We started Michigan Future more than two decades ago to be a source of information and ideas on how Michigan and its citizens could be prosperous in an economy being constantly transformed by globalization and technology. We understood then—remember this is before the Netscape browser made the internet widely available—that these were mega forces that were going to make obsolete the high paid, factory based 20th century economy that made Michigan and its citizens among the most prosperous on the planet.

Boy were we right. Far more than we could have ever imagined in 1991. Today it is clear that the new path to prosperity is the broad knowledge-based economy. With the exception of a few states which have turned high oil and natural gas prices into prosperity, the most prosperous places are those states and regions most concentrated in the broad knowledge-based sectors of the economy—health care; education; finance and insurance; information; and professional and business services. And those states and regions with the highest proportion of adults with a four year degree or more.

Unfortunately Michigan isn't one of those places. We now are in the mid thirties in per capita income, knowledge sector concentration and college attainment. Having fallen from 18th in per capita income in 2000—the end of the old factory driven economy.

Michigan's fundamental problem is that we are 36th in college attainment. If we don't change that we are going to be one of the poorer states in the country.

As we have researched what makes places prosperous today and, almost certainly, tomorrow we have also learned a lot about the new realities of the job market. That is what I want to speak to you about today. I want to explore what an economy constantly being reshaped by globalization and, most importantly, increasingly smarter and smarter machines that can do more and more of the work people use to means for you and your peers who are graduating from college this year.

First and foremost: you made the right decision. I know the new conventional wisdom is that we have too many four year degree graduates, particularly in the liberal arts. Therefore, the story goes, you are likely to end up in jobs that don't use your skills and pay to little to pay off student loans. Don't believe it! Its not true.

In fact the exact opposite is the reality. The Pew Research Center reports: Today the unemployment rate for 25-32 year olds with a bachelors or more is 3.8 percent; for those with a two year degree or some college its 8.1 percent; and for those with a high school degree 12.2 percent. In terms of median annual earnings for full time workers those with a bachelors or more earn \$45,500; two year degree or some college \$30,000; high school degree \$28,000.

No matter what you hear, the reality is Millennials with a four year degree are doing substantially better than their peers without a four year degree. End of story!

And today's 25-32 year olds have higher full time earnings corrected for inflation than those in previous generations. Almost \$2,000 higher than for 25-32 year old Generation Xers in 1995 at the beginning of the economic boom.

The gap in median annual earnings for young full time workers has grown consistently for those with a four year degree compared to those with a high schools degree from \$7,500 in 1965 to \$17,500 today. The gap—once again conventional wisdom has it wrong—between 25-32 with a four year degree and those with some college or an associates degree has grown from \$5,000 in 1965 to \$15,500 today. So much for you would have been better off going to a community college!

No one can guarantee you a good paying job in your field of study right out of college. The American economy since the onset of the Great Recession isn't creating jobs fast enough to fully employ new entrants into the labor market no matter what your education attainment. But as the data indicate you have a far better chance than those without a four year degree. And that advantage almost certainly will grow over what is likely to be a forty year career.

Consider this story from the New Republic:

"Sally Cameron thought she had done everything right. After studying French and Arabic at a tony liberal arts college, she knew that graduate school would help her career chances. But when she hit the job market, her lvy League management degree didn't seem to matter. The worst recession in decades had pushed the unemployment rate to nearly 10 percent and good jobs were

scarce. Sally paid the rent by tending bar and filled her time with volunteer work.

Meanwhile, experts and government officials warned that the days ahead would be grim. For decades, a growing number of students had streamed into higher education assuming that their degrees would lead to prosperity. Now people were openly questioning whether college was really worth it.

Sally's story sounds like the kind of depressing story filling the pages of newspapers and the popular press these days. There's only one difference: Sally Cameron earned her master's degree from Yale in 1980. The Washington Post story that described her struggles was published in 1982. For going on four decades, the press has been raising alarms that college degrees may no longer be a sound investment. Two things about these stories have remained constant: They always feature an over-educated bartender, and they are always wrong."

This is the core lesson Michigan Future has learned. Economies are cyclical, they go up and down. But the constant is that those with the highest education attainment—with the broadest skills—do best.

