

# Study shows what business leaders can learn from Formula One racing

August 20 2015, by Jeff Grabmeier

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Formula One racing teams may have a lesson to teach business leaders: Innovation can be overrated.

That's the conclusion from academic researchers who pored over data from 49 [teams](#) over the course of 30 years of Formula One racing. They found that the teams that innovated the most - especially those that made the most radical changes in their cars - weren't usually the most successful on the race course.

Moreover, radical innovations were the least successful at exactly the times when many [business leaders](#) would be most likely to try them: when there were major changes in their regulatory environment.

"We found that it wasn't always good to be the aggressive innovator," said Jaideep Anand, co-author of the study and professor of strategy at The Ohio State University's Fisher College of Business.

"The [conventional wisdom](#) that companies need to embrace change is often wrong."

The study appears in the current issue of the journal *Organization Science*.

Formula One racing is actually a very good venue to study the value of innovation in business, Anand said. It is an innovation-intensive industry with teams of engineers, drivers and sponsors who all have to work

together to succeed.

The independent governing body for Formula One (FIA) imposes changes to racing teams' environments by releasing a new set of rules each year, which is similar to changes in the regulatory and business environment that businesses face on a regular basis.

The FIA rules define basic guidelines for technology advances in the sport and let teams know how much innovation they are allowed to incorporate each year.

Anand said the rule changes are more major in some years than others, allowing teams more leeway in how much change they can make in their cars.

When the researchers analyzed how much the teams innovated each year, and how well they performed on the race tracks, some findings stood out, Anand said.

For one, small amounts of innovation were generally good, but at some point, teams actually performed more poorly when they changed too much.

This was particularly true when the FIA made major changes to the rules, allowing teams more freedom to innovate.

"Teams sometimes believed that the more the rules changed, the more they had to change along with them," Anand said.

"But we found that small, incremental improvements were often better than big changes."

That's because Formula One cars - like many businesses - are complex,

interconnected systems. If you change one part of the system, you risk changing other parts of the system that you want to stay the same.

"There's a risk when you make some kinds of changes that you won't be able to make the whole system work together again," Anand said.

The best path, he said, is usually to make changes on the margins, where you can gain some efficiency without disturbing all the other parts of the system.

Anand and his colleagues did a case study of one particular year in Formula One racing - 2009 - that illustrates many of these larger points.

That year the FIA approved a radical change allowing teams to use a new component - an energy-efficient technology known as the kinetic energy recovery system, or KERS.

This device could store the kinetic energy from the waste heat created by the car's brakes. Once stored in a battery, the energy could be used for acceleration.

The upside was intriguing, but it came with costs, Anand said. For example, it added weight to the car and the driver had to learn how to use the technology correctly.

Several teams jumped at the opportunity to add KERS to their cars, believing the possibilities outweighed the potential costs. But at the end of the year, two teams that did not use KERS - but instead concentrated on other, more marginal improvements - were the ones who finished on top in the standings.

"The KERS example in Formula One shows the dangers of jumping too quickly at the chance to innovate," Anand said. "You don't always get an

advantage by moving first."

The lessons from Formula One can apply to many businesses, according to Anand. Like some Formula One teams, many older, mature businesses are especially tempted by the siren call of nimbleness and agility. They believe that if they can innovate quickly, they can protect their market.

"But if you have a firm that has grown and prospered, you have traded innovation and constant change for efficiency and reliability. Those can be real advantages, too," he said.

Anand said that, in his experience, it is often the top managers of a firm who most believe that they need to change and innovate more.

"Maybe they have too much exposure to management gurus and read too many books," he said jokingly. "The mid- to lower-level managers are often the ones who see how change can create problems for the rest of the system. They are closer to the customers and supplier and shop floor."

Anand cautioned that the results don't mean innovation, even radical innovation, is not sometimes needed in business.

"But we're pushing back at the conventional wisdom that [innovation](#) is always good, and is always the right choice for business. Sometimes there is value in going slow."

Provided by The Ohio State University

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