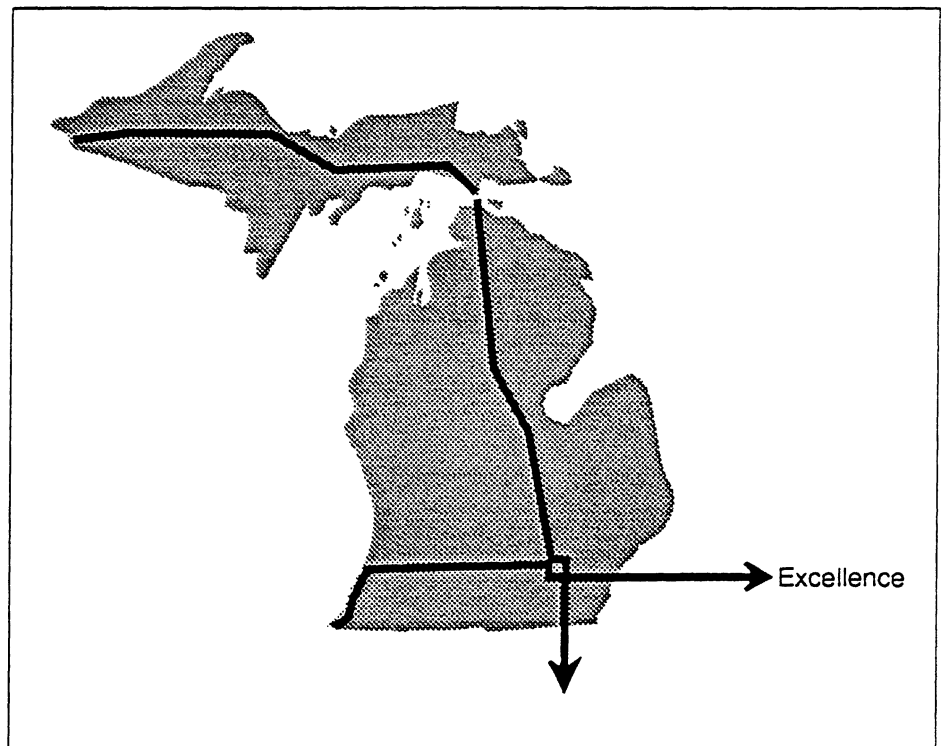


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# Michigan at the Crossroads: The Future of Public Higher Education in Michigan

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President  
The University of Michigan

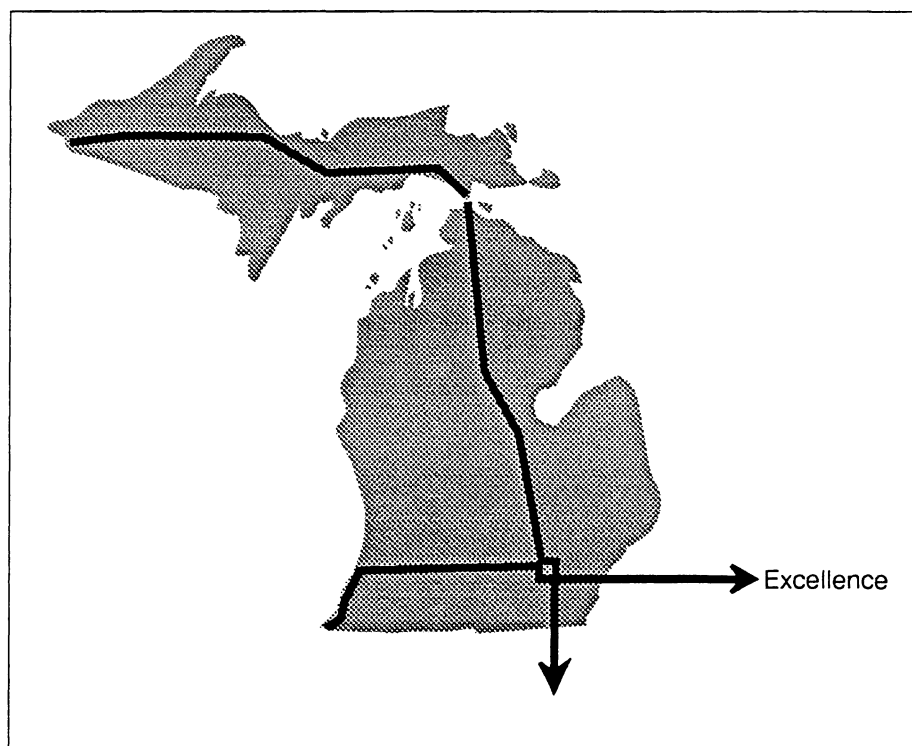


Presidents Weekend  
Ann Arbor, Michigan  
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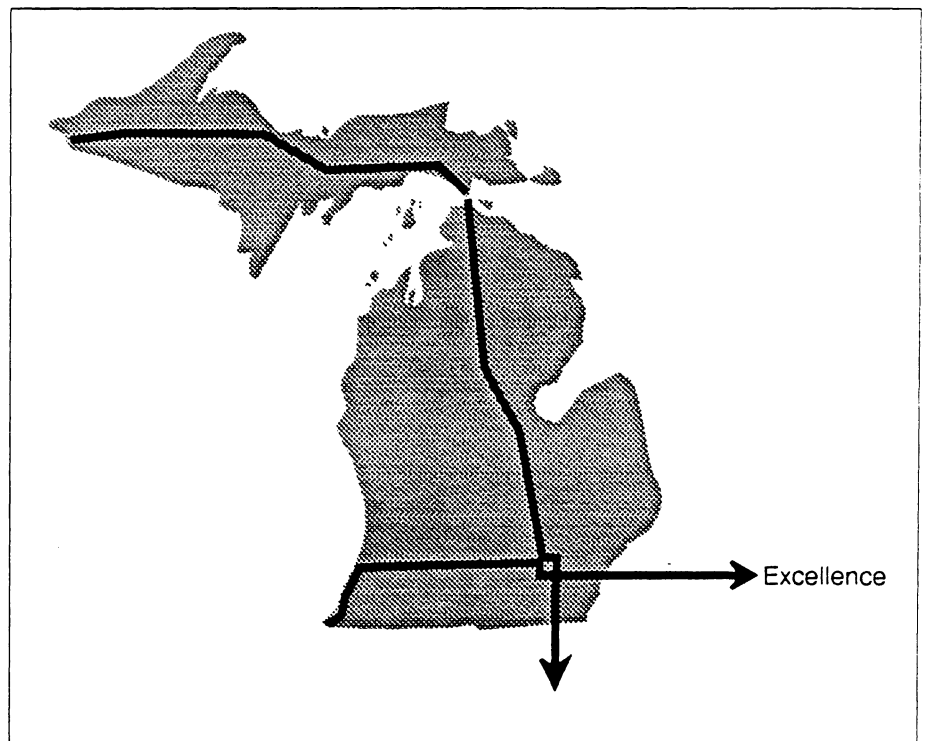


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# Michigan at the Crossroads: The Future of Public Higher Education in Michigan

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## Michigan at the Crossroads

In recent years, there have been many concerns raised about the future of public higher education in Michigan:

1. How to provide the best possible education for the sons and daughters of Michigan citizens?
2. How to keep tuition affordable?
3. How to provide adequate financial aid to meet the needs of all Michigan residents?
4. How to increase the productivity and efficiency of our programs?
5. How to assess the impact of new programs such as the Michigan Education Trust on the quality of our institutions?

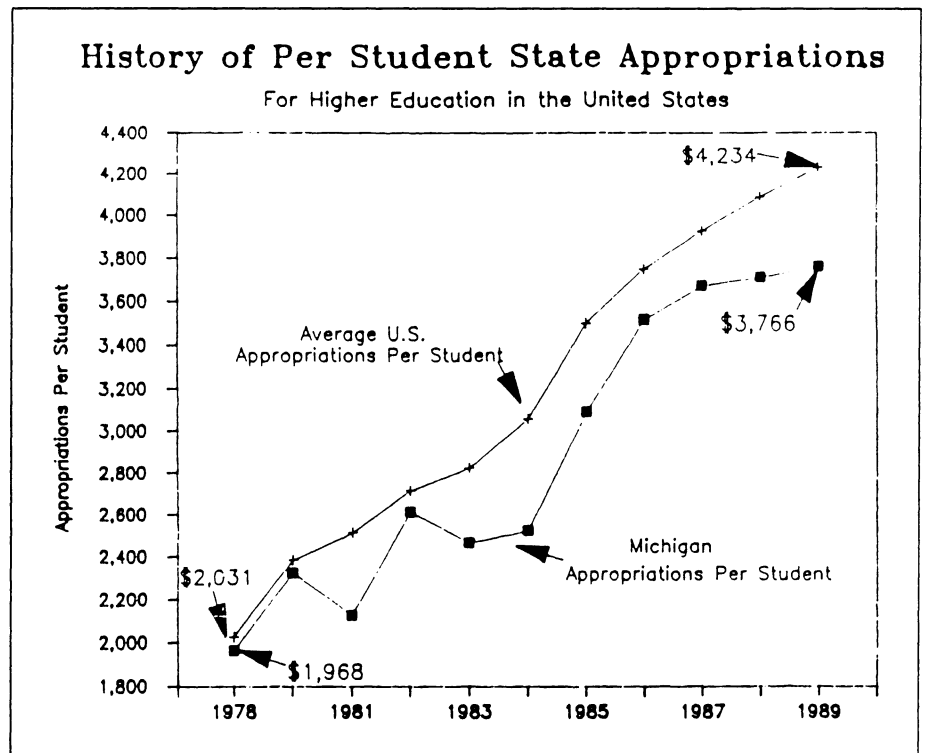
Because our public universities will play such a vital role in determining the future of our state, the presidents and chancellors of Michigan's fifteen public university campuses have come together in an unprecedented series of forums across the state to focus public attention on the most fundamental issue facing higher education as we enter an election year: how to continue to provide broad access to quality higher education in Michigan in the face of the serious erosion in public support, which has occurred in our state in recent years.

