James Heckman on the Drivers of Human Success

By Dan Richards
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A video of this interview is available in two parts: Part 1 and Part 2.

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James J. Heckman is the Henry Schultz Distinguished Service Professor of Economics at The University of Chicago and the recipient of many awards. In 2000, he received the Nobel Prize in Economics.

His recent research deals with such issues as evaluation of social programs, the economics of the labor market, and alternative models of the distribution of income

Dan Richards interviewed Professor Heckman on January 5 at the annual meeting of the American Economic Association in Atlanta, GA. This interview is one of a series that Dan conducted at that conference.

Let me start by asking you about your work leading up to your Nobel Prize in 2000.

My work was basically focused on trying to evaluate and understand social programs. That's a basic question in social policy that accrues across social science more broadly, but it's also in economics.

If the government tries a program, such as a jobs training program, or a program to advance the health of disadvantaged children, or tries to aid in various ways, such as through a tax policy, what's the best way to understand how much that policy has contributed or subtracted from total welfare? I've developed a number of methods and studies to try to understand exactly whether or not various social programs and interventions have been helpful or harmful.

So you've tried to conduct more rigorous and quantitative measurement and analysis.

We ask basic questions: If we do something now today, what would the world look like if had we not done it? Or, turning it around, if suppose we hadn't done something, how much better or worse would the world have been?

You've done a lot of work lately around human capital policy. You've suggested the nature versus nurture debate is obsolete.

It's totally obsolete. Correct.

Generally, in popular discussions, everyone who was educated in college over the last 20 or 30 years will typically say that there is this contrast between the role of nature and the role of nurture (family and social environment). What we have come to learn from modern genetics, which has huge social implications, is that it's neither nature nor nurture. It's both combined. The fact is that nature – genetic material and other aspects of biology – interact strongly with nurture, and interact in such a way that actually produces genetic changes.

It turns out that two identical twins can have exactly the same genetic material, but as a result of the experiences they face in their lives, the expression of that genetic material will be fundamentally different. We've come to understand this.

The work you have done has identified nine factors that drive success in human development. One of those is that early intervention has high payoffs.

What I have brought to this discussion is an economic analysis.

I have done cost-benefit analyses where you can identify the benefits of early intervention versus later intervention. Suppose that society takes as its point of view, as it typically does, that it doesn't matter when we intervene, as long as we intervene. How costly is that? What I have done is quantify that cost, using some of the methods that won me the Nobel Prize, but now applying that to a much richer area of human development.

Before, I was worried about job training programs – what the Europeans called active labor market programs. These were programs for high school dropouts, criminals, and for rehabilitation for late adolescents and young adults. What I found, in a series of studies, is that those programs, as they are currently constituted, have very low economic returns and, in some cases, we found even negative returns.

But then as you go back earlier in the life cycle, where the human being is developing and creating and skills are being formed. Once we go back – early, early, early – we find extremely high rates of return.

Can you discuss your work in analyzing the Perry study?

Just recently I computed the rate-of-return to the so-called Perry preschool program in the United States. That was a program given to disadvantaged children in a suburb of Detroit some 40 years ago. Kids were randomly assigned to getting a high-quality, active learning preschool program and others who were denied that program.

The program's participants were followed. The kids are now 50 years old.

What did we find? We found that in substantial ways – in terms of crime, education, welfare dependency, home ownership, earnings – that the Perry participants earned a lot more than those who did not participate in the program.

The economic rate of return was higher than what you get on equity. If you take the historical real return on US stocks, which has been about 5.8 or 6%, the return on Perry is somewhere over 6% and can range as high as 10%. It depends on different assumptions.

How does this differ from the Head Start program, which goes back to the 1960s?

It differs in several ways. What we have come to understand is that Head Start is a start in the right direction, but it's not intensive enough and it doesn't generally start early enough to as effective as it could be.

There are two dimensions. What we didn't think of in those early intervention programs was about the quality of the program. That quality of the program was substantially compromised. A lot of the Head Start participants' parents were actually serving as mentors to the children themselves. So you really weren't changing the quality of the environment. So some Head Start programs were very enriched and some were not.

We learned about quality and we learned that starting early makes a big difference.

There is a wonderful group at the University of British Columbia, people like Adele Diamond and Tom Boyce, showing that in very important ways, in terms of personality and in terms of health, that early years are shaping the whole structure of what we are and what we become.

As an economist, I see this as an investment, where you are enhancing the skill base. And that makes all the other investments so much more productive.

The motto is skill begets skill and productivity begets productivity. The dynamics of this are fascinating to understand, and I think they can shape and reshape the way we think about social policy.

One of the observations in one of your articles is that, when you adjust for income, minorities participate more in college and advanced education than we would otherwise expect.

Let me be careful. What I really said was a little bit different from that. What I suggested was that it wasn't income *per se*. Once you adjust for ability at the time they are going to college, you find, irrespective of family income, an able minority, partly because of affirmative action and other programs, is more likely to be going to college.

But – and this is the second part of it – we typically think of ability as fixed – some frozen thing you are born with. The key development in this whole literature is how we can produce ability, and that ability has multiple aspects. It's more than just IQ. IQ is not solely genetic. You can change IQ in a permanent and positive way. There is much more needed for success in life than just IQ.

In some sense you think that minorities are beaten down because of ability gaps and achievement gaps that open up long before kids go to school. But it's not genetic – at least not purely genetic.

That's the important part of my research that has huge implications for social policy.