Diversity adds up to profits in economists' math equations

By Katy Human / The Dallas Morning News

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When people debate affirmative action, they usually talk about the good or harm it does for the individuals involved or for society. But having a diverse set of managers may also make the company more profitable, a new analysis suggests.

"There are actually efficiency reasons to care about the diversity in your organization," says economist Susan Athey of the Massachusetts Institute of Technology in Cambridge, Mass.

Dr. Athey and two colleagues used mathematical equations to represent the costs and benefits that companies should consider when choosing whom to promote. The economists essentially created mathematical models of managers who always make the right decision - the one that maximizes their company's profits.

What emerges from the models are hypothetical companies that behave like real companies in some interesting ways, says Christopher Avery, an economist at Harvard University who worked with Dr. Athey.

For example, the models help explain why companies that are not diverse tend to stay that way, unless people in the minority get some sort of boost. The results also suggest that over the long term, a diverse company may be more profitable than a nondiverse, or homogeneous, one.

In general, a company should choose whom to promote based on the expected future value of workers. In a paper under review at an economics journal, the researchers use math to describe how different types of workers may be more or less valuable to a company. Value calculations depend on two key factors - how similar the worker is to people in management and how far into the future companies make projections.

Any managerial majority - whether it is characterized by men, white people, people from Ivy League schools or extroverted people - tends to define the corporate culture. Workers tend to thrive when they match the majority, while workers in the minority can suffer.

Sociologists have described how this tendency can keep the upper echelons of a company pretty uniform.

If almost all managers are extroverted, for example, introverted people - who may prefer not to join Friday happy hours - can lose out on the informal mentoring and information gathering that can happen over a beer. This informal mentoring can significantly help workers who are similar to the majority and hurt workers in the minority.
"People who are similar are going to fit in better," says Dr. Athey. That means that majority types improve more quickly and are more likely to be promoted than minority types.

As the new economic models indicate, this inequality-reinforcing bias makes perfect sense in the short term. For a company, it can be costly to promote someone who isn't going to work out.

Imagine two workers - one a minority type and one a majority type. Even if these two are perfectly matched in terms of past performance, a majority type worker who fits in better is likely to become more valuable, more quickly.

"Men and women who start out equal don't end up equal, due to mentoring," says Dr. Avery.

According to the math, that can mean that a company that is not diverse tends to remain not diverse, since the company would take an economic hit by hiring minorities.

It's a mathematical glass ceiling, Dr. Athey explains. "Firms face a cost of transitioning from homogeneous to heterogeneous. The cost is that along the way, the first few people [in the minority] are not very valuable to you because they're not functioning very well in your organization," she says.

Interestingly, the math also indicates that when companies do somehow get a diverse set of people in management, they tend to stay diverse. That's because they can then attract, train and support the best and the brightest in the field - an increasingly diverse group, says Dr. Athey.

"The diversity of current management affects the quality of the pool of subsequent management candidates," the authors wrote in their paper. To attract the most talented people in the future, a company should start hiring and promoting minorities now, Dr. Athey says.

"You can get trapped," Dr. Avery explains. "If you're not managing the process carefully, you might tend to drift in a direction that's not profitable in the long run." A company loses out by ignoring talented workers who don't match the majority.

The trick, then, is to steer a company that is not diverse over a mathematical ditch toward diversity.

Hiring or promoting one or two minorities isn't enough. In the models, companies that try that usually end up back where they started. The minorities don't get enough mentoring to do well.
"Mathematically, there's a sense in which you need a critical mass of people in leadership roles, and until you have that critical mass, you can't hope to produce a lot more to supplant them," says Dr. Avery.

Social and governmental pressure can force companies to promote a critical mass of minorities, or a company may end up with that critical mass accidentally. If a group of women or minorities find their way into upper management, they may alter the culture enough, or mentor other workers effectively enough, that other minorities can make it up the corporate ladder.

"A firm might rationally oppose the efforts of minorities to reach management early on," the authors wrote, "but if they make sufficient progress on their own, the firm might support their continued efforts with favorable biases."

There's already a bias in most promotion decisions, Dr. Avery says. Generally, managers are biased toward workers that are more similar to them - workers who they suspect will do best in the near future, since they'll get effective training. Companies with a long-term perspective may decide to reconsider those biases, Dr. Avery says, in order to take advantage of available talent.

Edward Lazear, an economist at Stanford University, isn't convinced that the new mathematical models are the best way to describe diversity dynamics in corporations.

"Their argument is that women don't get mentored. That's surely an effect," he says. "The question is, is it a big deal?"

Dr. Lazear thinks that if the model were correct, then one should observe companies splitting up into male-dominated companies run by male managers and female-dominated companies run by female managers. "There's no evidence that that's the case," he says.

But Dr. Avery thinks that there may be some weak evidence that segregation of that sort is occurring. Consider colleges, he says. Ten or 15 years ago, many historically women's or historically black colleges were thinking about integrating, he says. Today, they're quite popular, suggesting that there may be a trend favoring segregated organizations.

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