## The Public Challenge

As many of you know, last December several of our institutions took the unprecedented action of announcing our intention to hold the line on undergraduate tuition levels for Michigan residents for the year ahead by limiting increases to the inflation rate. Believe me, this was not an easy action to take, particularly in the face of the serious needs of our institutions.

To make this commitment so far in advance of legislative action on appropriations for higher education, we understand all too well that it will be necessary to implement a series of budget cuts and reallocations to allow us to make it through what is certain to be a difficult year. Most of us have been reallocating, cutting, and keeping a lid on developing critical new programs for a decade or more. There isn't much fat left to cut. Furthermore, if state appropriations continue to fall far short of our needs, as they have during the past several years, the action of limiting tuition increases to the inflation rate will be very difficult for our institutions.

Then why did we take this difficult and unprecedented action? Because we believe it to be in the public interest. Because we believe it to be critical to our future and our children's future. And, because we hope that by this action, we can more effectively issue a challenge to state government--and



to all those aspiring to political office--a challenge to join with us in the development and implementation of a strategy that addresses the real crisis in higher education in Michigan today: how to restore adequate public support of higher education in Michigan--and thereby provide the access to high-quality public education so necessary to the citizens of this state. We

want to work with state leaders to develop a plan that accomplishes the following objectives:

1. To reverse the steady erosion in public support of higher education in Michigan which has allowed our state to slide from being a national leader to a position now among the lowest in the nation (ranking 45th among the states in support increase over the past decade).
2. To address the real issue facing education in Michigan: the silent shift of public policy that has, in just a few years, undermined the public principle of higher education, that is, the support of higher education by public tax dollars rather than student tuition. We want to put "public" back in public education. We simply cannot let either the quality of or the access to higher education in Michigan deteriorate any further.
3. To address in a thoughtful and timely manner the impact of new programs such as MET on the quality of our institutions and on the financial aid offered by our universities to the less advantaged, particularly from our minority populations.

It is clear that our effort to keep tuition so far below the level that would be required to meet our true needs can only last for a limited period of time without seriously harming both the quality of and access to our universities. If, working together with leaders of State government over the next year, we are unable to develop a public policy that addresses the serious underfunding of higher education in Michigan, it is clear that our institutions will have no recourse but to continue the shift of the true costs of quality education from the taxpayer to the parents through increased tuition and fees—or face the tragic prospect of destroying the quality of a system of higher education built by the commitments and sacrifices of eight generations of Michigan citizens.

We are firmly committed to protecting the quality of our institutions and to providing access through strong financial aid programs to all Michigan citizens, regardless of ability to pay. We challenge leaders of state government to uphold their end of this partnership by developing both a plan and a public policy aimed at restoring adequate support of public higher education in our state, a resource of extraordinary importance to Michigan's future.

We believe that most state leaders understand these issues. They really want to support education. The problem is that they do not feel they have public support! And can you blame them, with the massive defeat of Propositions A and B still fresh in their memories, with the tax recalls of the early 1980s, with the calls for other social priorities such as health care, social services, and corrections? Our elected public officials are really caught in a bind: how to face the urgent problems of the moment and to balance these with investments in the future that, as a public, we have yet to understand and support.

As leaders of higher education in this state, we do appreciate the efforts of state government thus far. But it is clear that far more is needed. If the State of Michigan is to survive as an economic force in our nation, it is clear

that we must do far more to restore adequate public support of higher education.

## The Challenge of Change

Few realize the enormous changes our society is undergoing as it approaches the 21st Century, a new millennium.

We are changing dramatically as a people as we become ever more diverse and pluralistic. Indeed, almost ninety percent of the new entrants into our workforce during the 1990s will be people of color, women, or immigrants.

We are changing in our relationships to other nations and other peoples as our economy and our commerce become ever more interdependent with other nations, as the United States becomes a "world nation," a member of the global community.

And we are changing rapidly in the nature of our activities as we evolve into a new post-industrial society. Indeed, the key strategic resource necessary for prosperity and social well-being has already become knowledge itself, that is, educated people and their ideas.

In the pluralistic, knowledge-intensive, global future that is our destiny, it is clear that it will be the quality of the knowledge and skills of our people, our intellectual capital, that will determine the strength and prosperity of our state. Hence the challenge we face for the 1990s is to develop Michigan's human resources to prepare our state for an age of knowledge that will characterize both America and the world in the 21st Century.

The good news is that Michigan is well positioned from this perspective, since over the decades we have built not only one of the finest systems of public education in the world, but we now possess several of the world's leading research universities. The bad news is that a lack of public understanding and support threatens to permanently cripple Michigan's education infrastructure. Worse, this failure comes at just that moment in our history when we are becoming more and more dependent on the development of our human resources--on education--to lead our state into a competitive and a complex future.

## Possible Futures

The French poet, Paul Valery, once said, "The trouble with our times is that the future is not what it used to be." I believe that the 1990s will be a time of greater change and transformation than any experienced before in our nation's history. While it is always risky to speculate about the future, three themes of the years ahead seem clear:

## 1. Demographic Change: The New Majority

America is changing rapidly. When we hear references to the demographic changes occurring in our nation, our first thought probably focuses on the aging of our population. It is indeed true that the baby boomers are now entering middle age, and their generation has been followed by a baby bust, in which the number of young adults will be declining over the remainder of this century by twenty percent. Indeed, today there are already more people over the age of sixty-five than teenagers in this country, and this situation will continue throughout our lives. Further, the growth rate in both our population and our work force is declining to the lowest level in our nation's history. America will simply not be a nation of youth again in our lifetimes.

Yet, there is a far more profound change occurring in the population of our nation. America is rapidly becoming one of the most pluralistic, multicultural nations on the face of the earth. Women, minorities, and immigrants now account for roughly 90 percent of the growth in the labor force. By the year 2000, they will represent 60 percent of all of our nation's workers.

Those groups we refer to today as minorities will become the majority population of our nation in the century ahead just as they are today throughout the world. And women have already become not only the predominant gender in our nation and our institutions, but they are rapidly assuming their rightful role as leaders of our society.

In this future, the full participation of currently under-represented minorities and women will be of increasing concern as we strive to realize our commitment to equity and social justice. But, in addition, this objective will be the key to the future strength and prosperity of America, since our nation cannot afford to waste the human talent represented by those currently underrepresented in our society--this human potential, cultural richness, and social leadership. If we do not create a nation that mobilizes the talents of all our citizens, we are destined for a diminished role in the global community, increased social turbulence, and--most tragically--we will have failed to have fulfilled the promise of democracy upon which this nation was founded.

But there are other important challenges associated with such demographic change. In particular, it is important to realize here that 21st century America will not be a melting pot in which all cultures are homogenized into a uniform blend--at least not during our lifetimes. Rather, it will be pluralistic, composed of peoples of vastly different backgrounds, cultures, and beliefs; people seeking to retain their cultural roots, to maintain their differences in identities. Our challenge will be to find the common bonds and values that unite us, even as we learn to respect and value our differences.

The growing pluralism of our society is perhaps our greatest challenge as a nation. Yet it is also one of our most important opportunities, since it gives us an extraordinary vitality and energy as a people.



## 2. The Internationalization of America

The second theme is triggered by an event that happened almost exactly two decades ago, when Apollo II set down upon the Sea of Tranquility to put man on the moon. The image I have in mind is the extraordinary photograph of the earth taken by the Lunar Orbiter as it circled the moon, an image that dramatically revealed how all nations and all peoples are passengers together on spaceship earth. It was a portent of today, a time in which all aspects of American life are becoming increasingly internationalized, in which our nation has become a member of a truly global community.

Whether through travel and communication; the arts and culture; the internationalization of commerce, capital, and labor, we are becoming increasingly dependent upon other nations and other peoples. The world, and our place in it, has changed.

