

Appropriation Testimony

Introduction

Introduce Gil Whitaker

I would like to begin by making a few general comments before moving to the details of the FY91-92 budget request and responding to your questions.

My Message

Michigan as a state is changing very rapidly...

We are becoming more diverse, more pluralistic as a people. Indeed, almost 85% of the new entrants into our workforce during the 1990s will be people of color, women, or immigrants.

Our economy and commerce are becoming every day more interdependent with other nations as the United States becomes a world nation, a member of the global community --

And we are rapidly evolving into a new post-industrial society, in which the key strategic resource necessary for prosperity and social well-being has become knowledge itself, that is, educated people and their ideas.

Indeed, knowledge will play the same role that in the past were played by natural resources or geographical location or labor pools...

In the pluralistic, knowledge-intensive, global future that is our destiny, it is clear that the quality of and access to

...education in general

...higher education in particular

...and research universities

such as the University of Michigan are rapidly becoming the key factors in determining the strength and prosperity of our state.

Let me give three examples of just the past few months

Genetic Medicine

Medical scientists

Applications of molecular genetics to medicine

- i) Discovery and cloning of gene responsible for cystic fibrosis
- ii) Discovery of the gene responsible for neurofibromatosis...Elephant's Man disease
- iii) How to inject normal genetic material into a cystic fibrosis gene and cure it
- iv) Identified gene responsible for body's inability to handle cholesterol
- v) Within past several weeks have now discovered the gene responsible for diabetes

What an extraordinary contribution!

Note: 40 years ago, Michigan conducted the clinical trials for the Salk Vaccine...

Jonas Salk was a faculty member at UM!

An example of how Michigan research has great impact on our society!

Computer Network

NSFnet, the major computer network, operated by the University in collaboration with IBM and MCI, passed the milestone of linking together over one million users in the U.S. and around the world...at over 500 sites.

The next stage, the National Research and Education Network or NREN, now stands poised to continue this momentum in the year ahead with strong support building both in the White House and in Congress.

Today in Washington, UM, IBM, and MCI are announcing the formation of a new nonprofit corporation to manage this "interstate highway system" for information transfer.

Solar Car Race

ii) A team of over 100 Michigan students won the solar car race from Florida to Michigan, thereby earning the right to represent the United States in the world competition in Australia this fall.

They then went on to finish 3rd in the world...behind factory teams from Switzerland and Honda.

An extraordinary performance...for a group of students.

But, even more to the point, they helped to develop a technology that may have great impact on our society.

What do we get for our 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?

Well, there are certain obvious payoffs...

- i) an outstanding education of roughly 50,000 students
Including 29,000 undergraduates)
(80% of them Michigan residents!!!
- ii) the production of 12,000 graduates at
all degree levels
in all disciplines and professions

But they got far more for this investment

Dollars:

- i) In comparison to the \$270 M invested by the state, the UM attracted to Michigan over \$300 million in federal support--most of which came in the form of sponsored research contracts and student financial aid.
- ii) Further, the students attracted to our programs contributed roughly \$300 M additional dollars to tuition and fees...
- iii) In addition, the auxiliary activities of the University contributed another \$800 M to the state's economy...

iv) Or \$1.7 billion, in all -- a multiplying factor of six-fold

Cost/Benefit Implications for Michigan Residents

State spends: \$30 per year per citizen for UM

UM pumps back: \$220 per year per citizen

UM stimulates: \$2,000 per year per citizen

Calc:

1.8 B budget

\$270,000,000 appropriation

9 million citizens

economic multiplier = 10

Job Creation

UM generates 120,000 jobs each year through direct expenditures

Calc:

\$1.8 B budget

\$20,000 per job ==> 90,000

30,000 UM employees

Value of Education

Students spend \$200 per day for UM education

Students will earn \$2,000 per day as a result

Calc:

UM B.S. lifetime earnings: \$3,000,000

HS graduate earnings: \$1,500,000

720 days for B.S. degree

Economic Development

i) But far beyond that, we estimate the true economic impact of the University multiplies its state appropriation by at least a factor of ten or more...

ii) For example, the UM's engineering programs-- supported in part by the Research Excellence Fund, are credited as a key to the recent growth of a \$5 billion industry in industrial automation in the southeastern Michigan area.

- iii) Each year the University spins off dozens of new companies, creating new jobs and attracting new dollars to our state
- vi) Each year the UM produces thousands of engineers, scientists, business executives, lawyers, teachers,...and all of the other professionals so necessary to compete in the knowledge-based economy which characterizes our world.

Health Care

Last year, over 750,000 patients were treated in the UM Medical Center...regarded as one of the world's great centers of quality health care.

Indeed, our 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 doctors.

I would suggest there is not a person in this room whose life has not been...or will not be touched at one time by our doctors and medical scientists!

It is clear that the public research university...
...an institution for which the University of Michigan is not only the prototype, but perhaps also the flagship...
...touches the lives of a great many people in a great many different ways...

