females off to home ec and boys off to shop and the top twenty percent to college. That was a very powerful

message. But I think it's been too much of a good thing. We completely dismissed everything but the academic curriculum, so that every kid in America now has to take algebra 2. And when you look at K-12 education, education reform in the states is crashing on algebra 2 because the kids are flunking algebra 2. The common core answer to that is, let's push them harder. My bias is that we ought to open up some alternatives -- not to track kids into inferior educations, but there's more than one kind of curriculum. In this case the obvious alternative would be career and technical education curriculums. Kids are more likely to graduate from high school and go to college if we give them that alternative. That is a very tricky political question, but I don't think having one pathway to college is a good idea. In a nation where we spend six hundred billion dollars a year on K-12 education, I think we can afford more than one pathway.

MODERATOR: Tony, thank you very much.