The fact is that a truly domestic United States economy has ceased to exist. It is no longer relevant to speak of the Michigan economy or the American economy. . . or the competitiveness of Michigan industry or American industry. Our economy, our companies, are truly international--spanning the globe and intensely interdependent with other nations and other peoples. We are no longer self-sufficient or self-sustaining. We are not immune to the shocks of the world's society--as the last year's events in China, the Soviet Union, and Eastern Europe make all too clear.

But beyond commerce and national security, there is an even more important reason to pay attention to the trends of internationalization. The United States has become the destination of about one-half of the world's immigrants, with perhaps as many as ten million entering the United States during the 1980s alone. With falling fertility rates, immigration will soon become the primary determinant of the variability in our population. As we have been throughout our history, we continue to be nourished and revitalized by wave-after-wave of immigrants coming to our shores with unbounded energy, hope, and faith in the American dream. Yet today, in a very real sense, America is evolving into the first true "world nation" with not simply economic and political ties, but also ethnic ties to all parts of the globe.

Indeed, the 21st Century will be the first post-European century in American history, since an absolute majority of the people born in this century will be of parents of other than European ancestry--of Asian, African, and Hispanic descent. This will represent a major change in the character of our society.

From this perspective, it becomes clear that understanding cultures other than our own has become necessary, not only for personal enrichment and good citizenship, but for our very survival as a nation.

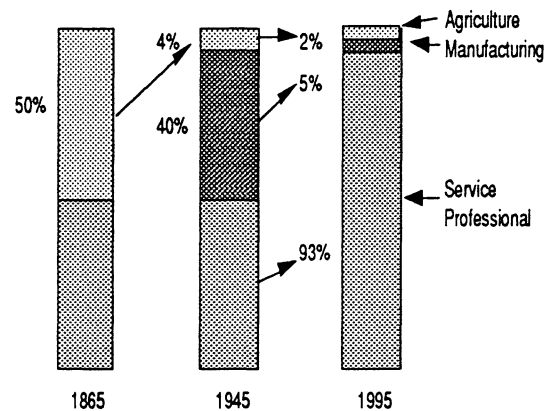
## 3. The Age of Knowledge

Looking back over history one can identify certain abrupt changes, discontinuities, in the nature, the very fabric of our civilization--the Renaissance, the Age of Discovery, the Industrial Revolution. There are many who contend

that our society is once again undergoing such a dramatic shift in fundamental perspective and structure. Today we are evolving into a new post-industrial, knowledge-based society, just as a century ago our agrarian society evolved through the Industrial Revolution.

We are surrounded by evidence of this transition. Industrial production is steadily switching away from material and labor-intensive products and processes to knowledge-intensive processes. For example, Peter Drucker notes that roughly 40 percent of the cost of an automobile is determined by materials and roughly 25 percent by labor. In sharp contrast, in a silicon chip, less than 1 percent of the cost is in materials and less than 10 percent is in labor--70 percent is in knowledge!

Our nation's future has probably never been less constrained by the cost of natural resources. Further, it is clear that increasing productivity has come to mean decreasing use of low-skilled labor. In the 1920s, one out of three workers was a blue collar worker. Today that number is one in six and dropping fast, probably to about one in twenty by the mid-1990s.



It is clear that we are in the midst of an information revolution that is changing the basis of economic competitiveness and world power. Indeed, if you want to know the real reason for the recent events in Eastern Europe, China, and the Soviet Union--the collapse of communism--let me suggest that it was not politics, but rather the silicon chip. It was information technology that allowed a truly international exchange of perspectives and ideas that could not be constrained by any government.

It is clear that a transition is occurring in which intellectual capital--brain power--is replacing financial and physical capital as the key to our strength, prosperity, and well-being. In a very real sense we are entering a new age, an age of knowledge, in which the key strategic resource necessary for prosperity has become knowledge itself.

This new critical commodity knows no boundaries. It is generated and shared wherever educated, dedicated, and creative people come together. And, as we have learned all too well over the past two decades, it spreads very quickly. The knowledge revolution is happening worldwide and at a very rapid rate.

## Themes of Change

The America of the 20th century that we have known is a nation characterized by a rather homogeneous, domestic, industrialized society. But that is an America of the past. Our children will inherit a far different nation, a highly pluralistic, knowledge-intensive world nation that will be America of the 21st century.

These themes of the future—the changing nature of the American population, our increasing interdependence with other nations and other peoples, and the shift to a knowledge-intensive, post-industrial society—are actually not themes of the future, but rather themes of today. In a sense, I have simply been reading the handwriting on the wall. In fact, the brave new world I have been describing as America of the 21st century has already arrived as we enter the 1990s!

But whether you accept these as themes of the present or the future, it is clear that they are also themes of change, themes that will both reflect and stimulate even more fundamental structural changes in the nature of our society and our civilization.

## Michigan at the Crossroads

Needless to say, the themes of pluralism, globalization, and knowledge that will dominate our future will pose great challenges and demand profound changes in our state and in our nation. The impact of these changes are already painfully apparent to Michigan's workers and industries. In fact, it is in Michigan, in the heart of the "rust belt," that the impact of these extraordinary changes are most clearly seen, and most tragically felt.

We all know that the past decade was a period of great difficulty for our state. Industries of great importance to our nation such as steel, automobiles, and electronics have fallen victim to intense competition from abroad. Plants have closed. We still have many people chronically unemployed or underemployed.

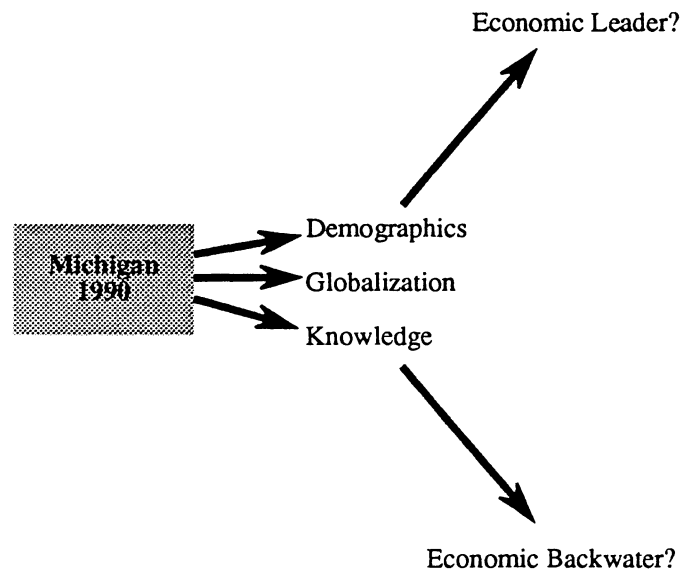
Indeed, over the last decade Michigan's per capita income has dropped from well above the national average to slightly below this norm. Our state has slipped over the past decade to the bottom ranks in this nation in its public support of education, in the fraction of our tax dollars returned from Washington, in the burdensome and inequitable nature of our tax system, and in the climate we provide for small business development. Oh, Michigan still ranks close to the top in some areas, but these are areas of concern, such as unemployment, mortality from serious disease, high-school dropouts, and the fraction of our citizens incarcerated.

What is the problem here? I believe that these various measures of the decline in the quality of life in our state are, in fact, symptoms of a very fundamental structural change in our economic base—a change that began in the late 1970s and will continue for roughly two more decades.

The State of Michigan, just as our nation, is in the midst of a profound transition. We are shifting away from an industrial economy based upon

the abundance of natural resources; unskilled labor; and, to some degree, constrained, slowly moving domestic markets. Instead, our future will be determined by a knowledge-based economy, characterized by intensely competitive world markets, rapid technological change, and--most important of all--the strategic role played by educated people and their ideas.

This has not been--and will not be--an easy transition to make. The truth is that the outcome is still very much in doubt!



We have come to a critical turning point. One path will lead us toward world economic leadership once again, with a strong, prosperous--albeit new--economy producing jobs and improving our quality of life. But there is a second path ahead, a path that could be our destiny if we fail to heed the warnings to make the necessary investments and sacrifices today necessary for strength and prosperity tomorrow. This path will lead our state and our nation to a position of economic weakness and poverty in the century ahead.

My central point is that education, broadly defined, will be the pivotal issue in determining which of these two alternative futures will be Michigan's and which will be America's. Indeed, I am absolutely convinced that the dominant issue of the 1990s will be the investment in the skills and knowledge of our people, the education of our youth.

Previous economic transformations were closely associated with major public investment in infrastructures such as railroads, electric networks, and highways. But in the coming economic transition, the key infrastructure will be an educated population. Hence the investment we must make will be in public education. We simply must dedicate ourselves to improving education for every child in Michigan--in our primary schools, our secondary schools, and our universities.

It is clear that the challenge before Michigan is the challenge before America. And the actions we must take, and the investments we must make, will clearly determine our capacity to respond to this future. Our people are our strength, and our children are our future.

Here, it seems essential that we shift our perspective on tax expenditures when discussing education. In contrast to the costs of social services such as health care, welfare, and corrections, the funding of education in general and higher education in particular should be regarded as an *investment* in our future. Let me illustrate by using the University of Michigan as an example of this investment perspective.