Why? Because globalization and technology are increasingly concentrating employment growth and high wage work in the knowledge-based sectors of the American economy. And the asset that is the most valuable to knowledge-based employers and is in the shortest supply is talent.

## The New Republic continues:

"Sally Cameron, meanwhile, isn't tending bar anymore. She's a senior manager at an international development consulting company that works under contract with USAID.

Her recent work includes building railroads in cyclone-devastated Madagascar. Her liberal arts degree from Smith College must come in handy, since one of the two official languages there is French. That's how things usually work out for people who get college degrees."

Getting a four year degree was the most reliable path to a middle class career for Boomers like Sally Cameron and me, its even more true today. Your Alma degree positions you best for today's and tomorrow's job market to have a successful forty year career. You have built the foundation on which you can create a successful career.

The value of a college degree is far more than how quickly a graduate gets a first job and how much it pays. These are the short term metrics that fuel the "college isn't worth it" nonsense.

Rather the payoff is over an entire career. It comes from having skills that give you a competitive edge in all industries and most occupations, in having skills that may not be in demand today but will be in the future and in learning how to learn so that you can better spot new opportunities and take advantage of them in a constantly changing labor market.

Consider Eileen Lonergan. She describes in an alumni publication how MSU prepared her for a career in an occupation that she didn't know existed when she was in college. She writes:

"When I graduated from Michigan State University in 1988 with a degree in Advertising, the last thing I expected was to one day own my own web design firm, handle search engine optimization and implement social media campaigns for clients all over the world.

The most important part of my education at MSU was in how it prepared me for a career that didn't yet exist while I was on campus. Throughout my four years there, I took classes that at the time were required or encouraged or simply fit in nicely with my schedule. I had no way of knowing at the time that the many art history classes I took would one day become very relevant in my life. I lived as an expatriate in London and Asia, seeing many great works in person and learning how art related to geography and history was fascinating.

... The exposure to ideas and technology provided me with the curiosity to want to continuously learn new things and instilled in me the confidence to put myself out there and try. So, while I didn't major in computer science and my niche didn't exist when I was on campus, I thank MSU for the foundation I built as a student. That education and experience helped to serve me well for the future, personally and professionally."

Lonergan's story is one repeated over and over again by those with four year degrees or more. The value of higher education is in developing broad skills—

including becoming a lifelong learner—that are the foundation of successful forty year careers.

The push from policy makers and other thought leaders to demand that higher education prepare students for a job the day they graduate is not good either for students or the economy. Just as bad is the push to steer universities away from the liberal arts.

Course like art history, that proved so valuable to Lonergan, are chronically on the list of so-called useless subjects that universities are increasingly pushed to deemphasize if not eliminate. Not smart!

Building a foundation to do well over a long career is only going to grow in value in an economy where technology and globalization accelerate creative destruction. Destroying jobs and occupations and creating new, unimaginable, jobs and occupations at a quicker and quicker pace.

As we describe it, successful careers will go to those who are good rock climbers, rather than ladder climbers. Those who are able both to constantly spot opportunities in a constantly changing world and have the agility to take advantage of those opportunities. Far different than career success in the past which were build around known and stable rungs of a career ladder.

What worries me the most about the direction education is taking is that it seems increasingly disconnected from the economy of today and tomorrow. That we are trying to align education to a 20th Century economy of stable jobs and occupations in a 21st Century economy where both are increasingly unstable because of globalization and technology. And even when a job or occupation is stable the skill requirements of doing that job—and therefore staying employed—are constantly changing largely because of smarter and smarter machines.

Increasingly employers in knowledge-based enterprises—the source of most new good-paying jobs—understand the importance of hiring for more than job specific skills. Software entrepreneur Bill Wagner in a column for AnnArbor.com writes:

"My perspective on education is firmly rooted in being a business owner: What type of education is needed for a long and successful career? What do businesses look for in a successful new employee?

