

# Study explores diversity-innovation link in pulp and paper industry

December 23 2020, by Laura Oleniacz

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The Talley tower welcomes students returning to campus for the fall 2020 semester. Credit: Becky Kirkland

Innovation is key to corporations' success, allowing companies to identify and respond to new market opportunities. In a new analysis, researchers from North Carolina State University compared companies ranked among the world's most innovative with the largest pulp and paper companies to understand how diversity among company leaders

may affect innovation.

The study, published in *Humanities and Social Sciences Communications*, analyzed the gender, ethnicity, age and educational background of members of the boards of companies in the pulp and [paper](#) industry. Researchers then compared those findings with the composition of the boards of companies considered to be among the world's most innovative according to Boston Consulting Group's 2018 annual survey and ranking. The study uncovered differences in diversity trends that researchers say could be important to a company's ability to innovate.

"You can see subtle differences in the composition of the boards from a diversity perspective," said the study's senior author Marko Hakovirta, professor and chair of the NC State Department of Forest Biomaterials. "Those subtle differences, in my opinion, can escalate to the culture of [innovation](#) in the company. That goes to the selection of the CEO, who is on the [management team](#) and what the innovation agenda of the corporation is."

The Abstract sat down with Hakovirta to talk about the link between diversity in the company's board and innovation.

## **TA: Why did you focus on the pulp industry?**

Hakovirta: The pulp and [paper industry](#), while it has the potential for innovation, has typically been considered very traditional. The perception is that there haven't been many changes in products or technology. This industry is nowadays called the "bioeconomy," and is highly focused in creating sustainability solutions. We wanted to explore the level of diversity on the boards of the largest bioeconomy companies by revenue by looking at age, gender, ethnicity and education. We compared what we found to the composition of boards of companies considered to be highly innovative.

## **TA: What are some of the opportunities for innovation in pulp and paper?**

Hakovirta: There are opportunities for disruptive innovation related to some of the paper manufacturing processes that are about 100 years old. I would really like to see radical innovation where the fossil-based plastics are totally replaced in packaging, or business models that create solutions to better recycle some of those products. There are a lot of packages that are difficult to recycle because of the plastics or the aluminum in them. I'd like to also see more radical solutions when it comes to digitalization and big data.

## **TA: What were your major findings about how the two types of companies differed in terms of diversity on their boards?**

Hakovirta: In some of the pulp and paper companies, there were cases where you had one ethnicity in the board. When you look at the most innovative companies, you don't see that happening.

In terms of the age of the board of directors of the bioeconomy, there was quite a different distribution. It's more senior. The most innovative companies have a broader distribution, which shows us they have more openness to getting younger folks.

When you looked at the gender side, the distribution was almost the same; there was no major difference there.

There were differences in the educational background of board members between the two groups. The board of directors of [pulp](#) and paper companies have business or economics degrees, even though these are very technical companies. It might be related to the fact that in these

bioeconomy companies where the investments for new mills can cost hundreds of millions or billions of dollars, you need to do a lot of investment planning. Whereas in case of the [innovative companies](#), they have more engineering backgrounds which may perhaps be more connected to technical product innovations.

## **TA: Why were you interested in diversity and innovation?**

Hakovirta: The best, most effective team is the team that has members with diverse backgrounds, and diversity of thought. Innovation is all about new thinking—challenging the norm. If you don't have a diverse team on the board, then that open thinking and practice of challenging the norm may not be as common. And you can see that in this paper. The more diverse the board is, the more likely that companies are considered innovators.

## **TA: What should companies take away from this?**

Hakovirta: Companies should challenge themselves to think about board composition and the selection process. When they select board members, they should look at what skills, capabilities and backgrounds are of interest to the really high-level strategic direction of the [company](#). If they want to be seen as innovators, diversity is a part of their strategy. Pulp and paper or bioeconomy companies should show the real commitment to innovation by having individuals on their boards who represent more diversity and thus [diversity](#) of thought and openness to innovation culture.

**More information:** Marko Hakovirta et al. The importance of diversity on boards of directors' effectiveness and its impact on innovativeness in the bioeconomy, *Humanities and Social Sciences*

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