## What Do Taxpayers of the State Get for Their Money?

This past year the taxpayers of this state contributed over \$270 million through state appropriations to the University of Michigan. What did they get in return?

The payoff from this investment is truly extraordinary. Let me illustrate with a few examples:

### Educational Impact

At any moment, the three campuses of the University of Michigan are providing an outstanding education for over 50,000 students--80 percent of them Michigan residents, including 29,000 Michigan undergraduates. Further, the University produces over 12,000 graduates per year at all degree levels, in all disciplines, in all professions.

### Economic Impact

In comparison to the \$270 million invested by the state, the University of Michigan attracted to our state over \$300 million in federal support, most of which came in the form of sponsored research contracts and student financial aid. Further, the students attracted to our institutions contributed roughly \$300 million of additional dollars through tuition and fee payments. In addition, the auxiliary activities of the University contributed another \$800 million to the state's economy.

In summary then, the \$270 million invested by the state in the University resulted in adding over \$1.7 billion dollars to the state's economy, a six-fold multiplier.

But even beyond that, we estimate the true economic impact of the University multiplies its state appropriation by at least a factor of ten or more. For example, the University's engineering programs, supported in part by the Research Excellence Fund, are now credited as key to the recent growth of a \$5 billion industry in industrial automation throughout the southeastern Michigan area. Each year the University spins off dozens of new companies, creating new jobs and attracting new dollars to our state. Each year the University attracts to Michigan new companies, as evidenced by the recent announcement that Philips Electronics has just agreed to site a major \$200 million factory in the Washtenaw County area. The University has played the lead role in exciting new ventures such as the National Research

and Education Network and CIESEN, a major NASA laboratory we are attempting to attract to Michigan.

The University of Michigan also produces thousands of engineers, scientists, business executives, lawyers, teachers, and all of the other professionals so necessary to compete in the knowledge-based economy that characterizes our world.

### **Health Care**

There are so very many other payoffs from this investment. Last year over 750,000 patients were treated in the University of Michigan Medical Center, widely regarded as one of the world's great centers of quality health care. Indeed, recent market surveys have indicated that essentially every family in this state at one time or another has had one of their members referred to and treated by our physicians. The University continues to have great impact on the people of this state through its activities in medical research, such as conducting the clinical trials for the polio vaccine developed by one of our faculty members, Dr. Jonas Salk, or the announcement last fall that a UM team of scientists had identified and cloned the gene responsible for cystic fibrosis.

### **Social Change**

But there is so very much more. The University continues to serve as one of the great forces of social change in our state. Michigan's long tradition of student activism has frequently awakened the conscience of our society: the teach-ins of the 1960s against the war in Viet Nam; Earth Day in the 1970s to raise concern about the environment; our celebration of Martin Luther King Day during the 1980s as a community educational experience involving thousands of students, faculty, and staff attempting to come together to erase the scourge of racism and bigotry on our campuses.

There is the extraordinary impact of our regional campuses as they educate the first generation of college graduates in area families. Or there is the leadership the University provides in addressing the needs of our minority communities, as evidenced by The Michigan Mandate, widely regarded as one of the nation's most visionary approaches to affirmative action in higher education.

### **Inventing the Future**

It is clear that the public research university--the class of institutions for which the University of Michigan is not only the prototype, but perhaps also the flagship--touches the lives of many, many people in many different ways: through education, research, and service; through health care, economic development--yes, even through a sense of pride in the accomplishments of their athletic teams. Yet as important as these institutions are today in our everyday lives, it is my belief that in the future they will play an even more critical role as they become the key players in providing the knowledge resources necessary for our future: both the knowledge itself and the educated citizens capable of applying it wisely--so necessary for our prosperity, security, and social well-being.

It has sometimes been said that the best way to predict the future is to invent it. And perhaps this is the best definition of the role of a major research university such as the University of Michigan: to invent the future, through the knowledge we produce on our campuses, and through the graduates we educate.

## Clouds on the Horizon

But here there are dark clouds on the horizon, because there is increasing evidence that we as a people and as a state have not yet recognized either the nature or the magnitude of the investments we must make to achieve prosperity in the intensely competitive global community. While we all give the "age of knowledge" lip service, the evidence suggests that in reality, many of us cling to the past, wanting to return to the agricultural and manufacturing economies that once made us prosperous. Yet we simply cannot continue any longer in this dream state. We have to face reality.

Numerous studies over the past several years have suggested that Michigan is seriously under-investing in its "knowledge infrastructure" by as much as 30 percent to 40 percent, relative to other states. The challenges faced by K-12 education are apparent to all of us. Unfortunately, what is also apparent is our inability to agree on actions and policies needed to improve the quality of our schools and to achieve adequate and equitable financing.

The situation is somewhat different, yet no less acute, for higher education in our state. While the quality of Michigan higher education today is still very high, the long-term prognosis is poor if we continue down the path that we have been in recent years. Over the past two decades the State of Michigan has dropped from the position of a national leader (ranked sixth in 1965) in its public support of higher education to among the lowest in the nation.

Let us look at the comparisons for a moment. Among the states Michigan currently ranks:

1. 33rd in appropriations per student.
2. 37th in appropriations as a percentage of personal income.
3. 35th in appropriations as a percent of tax revenue.

Further, we not only fall significantly below the national average in our support, but it is clear that we are slipping even further behind with each passing year. In fact, the increases we have provided in our support to higher education over the last several years now rank:

4. 42nd over the past two years.
5. 45th over the past decade, nearly dead-last among the states.

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**State of Michigan's Ranking Among the States  
on Various Measures of Funding of Higher Education**

<u>Index</u>	<u>Michigan's 1989-90 Ranking</u>
State & Local Tax \$ per FTE Student in Public Higher Ed	33nd
Higher Ed Appropriations Per Capita Population	24th
Appropriations to Higher Ed as % of Tax Revenue	35th
Appropriations to Higher Ed as % of Personal Income	37th
Annual (one-year) increase in State Appropriations to Higher Education	35th
Two-year Increase in State Appropriations to Higher Education	42nd
Ten Year Increase in State Appropriations to Higher Education	45th

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Ten-Year and Two-Year Percent Change (Adjusted for Inflation\*) In State and Local Tax Dollars for Public Higher Education.

		10-YEAR PERCENT CHANGE - FY '80 to '90		2-YEAR PERCENT CHANGE - FY '88 TO '90				
Rank: based on unrounded figures	1.	Maine	83	%	1.	Maryland	23	%
	2.	Massachusetts	54		2.	Nevada	20	
	3.	Nevada	53		3.	Nebraska	17	
	4.	Washington	51		4.	Illinois	16	
	5.	Maryland	51		5.	Maine	15	
	6.	North Carolina	49		6.	Kansas	13	
	7.	New Hampshire	48		7.	Virginia	11	
	8.	Virginia	48		8.	North Dakota	11	
	9.	Arizona	45		9.	Hawaii	11	
	10.	Florida	43		10.	Mississippi	10	
	11.	New Jersey	42		11.	Missouri	10	
	12.	Hawaii	49		12.	Vermont	10	
	13.	Georgia	36		13.	Texas	8	
	14.	North Dakota	34		14.	South Carolina	8	
	15.	Alabama	34		15.	Washington	8	
	16.	Wyoming	33		16.	South Dakota	7	
	17.	Vermont	31		17.	Georgia	7	
	18.	Tennessee	29		18.	Minnesota	7	
	19.	Delaware	28		19.	Pennsylvania	7	
	20.	New Mexico	27		<b>National Average</b>			
	21.	Ohio	26		20.	Alabama	6	
	<b>National Average</b>				21.	Indiana	6	
	22.	New York	22		22.	Oklahoma	6	
	23.	Connecticut	21		23.	Florida	5	
	24.	Colorado	21		24.	Arizona	5	
	25.	Indiana	21		25.	Colorado	5	
	26.	California	21		26.	Tennessee	5	
	27.	Rhode Island	19		27.	Delaware	5	
	28.	Texas	18		28.	Iowa	5	
	29.	Minnesota	17		29.	Idaho	4	
	30.	Oklahoma	17		30.	North Carolina	4	
	31.	Utah	16		31.	California	4	
	32.	Nebraska	14		32.	Oregon	4	
	33.	Missouri	14		33.	Rhode Island	4	
	34.	South Carolina	13		34.	Ohio	4	
	35.	Kansas	10		35.	New Mexico	4	
	36.	Idaho	10		36.	New Jersey	3	
	37.	Mississippi	10		37.	Connecticut	3	
	38.	Alaska	9		38.	New Hampshire	2	
	40.	Pennsylvania	9		40.	Wisconsin	2	
	41.	Montana	7		41.	New York	2	
	42.	Illinois	7		42. Michigan -1			
	43.	Iowa	6		43.	Alaska	-2	
	44.	Arkansas	5		44.	West Virginia	-3	
	45. Michigan 3				45.	Arkansas	-3	
	46.	Oregon	2		46.	Utah	-3	
	47.	Wisconsin	-1		47.	Louisiana	-3	
	48.	South Dakota	-3		48.	Wyoming	-4	
	49.	West Virginia	-6		49.	Montana	-4	
	50.	Louisiana	-6		50.	Massachusetts	-16	