Through education, research, and service...
through health care, economic development, and
...yes...even through a sense of pride in their athletic accomplishments.

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 player in providing the knowledge resources...knowledge itself, and the educated citizens capable of applying it wisely... necessary for our prosperity, security, and social well-being.

“The solution of virtually all the problems with which government is concerned: health, education, environment, energy, urban development, international relationships, space, economic competitiveness, and defense and national security, all depend on creating new knowledge---and hence upon the health of America’s research universities” (Bloch)

The Particular Challenge Faced by Higher Education in Michigan

1. Numerous studies over the past several years have suggested that Michigan is seriously underinvesting in its "knowledge infrastructure"...by as much as 30% to 40% relative to other states.
2. The challenges faced by K-12 education are apparent. By any measure, K-12 is in serious trouble.

We are "A Nation At Risk"...

Note: it is bad enough that...

10% of Americans are illiterate

25% now fail to complete high school

But in recent years we have learned that in international comparisons of achievement in science and mathematics,

our grade school and high school students score at the very bottom of industrialized nations.

But most American students are simply not developing these skills.

They aren't even learning the basics...

reading, writing, critical thinking, languages
geography, history, literature, the arts

3. 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 high, the long term prognosis is poor if we continue as 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 6th in 1965) in its public support of higher education to among the lowest in the nation.

Let's look at the comparisons for a moment:

Among the states, Michigan currently ranks

i) 33rd in appropriations per student

ii) 37th in appropriations as a percent of personal income

iii) 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 farther behind with each passing year:

In fact, the increases we have provided in our support to higher education now rank

iv) 42nd over the past two years

v) 45th over the past ten years

nearly dead-last among the states.

Hence, no matter how you slice it, our state now ranks among the lowest in the nation in its support of higher education.

Yet Michigan has now fallen to the bottom of the ranks of industrialized states in its support of these critical resources.

Whether measured in terms of

state appropriation per student or fraction of our tax dollars directed toward higher ed,

it is clear that in comparison with other states, our 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 have become consumers of education,
not investors in the future.

As a nation we have been spending our children's future to pay for greedy consumption and quick fixes.

Instead of investing in our schools

We have squandered money on junk bonds and leveraged buyouts, on payouts and write-offs to people who already have enough.....or more than enough.

Conclusions

It is clear that our state is in the midst of a profound transition...

...from an industrial economy based upon the abundance of natural resources, unskilled labor, and, to some degree, constrained, slowly moving domestic markets...

To a knowledge-based economy, characterized by intensely competitive world markets, rapid change, and--most important of all--educated people and their ideas.

This has not been...and will not be...an easy transition to make.

The impact of these changes are already painfully apparent to Michigan's workers and industries.

The truth is that the outcome is still very much in doubt!

Whether we will emerge from this transition as a world economic leader once again...with a strong, prosperous--albeit new--economy producing jobs and improving our quality of life.

Or whether we will fail to heed the warnings...

...to make the necessary investments and sacrifices today necessary for strength and prosperity tomorrow...

And become an economic backwater in the century ahead.

It is clear that we have arrived at a fork in the road ahead.

My central theme is that education, broadly defined, will be the pivotal issue in determining which of these two

alternative futures will be Michigan's...and America's.
Indeed, I am absolutely convinced that the dominant issue of
the 1990s will be the development of our human resources.
Previous economic transformations were closely associated
with major public investment in infrastructure such as
railroads, canals, electric networks, and highways.
In the coming economic transition, an equivalent
infrastructure will be an educated population.
The actions we must take today...
...and the investments we must make...
...will clearly determine our capacity to
respond to this future...

Wrapup

We recognize that the choices before Michigan are not easy.
We must address pressing social issues of employment,
health, social welfare, we must meet the important
needs of our citizens today.
But also we must balance these immediate needs with
investment
in our future.
If we don't invest in cures, our symptoms will, in time,
become fatal...

The Challenge of Investment

Years ago our parents stepped up to their responsibilities
by sacrificing to give us an opportunity for a better life
through education.
They had faith in education.
Now it is our generation's turn.
We must rekindle that faith
and that commitment to the future today.
We must care for our children's future as much
as we attempt to our present needs and desires.
Today we are called upon to demonstrate a similar
commitment
to our children...to the next generation...to the future.

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 and our nation have developed the finest systems of public education in the world...

But we must also remember this 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...and it is our obligation as responsible stewards--not to mention as responsible parents--to sustain them to serve our own children and 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.

Appendix

Specific Needs

1. We applaud the Governor's recommendations for the FY91 Budget year...and we applaud the strong message of support we have received thus far from the Legislature.

However let me not that the recommended 4% increase while courageous in the face of a tight budget year, will at best only cover the minimum inflationary cost increases in our universities, and in itself

it fails to address either the past underfunding or necessary program investments in our institutions.

