

## Introduction of James Heckman

We are privileged to have James Heckman with us tonight. As most of you know, he is the Henry Schultz Distinguished Service Professor of Economics at the University and a recipient of the Nobel Prize in Economics.

Professor Heckman **is a prodigious student of Economics and of Society** who has published more than 200 books, papers and articles covering an **extraordinary** range of subjects. **His writing is striking for its clarity of thought and for its originality.**

The Nobel Prize was awarded for Professor Heckman's work in **Micro econometrics**. As computers enable us to collect and analyze larger and larger databases of information about individuals, households and firms; new statistical problems arise. **For example**, we can collect large amounts of data bearing on the relationship between years of education and wages earned, but the correlation is flawed if it doesn't take into account the wages which might have been earned by those who choose not to work; some of them because they cannot command a sufficient wage. **As a result, individuals with relatively high wages and relatively long education will be overrepresented in the sample and the regression or representation of the relationship between education and wages will be understated.**

Professor Heckman devised what is called the **Heckman Correction** which, when applied to the wage–education analysis, first examines the likely probability of working and then, in a second step, applies the result as an additional variable to make the analysis of wages and education more accurate.

**In a sense, this is similar to one of the important conceptual breakthroughs in Celestial Navigation.** For many centuries, voyagers estimated their position by reference to the sun and stars but the process was very inexact. The breakthrough came when navigators realized that by measuring the angle of a celestial reference, they could determine how far away they were from a known point on the earth's surface; the point directly underneath that reference at that exact time. **In other words, instead of asking “where am I with reference to a particular star” they would ask “how far away am I from a known point on the surface of the earth” - defined by the position of that star at that time.** Accordingly, a series of such observations would give an increasingly more accurate estimate of position.

**Professor Heckman's breakthrough is conceptually similar and of similar magnitude;** asking how each aspect of a selection of data differs from what careful analysis might lead one to expect. **How different is it from a defined point or standard?**

Building on his knowledge of economics and econometrics, Professor Heckman has explored many issues which are at the **junction of Economics and Public Policy**. This juncture is, of course, of particular interest to those of us in this room. Take, for instance, education. **Given finite resources, how should they be allocated between various groups?** How should money be divided amongst competing priorities such as retraining workers who have lost jobs due to technological change or to outsourcing, remedial education at the high school level, Head Start type programs, reducing class sizes in the public schools, teacher training, or pre-school programs? **What other initiatives** might serve to increase skill levels in the population? If money is less of an issue, will more students opt for higher education? How important is early childhood education?

In exploring some of Professor Heckman's work which came up when I typed his name into Google, I found a fascinating study entitled **“Skill Policies for Scotland.”** In this study which he co-authored, Professor Heckman looks at education and training in Scotland; how and when skills are

acquired and how human capital is created. **My wife, who is from Scotland, saw what I was doing and became so interested that she made me print out all 120 pages of the study!**

Some idea of Professor Heckman's wide range of interests is given in his own answer to a question posed by the National Academy of Sciences. The question was "**What are your research interests?**" Here is his reply:

*"I am interested in the evaluation of social programs (especially education, job training and skill acquisition); cost/benefit analysis; analysis of counterfactuals; racial discrimination and black economic progress; statistical methodology – clinical trials; randomization and social experiments; economic and social history; female labor supply; econometric theory; economic theory and demography."*

I would like to pause here for a moment, and offer some editorial comment. At no point in History has it been more important to apply careful, disciplined, peer reviewed reasoning to the questions facing us today. How will we deal with nuclear proliferation, particularly the acquisition of nuclear capability by non state entities? What will we do about the impact of our society on our environment? How much of the violence we do to each other is rooted in our shared genetic heritage? Are our schools and universities providing educational opportunities appropriate to the needs of our society?

People like Professor Heckman do the heavy lifting for all of us. This is difficult, sometimes lonely work. Money, fame and outside pressures tempt scholars to select data and skew conclusions to fit prevailing dogma. **Given the complexity and urgency of the questions facing us today, research based institutions like The Harris School and The University of Chicago and scholars like Professor Heckman are of transcending importance to all of us.**

I am honored to present **Professor James Heckman.**

E. Packer Wilbur  
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