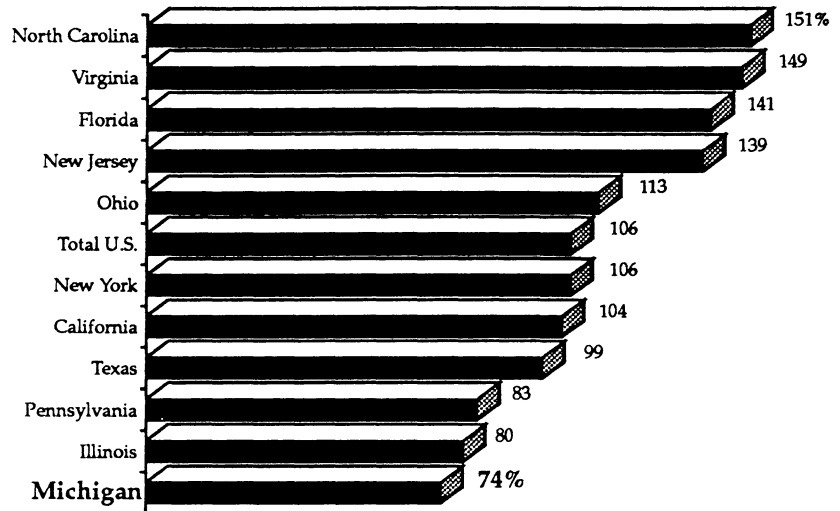
\*Increase in appropriations adjusted for inflation using the Labor Department's Consumer Price Index.

Source: Jaschik, Scott. "State governments to spend \$39.3-billion on colleges and universities in 1989-90." *The Chronicle of Higher Education*, October 25, 1989, 36(8): A1, A20-A21.

No matter how you slice it, our state now ranks among the lowest in the nation in its support of public higher education. As a highly industrialized state undergoing a dramatic change to a knowledge-based economy, Michigan is critically dependent upon quality higher education for well-educated citizens; for engineers, scientists, and other professionals; and for creative ideas that will fuel economic growth and create new jobs. Yet Michigan has now fallen into the bottom ranks of industrialized states in its support of these critical resources. We are being outspent by 30 to 40 percent in state support per student, not simply by prosperous states such

as California, but by neighbors such as Indiana and Ohio. They understand what we have yet to grasp: the world is changing rapidly, and we have to prepare ourselves for tough competition.

**Ten-year Percent Increase In State Appropriations To Higher Education In The Eleven Largest States, 1979-80 to 1989-90 (Unadjusted for Inflation)**



Source: Jaschick, Scott. "State governments to spend \$39.3-billion on colleges and universities in 1989-90." *The Chronicle of Higher Education*, October 25, 1989, 36(8): A1, A20-A21.

Until now we have been able to sustain the quality of public higher education in this state in the face of the catastrophic loss of state support because of our traditional autonomy, so wisely granted almost 150 years ago by the authors of our state constitution. This autonomy allowed Michigan's universities to take strong internal actions, by reallocating resources, redefining priorities, and increasing tuition levels to partially compensate for reduced public support. But in recent years, even this autonomy has been threatened through efforts from Lansing.

Michigan's present level of public support is simply inadequate to maintain over the long run a system of higher education that is competitive on a national basis. We recognize that the choices before Michigan are not easy. We must address pressing social issues of employment, health, social welfare, and crime in an effort to meet the important needs of our citizens for today. But we must also balance these more immediate needs with the investments necessary for our future. We simply cannot continue to address the symptoms of our problems of the moment without addressing their causes. If we don't invest in cures, our symptoms will in time become fatal.

For generations the people of Michigan sacrificed so their children could have a better life. They had faith in education. We must now rekindle that faith and that commitment to the future. We must care for our children's future as much as we attempt to address our present needs and desires.

## The Governor's Commission on Higher Education

The alarming situation for higher education in Michigan has not gone unnoticed by public leaders. A loud warning was voiced back in 1985 by the Governor's Commission on the Future of Higher Education in Michigan. The Commission clearly identified the fact that "public higher education in Michigan is at a crossroads."

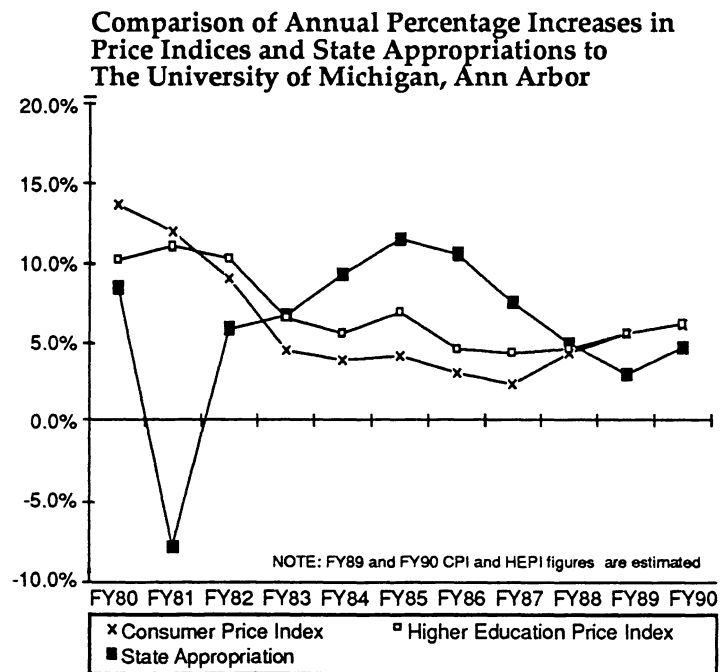
It noted that the per capita support of higher education had fallen from a position of national leadership to one of the lowest levels in the nation. Further, it noted that Executive Order cuts had played havoc with planning, resulting in maintenance deferrals, equipment purchase cuts, and eroding support for fundamental activities—all at a time when other states were rapidly increasing support for their systems of higher education. It credited Michigan's universities with launching a systematic process of improving efficiency and redirecting the system. In particular, it noted that from 1980 to 1984, over one hundred programs were eliminated, thereby indicating the discipline, good management, and commitment of leaders of higher education to use public funds responsibly and frugally.

The report concluded that if nothing were done, higher education in Michigan was likely to face a future in which mediocrity was coupled with inaccessibility, a totally unacceptable result for Michigan's citizens. To quote the conclusion of the report:

"To provide wide access to a higher education system of mediocre quality is to perpetrate a hoax of Michigan's citizens."

## The Particular Challenge Faced by the University of Michigan

As the state's flagship institution, the University of Michigan has been at particular risk. Despite its critical role, the University has been particularly disadvantaged in its efforts to achieve adequate state support in recent years.



Due in part to the intensely political dynamics of the legislative process and in part to the absence of any public policy in higher education, the University has been consistently given the lowest priority in state appropriations for over a decade. More specifically:

1. The University of Michigan has ranked last, fifteenth among the fifteen public institutions, in five of the past six years in its increase in state appropriations.

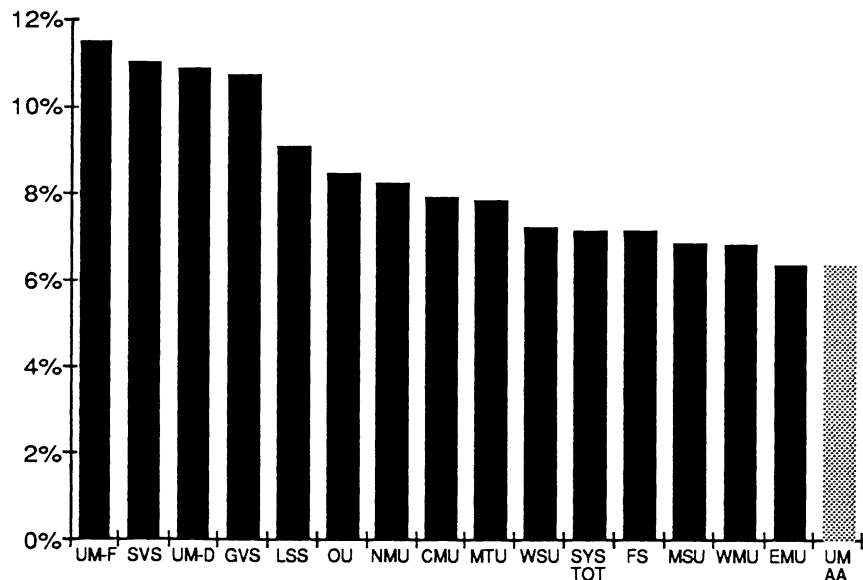
**Ranking of UMAA Annual % Increase in State Appropriation Relative to 15 Michigan Public Universities**