Hence, we must respectively ask that the Legislature take further steps to approach the funding increase requested by the Presidents' Council of 8.5%, while considering a multiple year approach to restore Michigan to at least the top third of states in the nation.

Five years of freeze on capital outlay projects have caused serious damage to our campuses. Urgent projects have been bottled up. Considering the seriously inadequate support of capital facilities on many of our campuses during the 1970s, we simply cannot continue much longer without some mechanism for rebuilding our infrastructure.

For example, on UMAA, over the past 20 years we have received state funding for only 2 academic buildings--and that at a 50% participation rate. This amounts to an average of \$3.6 M in state funding for new facilities over the past 20 years... compared to a level of \$25 to \$50 million per year for peer campuses such as UCB, UNC, Illinois,...

The Governor's recommendation of an increase on the bonding cap of the State Building Authority addresses this urgent need in a fiscally responsible manner, and we urge its support.

3. Over the past several years the REF has been of critical importance in strengthening and diversifying Michigan's industrial base. At Michigan, we have multiplied this investment by attracting \$2 from federal and industrial sources for every \$1 of REF...while stimulating

roughly a tenfold investment increase through economic activity. Yet we face serious challenges:

- i) REF funding has not kept pace with inflation, hence forcing program cutbacks
 - ii) Creation of the new competitive program has drained funds from the original program while introducing an additional layer of bureaucracy into the process
 - iii) The real impact of REF can only be achieved through very long term funding. The year-by-year micromanagement of the program focuses a very short term focus, thereby undercutting long term efforts.
4. The erosion in state support of public universities
Let me point out another serious concern. Over the past decade, the actual portion of the state appropriation going to the operating support of public universities has decreased from 94% to 91%. While it is, of course, the prerogative of the State Legislature to prioritize its allocations for higher education, I respectfully must question whether it is appropriate that the support of private higher education and specific programs should be the fastest growing components of the state appropriation base--particularly during a period in which the State of Michigan has fallen to 45th in the nation in its support of its public universities! (Example: Recent recommendation of State Board of Education that we triple tuition grant program!!!)

Other Issues:

1. Equity funding:
"comparable funding for comparable programs" ...
...requires program by program comparisons with peer institutions

Quite frankly, I believe that simplistic institution comparisons are quite meaningless

(To this end, I would note that from this broad perspective, the UM costs across the UM system (\$6,162) are quite comparable to those of other state universities (MSU: \$5,462, MTU: \$5,856, WSU: \$7,557) ...and far less than peers in other states!)

Real problem is inadequate support across system ...cannot address equity by further cutting institutions

...can only address equity by increase ..."leveling up", not "leveling down"

Face it, ALL institutions in this state are inadequately funded relative to peers!

In this regard, I would note that it is very important to stress this peer comparison, since these are the institutions we compete against for faculty, federal grants, etc.

Michigan's peers include UC, Wisconsin, Illinois, UNC Harvard, Stanford, MIT

2. Impact of Erosion

Subtle...but measurable

i) Shift in nature of funding...

...Tuition now exceeds State Ap

...Fed now exceeds State Ap

ii) Loss in confidence

...difficulty in recruiting faculty.

...beginning to lose faculty to states like California

iii) Erosion in ratings

...UM only state institution in USN&WR

...dropped from 6th to 20th

...professional school drop

Why does it matter to Michigan whether its institutions rank at the top? Because they set the pace for the quality of everything else in this state...

...K-12 education

...health care

...financial activities

...industrial base

...professional infrastructure

...quality of life

And most important of all, our capacity to attract and retrain the outstanding people we need to be competitive in a global marketplace!!!

Tragedy...

It takes decades to build a reputation...

...and once it is lost, will be very hard to regain (as witnessed by Texas, etc.)

3. Costs of Education

Whitaker Task Force

4. Library and Info Tech

Need a strategy of many strands...

Institutions must have flexibility to address these

...whether through consortia

...special relations with vendors

The worst thing you can do to our institutions during a period of financial stress is to constrain our options, our capacity to manage our affairs.

5. Do you believe the UM has been discriminated against during the past several years:

i) UMAA has ranked dead-last in magnitude of appropriation increase in 5 of last 6

years...and has been at the system average
in only one year of the last ten.

in one one year

dead-last

- ii) In only 4 years of the last 10 has our increase in appropriations been above the rate of inflation (HEPI)--hence, in effect, we have had our real appropriation cut in 6 of the last 10 years.
- iii) Over the past decade, UMAA ranks last, among state universities, 15th among 15, in its compound growth rate in state appropriations
- iv) Over the past 20 years, UMAA ranks 14th, next to last, in state capital outlay per FYES.
- v) To be in last place, year after year, decade after decade, is bad enough, but when you realize this is last place in a state that now has fallen to the bottom of the nation in its public support of higher education, it is easy to understand why we are so concerned!!!