- ... The country, and especially Michigan, seem stuck in the mode of thinking of education as a means to a job, as a vocation. The problem with this attitude is that the hot jobs change frequently. Preparing people for one job, and one job only, creates a temporary and rigid work force.
- ... If you've experienced any kind of career growth, or enjoyed any success you know the answer: Your education must prepare you for a long career that meets constant changes in the job market, and supports your own growth. The only constant during a life-long career is that you'll need to adapt. The important question for our education system: Are you prepared for all the changes that may come in the future?
- ... In order to grow companies and our work force, our education system needs to prepare people for an ever-changing world. Preparing for today's hot job is the road to irrelevance. Getting a broad, rich education that lays the foundation for becoming a triple threat is the path to a very successful career."

What are those broader career success skills? New York Times columnist David Brooks answers:

"Practical knowledge is not about what you do, but how you do it. It is the wisdom a great chef possesses that cannot be found in recipe books. Practical knowledge is not the sort of knowledge that can be taught and memorized; it can only be imparted and absorbed. It is not reducible to rules; it only exists in practice.

... Think about Sheryl Sandberg's recent book, "Lean In." Put aside the debate about the challenges facing women in society. Focus on the tasks she describes as being important for anybody who wants to rise in this economy: the ability to be assertive in a meeting; to disagree pleasantly; to know when to interrupt and when not to; to understand the flow of discussion and how to change people's minds; to attract mentors; to understand situations; to discern what can change and what can't. These skills are practical knowledge. Anybody who works in a modern office knows that they are surprisingly rare."

Where do you learn these broader career success skills? Brooks continues: "... students can learn these skills at a university, through student activities, through the living examples of their professors and also in seminars."

Particularly at small liberal arts colleges like Alma.

Michigan Radio's Jack Lessenberry puts its this way:

"There's nothing wrong with education for education's sake—if that means teaching people how to think, and how to learn. There is also nothing wrong with knowing lots of things that are part of culture and civilization, even if they aren't knowledge that can immediately be converted into cash.

I didn't study journalism until graduate school. But I studied other things that equipped my mind with a set of intellectual furniture and the tools to try to keep learning and figuring stuff out."

It was my great pleasure to serve as a judge for the Grand Rapids Business Journal's 2013 40 Under Forty class. As we were going through write ups of the nearly 140 nominees what struck me was how many seemed to be in creative occupations and/or industries. Not consistent with the image of a manufacturing centered region. Nor consistent with the story that we are told repeatedly that jobs for college graduates are increasingly concentrated in science, technology, engineering and math occupations.

Sure seemed like a lot of the nominees worked neither for an employer that made things nor were in science and math based occupations. In fact, the nominees, at the undergraduate level, primarily have liberal arts degrees. The kind of degrees that conventional wisdom increasingly is predicting is a path to underemployment and wages too low to pay off so-called crushing student loans.

Looking at the 40 Under Forty class what you find is in both occupations and industries they provide a much better reflection of the realities of a 21st Century economy than we get from far too many of our politicians, pundits and economic developers.

The 40 Under Forty work, of course, in the private sector but also for non profits and government. And they overwhelming work in the knowledge-based sectors of the economy: health care and social assistance; education; management of companies; professional services; finance and insurance; and information.

In terms of occupations the 40 Under Forty represent well the broad diversity of opportunity in a 21st Century economy. And the continuing reality that the liberal arts remain a reliable path to success. Hardly any of these future leaders of the region work in STEM occupations.

The good news is that your generation—the Millennials—are, in large numbers, ignoring the conventional wisdom. They have a much higher four year degree attainment rate than previous generations. 34 percent compared to around 25 percent for Generation X and the Boomers and only 13% for the generation before the Boomers.

Keep on ignoring that conventional wisdom. For the fact is that the diploma you will receive today from a liberal arts college—no matter what your major or what your first job after college is—puts you on the most reliable path there is to a middle class or better career.

Because you have "equipped your mind with a set of intellectual furniture and the tools to try to keep learning and figuring stuff out" you have built the foundation to be a successful rock climber. There are no guarantees, but if you take advantage of the broad non career specific skills you have developed here at Alma College there is no reason you won't be at least as successful as Sally Cameron, Eileen Lonergan, Jack Lessenberry and this year's Grand Rapids Business Journal 40 Under Forty class. Don't let anyone tell you otherwise.