FY81	10th
FY82	9th
FY83	14th
FY84	4th
FY85	14th
FY86	4th*
FY87	15th
FY88	15th
FY89	15th
FY90	15th

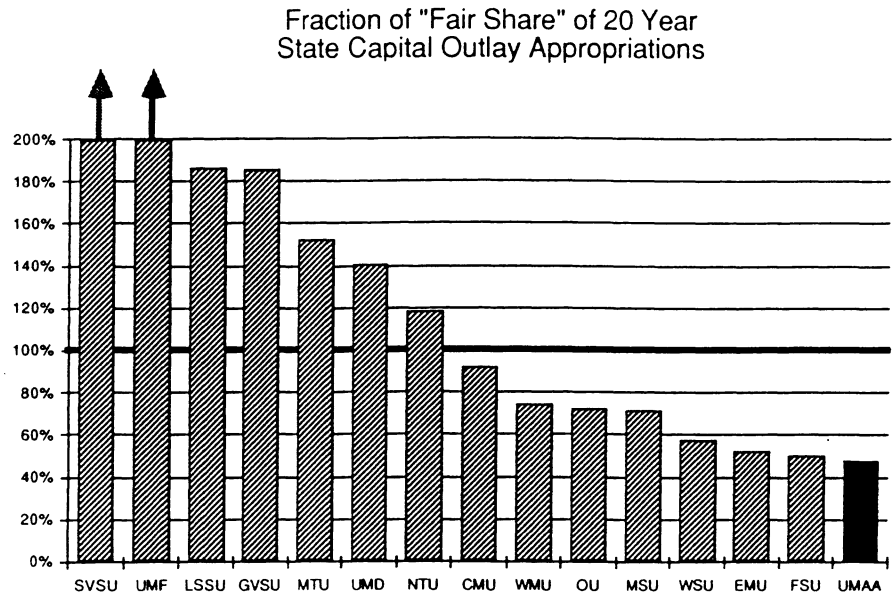
\*15th without Research Excellence Fund, which was implemented in 1986.

2. The combination of low priority within the legislative appropriation process, coupled with the general erosion in state support of higher education in Michigan, has led to a situation in which state appropriations to the University have exceeded the inflation rate in only four of the past ten years.
3. Over the past two decades, the University of Michigan ranks last among Michigan's public universities in its growth in state appropriation.

**Compound Growth Rate in State Appropriations Michigan Public Universities: FY71 - FY90**

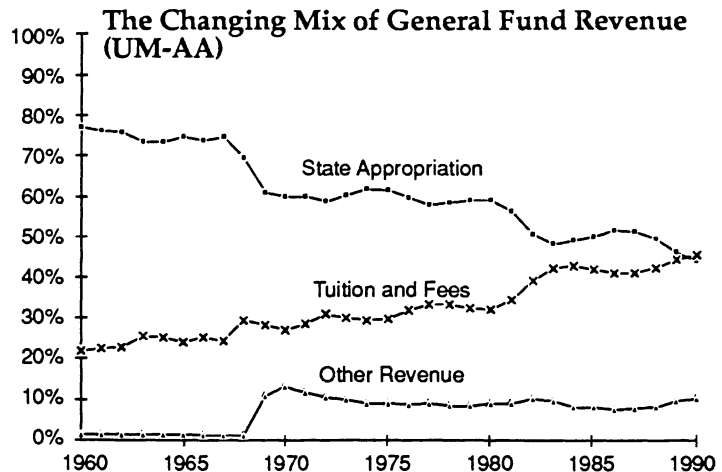


4. A similar picture of eroding priorities appears with the University of Michigan's share of state capital outlay support for academic facilities, where again it ranks last in state support over the past two decades.



5. Indeed, during the past twenty years, the state has provided funding for only two new academic facilities on the Ann Arbor campus—and then only at a 50 percent participation rate.
6. Over the past two decades, UM's peer public institutions (Big Ten, Pac Ten, ACC) have been benefiting from an average capital outlay of \$25 M to \$50 M per year for facilities. In sharp contrast, UM has received less than \$4 M per year over this period.

As with the state's other public universities, the constitutional autonomy of the University has been the key factor in enabling it to sustain the quality of its programs and its capacity to serve the state in the face of eroding state support. The University has been able to sustain—at least for the moment—its quality in the face of this alarming erosion in appropriations only by a combination of extraordinary internal management actions. These difficult but necessary actions were: the focus of limited resources only on the very highest priorities, intensified efforts to attract resources from the federal government and the private sector, and the increase of tuition and fees.



The impact of these efforts is obvious as state appropriations have become a dwindling proportion of the University's operating funds. For example, by FY1990, state appropriations had slipped to less than 43 percent of the University's General Fund (unrestricted) operating funds and less than 15 percent of its total funding.

Further, even this strategy of setting internal priorities, coupled with the development of alternative sources of support, has been threatened in recent years by Lansing's efforts to interfere with the University's autonomy in the areas of tuition, nonresident enrollment, and even curriculum and faculty hiring criteria. It seems clear that such efforts, if successful in the face of inadequate state appropriations, will cause serious and permanent damage to the University.

## What Has Happened to Our Priorities?

What is wrong here?

Who is to blame?

Is the problem with our schools and colleges themselves? Certainly public education in Michigan must take stronger actions to improve quality, and strive harder to operate in a cost-effective manner. But our schools and colleges simply cannot provide the access to quality education without stronger public support.

What about our elected public officials? I believe that most of our leaders, whether in Washington or Lansing or our local communities, would like nothing better than to make education their highest priority. They would love to become known as the "Education President" or the "Education Governor" or the "Education Party." They understand clearly the importance of investing in our human resources.

But they also face formidable constraints. In the end, they must be responsive to the wishes of the electorate. And the sad fact is that in the privacy of the voting booth, the body politic today says: "No more taxes!" "No more crime!" "No more cuts in social services or national defense!" And our public officials have no choice but to respond.

No, the real finger of blame for the crisis we face in education should be pointed, as Michael Jackson would say, at "The Man in the Mirror" . . . at you and at me.

We are the ones who fail to demand the highest quality in our educational institutions in Michigan.

We are the ones who steadfastly resist a tax base adequate to support both our needs and desires, while providing an adequate level of support for quality education in this state.

We are the ones who generally are too busy to help our own children in their studies or participate in their activities.

We are the ones who insist on building more and more prisons, even when

we know that these funds come at the expense of education and human services—which are, of course, the only true long-term solutions to crime.

We are no longer investors in the future. We are consumers, depriving our children of the opportunity that we ourselves had.

Our approach to education, like to so much else in our society, can be summarized by that T-shirt slogan: "Eat dessert first. Life is uncertain!"

Something has changed in Michigan. . . and in America.

I was brought up in a long tradition in which one's first responsibility was to one's children. My parents scrimped and saved for my college education. My wife and I have done the same for our daughters.

Saving for a college education came first. . . before a house, a second car, an exotic vacation.

But today's generation is different. It is almost as if the "ME" generation of the 1960s has grown up into comfortable Yuppiehood. Few save any more for their children's college education. Few support adequate tax programs to support public education. Yet most jump on the band wagon to force institutions to constrain tuitions to artificially low levels, either not realizing or not caring that they are undermining the quality of the education their children will receive—while depriving many others from less fortunate backgrounds of the opportunity for college education because of the erosion of financial aid programs in the face of inadequate tuition revenue.

Perhaps our dilemma is in part due to a generation which has vigorously defended its rights, but failed to step up to its responsibilities. Whatever, it is clear that while the public gives lip service to education, in the privacy of the voting booth they tell our public officials something quite different: to invest elsewhere—by building roads or prisons or football stadiums rather than educating our youth.

I must say that I find the attitude that we have taken as a society toward our most precious resource, our youth, is both callous and alarming. I, for one, simply cannot accept the excuse that we cannot afford this investment in the educational opportunities we offer our children. To be sure, the immense social needs for welfare assistance, medical care, prisons, and all of the other programs that drain our tax dollars are compelling. However, by choosing to meet these needs with resources taken away from our system of public education, rather than through reforms in our tax structure or political system, we have in reality mortgaged our future by withdrawing the educational opportunities from our youth. We seem to have forgotten the commitments that past generations of citizens have made to provide us with outstanding educational opportunities. Instead we choose time and time again to deny these to our children and their descendents.

But there is a different way to look at it. The real issue here is not the magnitude of our investment in education, it is rather the priority that we as a community, as a state, and as a nation place on investing on our children. To put it bluntly, we should feel both embarrassed and ashamed for robbing our youth, indeed our future, to pay for our own excesses.

But suppose we take the cynical view that the challenge of responsibility and stewardship simply will not be a compelling enough argument to re-evaluate the importance of investing in human capital. There is an even more compelling argument, one suggesting a strong vested interest.

If we do not invest in the youth of today, then it is clear that they will not become a sufficiently productive workforce to keep this nation strong and prosperous in the years ahead. To make this more apparent, let me note that by the year 2000 there will be only three workers to support each retiree, and one of these will be a minority. Therefore, unless we make the investments today, you and I are not going to have much to look forward to once we reach the point where we must be supported by this society.

But there is an even more cynical way to look at the challenge of public education. That is simply to evaluate it as one of a series of alternative investments. From this perspective, which do you believe makes more sense: to invest \$3,000 per year to keep a pre-school child on track, to invest \$5,000 a year to achieve a strong K-12 education, to invest \$10,000 per year to sustain a strong college education, or to invest \$25,000 a year to put someone in jail--and then lose the income and taxes paid by this person as a productive member of our society. The answer seems obvious, albeit frequently ignored!

It is important for all of us to keep in mind that our own quality of life . . . our job . . . our retirement security . . . will be determined by the quality of the Michigan workforce. A second-rate education will lead to a second-rate workforce . . . and to a second-rate quality of life for us all.

For generations the people of Michigan sacrificed so their children could have a better life. They had faith in education. We must now rekindle that faith and that commitment to the future. We must care for our children's future as much as we attempt to address our present needs and desires.

## Concluding Remarks

I would like to conclude my remarks by challenging the state, its people, and its leadership.

### **Challenge to Higher Education**

In a very real sense, our state has entrusted to us its most valuable resources--its youth and its future. To be responsible stewards of the public trust, it is clear that we must strive to achieve greater cost effectiveness in our use of public funds. I can assure you that we are doing just that, and we will do more.

It is essential that we become staunch guardians of the quality of our institutions. For in education, as in every other aspect of American life, quality will be the key to our future. We need to give our children the best education and the best chance for the future that we can. We should be willing to pass to them what we ourselves have received: an opportunity for a better life. To us falls the responsibility of taking the forceful and courageous actions necessary to sustain and enhance this quality. In the long run the



people of this state both demand and deserve nothing less!

**A Challenge to the People of Michigan**

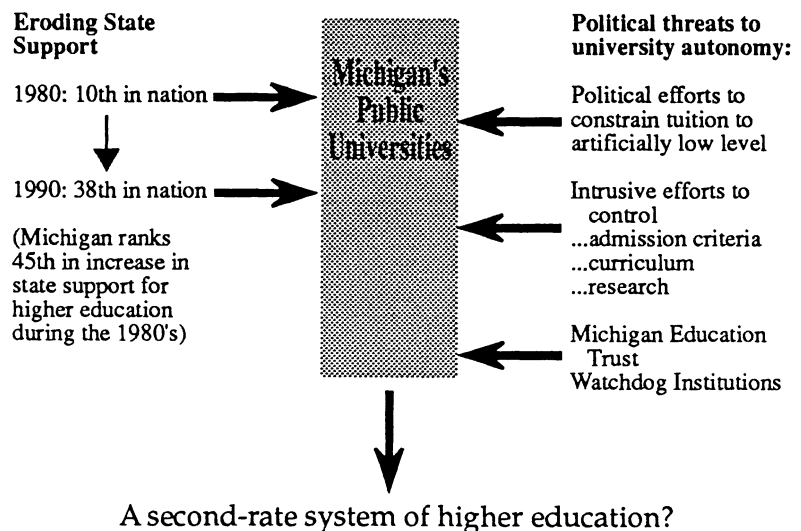
Higher education represents one of the most important investments a society can make in its future, since it is an investment in its people. It is indeed the case that our state has developed one of the finest systems of higher education in the world. But we also remember this has resulted from the willingness of past generations to look beyond the needs and desires of the present and to invest in the future by building and sustaining educational institutions of exceptional quality--institutions that have provided those of us in this gathering today with unsurpassed educational opportunities.

We have inherited these marvelous institutions because of the commitments and the sacrifices of previous generations. It is our obligation as responsible stewards--not to mention as responsible parents--to sustain these institutions to serve our children and our grandchildren. It seems clear that if we are to honor this responsibility to future generations, we must re-establish the priority of both our personal and our public investments in education, in the future of our children, and hence in the future of our state and our nation.

**A Challenge to our Elected Leaders and to those Aspiring to Public Office**

1. I ask you to work with us to develop and implement a strategy to bring Michigan from the very bottom among the states to a position once again of national leadership in our support of public higher education.

**The Squeeze Threatening Public Higher Education in Michigan**



2. It is critical that we end the present freeze on capital outlay appropriations for higher education, now entering its fourth year, and begin to deal with the seriously deteriorating facilities on our campus.
3. Let us respect the constitutional autonomy of our institutions and preserve this for generations to follow as the best safeguard for maintaining quality public education accessible to all.
4. It is important to remember that we are all guardians for the moment of an extraordinary resource for our state, one of the world's finest systems of higher education, a system that has resulted from the commitment and the sacrifices of eight generations of Michigan citizens. Let us work together to serve the people of Michigan, to educate new generations, and to provide the ideas and the discoveries to build and sustain our quality of life.

## A Challenge to Us All

Today the State of Michigan faces serious challenges that will clearly determine its future prosperity and well-being: the challenge of pluralism, the challenge of participation in a global community, the challenge of the age of knowledge, and the challenge of change itself. As we approach a new century, our state--just as our nation--is undergoing a profound and difficult transition to a new economic order. Our fabulously prosperous industrial economy--an economy that allowed us to build some of the world's greatest institutions, including some of its finest universities--is rapidly disappearing. Our challenge for the decade ahead is to take the steps necessary to build a new knowledge-based economy that will be competitive in a world marketplace.

Let there be no mistake about it. This will not be an easy transition. And the outcome is still very much in doubt.

But I am optimistic. I believe we can meet the challenge of the knowledge-based, global society that is our future. But it is also clear that to do so will require sacrifices on all of our parts.

It will take a renewed commitment to that most fundamental of all characteristics in the new economic order: quality.

And it will take a renewed investment of that most critical of all resources for our future, our system of public education.

Let me end by calling on you, as citizens of this state to join us in a partnership for the future, a partnership that restores both our public and our personal investments in education, in our people and their ideas, in our children, and in our future.

## Appendix

### Myth and Reality: The Cost of Public Higher Education in Michigan

Today, both across the state and across the nation, we find a rising tide of resistance to college tuition levels. Although this is primarily driven by the rapid increase in costs in private institutions, it has propagated as well in public institutions because of pressures encouraging government to intervene at both the state and federal level and essentially to dictate tuition levels—in effect to fix prices and control the marketplace.

So what is so dangerous about this trend? Isn't it necessary to keep those greedy colleges from gouging students and their parents? Isn't it necessary to keep a college education affordable for those of limited means? Well let me lapse once again into my background as an engineer and destroy several popular myths for you:

#### **Myth 1: Tuition levels at Michigan's public universities are out of control.**

Over the past seven years, the tuition rates for resident undergraduates at the University of Michigan have increased by 41 percent. This is not only less than most other public and private institutions across the nation (which have seen increases in the 40 percent to 60 percent range), but it is less than the higher education inflation rate of 45.6 percent during this period. Hence, in real terms, tuition levels at the University of Michigan—and at other public institutions in the state—have been quite stable.

#### **Myth 2: Tuition levels in Michigan's public universities are high.**

Not only is this statement quite incorrect, but in reality tuition levels at Michigan's public universities are quite low and comparable to those of most other public universities throughout the nation. The roughly \$2,000 to \$3,000 per year of annual tuition and fees charged to undergraduates in Michigan's public universities represents an incredible bargain when compared to all other alternatives: public or private education in Michigan or across the nation. Indeed, it now costs more to attend the private secretarial school Cleary College (\$4,400 per year) than to attend the University of Michigan (\$3,200) per year. Further, Michigan students face far higher tuition levels at peer public institutions (UC Berkeley tuition runs \$9,000-

\$10,000 per year), and at peer private institutions (Harvard, Stanford, and Cornell tuitions run \$14,000-\$16,000 per year).

NATIONAL UNIVERSITIES		
Rank	Rating	Tuition
1	Stanford Univ. (Calif.)	65.5% \$11,880
2	Harvard Univ. (Mass.)	64.5% \$12,015
3	Yale Univ. (Conn.)	62.7% \$12,120
4	Princeton Univ. (N.J.)	52.7% \$12,550
5	Univ. of California, Berkeley	36.4% \$ 5,776*
6	Dartmouth College (N.H.)	34.5% \$12,474
7	Duke Univ. (N.C.)	32.7% \$10,320
8	Univ. of Chicago (Ill.)	30.0% \$12,120
	Univ. of Michigan, Ann Arbor	30.0% \$ 8,828*
10	Brown Univ. (R.I.)	25.5% \$12,960
11	Cornell Univ. (N.Y.)	24.5% \$12,300
	Massachusetts Institute of Technology	24.5% \$12,500
	Univ. of North Carolina, Chapel Hill	24.5% \$ 4,106*
14	Rice Univ. (Tex.)	23.6% \$ 5,125
15	Univ. of Virginia	21.8% \$ 5,800*
16	Johns Hopkins Univ. (Md.)	19.1% \$11,000
17	Northwestern Univ. (Ill.)	18.2% \$11,637
18	Columbia Univ. (N.Y.)	17.3% \$11,900
19	Univ. of Pennsylvania	16.4% \$11,976
20	Univ. of Illinois, Urbana-Champaign	15.5% \$ 4,410*
21	California Inst. of Technology	14.5% \$11,000
22	College of William and Mary (Va.)	13.6% \$ 7,234*
23	Univ. of Wisconsin, Madison	12.7% \$ 5,580*
	Washington Univ. (Mo.)	12.7% \$11,400
25	Emory Univ. (Ga.)	10.9% \$10,050
	Univ. of Texas, Austin	10.9% \$ 3,991*

Note: Ratings are percentage of presidents making school in top 10 of their category and are based on a 53.9 percent response rate, with 110 of the 204 presidents surveyed responding.  
\*Tuitions are for out-of-state students. In-state tuitions are U. Calif. Berkeley \$1,476; U. Mich. \$2,684; U.N.C. \$504; U. Va. \$2,350; William and Mary \$2,750; U. Tex. Austin \$871; U. Wisc. Madison \$1,820. U. Ill. Urbana-Champaign \$1,046.

There are other interesting comparisons. It is now estimated that 60 percent to 70 percent of college-age students own an automobile. Well, the cost of a degree at a public university in this state is less than the cost of that car. Furthermore, this investment in a college education will be paid off in only a couple of years following graduation because of the very high earning capacity of a college graduate relative to those without college degrees.

Perhaps it is because the absolute tuition levels at public institutions are so low, that it is easy to become confused in a comparison of costs by simply noting percentage increases. I don't need to remind you that a large percentage of a small number is still a small number. Further, it should be noted that the true cost of higher education at a public institution is not tuition, rather it involves those other costs associated with room and board, books, travel and other expenses. Indeed, tuition represents less than 25 percent to 30 percent of the cost of a college education to Michigan residents.

**Myth 3: The increasing tuition levels at Michigan's public universities are pricing them out of reach of all but the very wealthy.**

Again, this statement is not only incorrect, but it is seriously misleading. In fact, the tuition levels at Michigan universities are the principal mechanism used to assure access to public higher education for those without adequate financial resources. The reason, of course, is the presence of effective financial aid programs. For example, at the University of Michigan, we have a policy that guarantees that all Michigan residents are provided with adequate financial aid to meet their needs until graduation. In fact, roughly 65 percent of our Michigan resident students receive some form of financial aid, which amounted to over \$140 million last year. Further, families with incomes of up to \$60,000 are generally eligible for some form of financial aid.

The tragedy here arises from the fact that one of the primary sources of financial aid is from the revenue generated by tuition, since state support is inadequate for this purpose. In a sense, public universities in our state, just as universities across the nation, have asked those more affluent families that have the capacity to pay a little bit more of the true cost of education for their students in order to provide the capacity for those less fortunate to attend. Hence, by artificially constraining tuition levels to unrealistically low levels, state government in fact cripples financial aid programs, thereby excluding those students who are less fortunate.

**Myth 4: Surely the fact that tuition rates are increasing faster than the CPI reveals that universities are not cost-effective and are exploiting the marketplace.**

While it is true that tuition has increased more rapidly than the CPI, it is important to note that resident tuition levels at public institutions throughout the nation were essentially at token levels until the late 1970s when public support began to wane. It has been clear public policy, both within the state and across the nation, that the nominal tuition levels charged to resident students of public institutions should be increased somewhat to reflect a shift in support from general tax revenues from those who benefit the most and who most can afford to pay. Nevertheless, in absolute terms, these tuition levels are still extraordinarily low (\$2,000-\$3000 at public institutions, compared to \$10,000-\$15,000 a year at private institutions).

A second point here has to do with the inappropriateness of using an index such as the Consumer Price Index. The CPI measures the increase in costs of fundamental needs such as housing, food, and so forth. But suppose one were required to live in a bigger and bigger house each year, then it is clear

that costs would increase more rapidly than this index. Well, in many ways this is just what is happening in higher education, since in most fields, the amount of new knowledge doubles every few years. In fields such as engineering, medicine, business administration, and public health, universities are required to provide increased value added as the knowledge base explodes. Furthermore, in many of these fields, the costs associated with the infrastructure necessary for education—computers, laboratory instrumentation, medical devices—all so very necessary to the education and training of tomorrow's professionals, have caused costs to increase. Therefore, it seems understandable that since both the amount and the nature of education provided to students moving into the professions are changing dramatically, that the cost of education should reflect these changes.

Third, even if we were to accept that the CPI was the appropriate index, it must be recognized that almost everything in our society has increased more rapidly than the CPI. The cost of a new automobile, the cost of health care, the cost of a house all have increased over the last twenty years more rapidly than the cost of higher education. Furthermore, disposable personal income has also risen at dramatic rates. For example, over the past fifteen years tuition has increased 232 percent, while personal income has risen 252 percent. As a result, there has been very little change in the percentage of income required to meet the total costs of a college education in a public institution. Furthermore, dramatic increases in financial aid have extended educational opportunities to many who could have never afforded a college education in years past. In a very real sense, a college education at a university such as the University of Michigan is more affordable today than it has ever been before.

But perhaps the primary factor driving the increasing costs of public education in this state has to do with public policy itself. It is clear that over the last two decades higher education has simply not been a priority of this state. As I have noted, the State of Michigan has fallen from among the nation's leaders in its support of education to far below the national average. Indeed, it now ranks last among the large industrial states in its public support of higher education. Hence, in an effort to preserve the quality of their programs and the access provided through financial aid, Michigan's public universities have been forced to increase tuition levels beyond the nominal levels which characterized public education in years past. It is clear that without tuition increases to offset the erosion in tax support, the quality of education in Michigan would have been seriously damaged.

**Myth 5: The price of a college education is no longer worth it.**

This statement is almost so ridiculous that it seems pointless to refute it. Nevertheless, let me venture a few points. Nationwide, it is clear that the money invested in a college education results in one of the highest returns of any investment a student or a family can make. Across all fields, the net return of an undergraduate education is in excess of 10 percent. In knowledge-intensive professions, of course, it is far beyond that.

Furthermore, the modest tuition levels charged by public institutions represent an incredible bargain. At a leading university such as the University of Michigan we estimate that we invest roughly \$25,000 per year, per student to create the learning environment necessary to prepare our graduates for the 21st century. Since our present instate tuition levels are \$3,200, we are asking parents to contribute less than twelve cents on the dollar. Not a bad deal I'd say!

**Myth 6: Hold on now! My taxes pay for the college education of my children.**

Once again, a popular but quite false myth. Over the past two decades, the University of Michigan's share of tax revenue has dropped by 42 percent from 3.74 percent, to 2.15 percent. Hence, today, only about two cents of each tax dollar goes to the University. In other words, someone paying \$5,000 per year in state taxes will be paying only about \$100 of those taxes to support the University.

More specifically, the typical parent over his or her entire earning career, will pay less than \$3,000 in taxes for the University of Michigan (assuming thirty years of earnings). By way of comparison, the tuition costs of a Michigan undergraduate education are currently about \$13,000. Hence, it seems clear that the Michigan taxpayer is not shouldering the real costs for a college education in a Michigan public university. Rather, it is being borne

primarily by a combination of other sources, including tuition, federal support, and private support.

### **The bottom line...**

Let me summarize this analysis of the myths and realities concerning college tuitions with two other questions that I think are the key ones involved in this debate:

### **Question 1: How good do we want public education to be in the State of Michigan?**

Higher education is one of the most competitive industries in America, with over 3,500 institutions competing for students, faculty, and funds--not to mention competition faced from the international marketplace. Hence, if we decide how good we want our institutions to be, then it is possible to arrive at a quite accurate estimate of how much we will have to invest to achieve that quality. This estimate then will determine an investment per student and per faculty necessary to achieve a certain level of quality.

Do we want the University of Michigan to be as good as Harvard or Stanford? Then it will take about \$50,000 per year, per student. Do we want the University of Michigan to compete with Berkeley or UCLA or North Carolina? That will require about \$30,000 per year. Should we compete with Ohio State or Minnesota? Then it will take about \$18,000 per student, per year. Perhaps we would like to see the University of Michigan compete with institutions of somewhat lesser reputation and distinction, such as Mississippi or Montana? Then this would require only about \$10,000 per year. Why not go beyond even this and compete with great institutions like Southern North Dakota State and Hoople. . .well, I think you get the point. It is clear that if our state wants to pay only bargain-basement prices for education, then we are clearly going to end up with bargain-basement quality.

### **Question 2: Who is going to pay for this quality?**

Will the state taxpayer pay for it? The federal taxpayer? Parents? The student (through loans and deferred payments)? Private philanthropy from industry, foundations, alumni, and friends?

Well, try as we might, we have been able to find no other options. Someone has to pay to achieve quality. And unfortunately, it seems that whether it is public tax dollars or the private dollars of parents and their students, fewer and fewer people are willing to step up and accept this responsibility.



