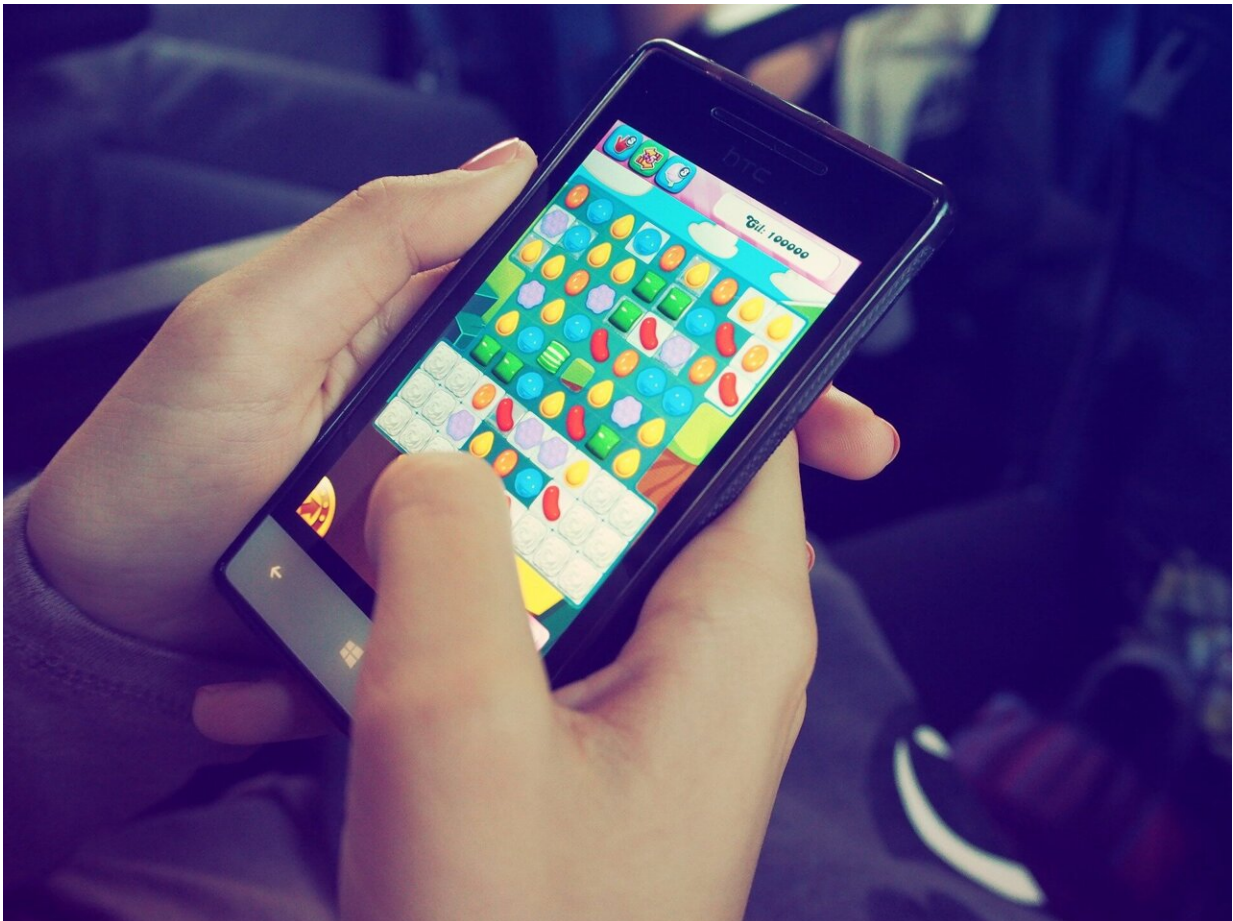


Apps get better when developers diversify, study finds

June 11 2024, by Deborah Lynn Blumberg



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Candy Crush Saga is one of the world's most popular video games, with

more than 5 billion downloads. That's partly because gamers can play it anywhere. It offers versions for multiple platforms, including Android, iOS, and Windows: a practice known as multihoming.

Smaller developers, however, often decide not to pursue multiple platforms because it's costly, can be complicated, and can take significant effort.

They might want to reconsider, however, based on new research from Texas McCombs. It discovers a major benefit for multihoming, one that might outweigh those upfront challenges: It can make the original software better.

Francisco Polidoro Jr., professor of management, finds that developers who multihome learn valuable lessons. They can use those lessons to enhance their product's performance on its original platform, helping it to stand out and get more users.

The work is [published](#) in the *Strategic Management Journal*.

"These challenges end up paying back later on," Polidoro says.
"Eventually, this knowledge benefits users on the original platform."

With Wei Yang from China Europe International Business School in Shanghai, Polidoro demonstrated this effect by analyzing [open-source software](#) packages, developed through open collaboration, from 2012 to 2018. They were housed on GitHub, the world's largest repository of open-source software, hosting more than 30 platforms.

The researchers found that on average, monthly usage on the original platform increased 2.8% after a developer put a [software package](#) on a competing platform. They also found that within six months, usage on the original platform had gone up by 18%.

The effect was even more pronounced for products that are harder to adapt—products that depend heavily on the original platform's hardware or software to function properly.

"Adopting in complex landscapes is very difficult," says Polidoro. After scaling that steep learning curve, developers have "more ideas to play with. That extra information will really help companies to improve things."

He points to developers who multihomed from the PyPI platform to others such as Rust and Go. To adapt to the new platforms, they developed memory allocation techniques they ultimately used to improve performance on PyPI.

Improving a program on the original platform can also help it stand out there, the study also found. Products that were similar to competing ones increased their average monthly usage 5.3% after multihoming.

The findings have implications for creators of software packages and related products such as games and apps, Polidoro says, "Ignoring or overlooking these benefits may lead them to not multihome, because they're too scared away by the challenges, when maybe they should be building on multiple platforms."

The study might also reassure consumers who worry their app experience might suffer when a developer's attention is divided among multiple platforms.

"People may wonder: Is it good or bad for me that this app is also going onto a competing platform?" Polidoro says. "But our findings suggest that users on that original platform should expect that it will eventually be beneficial to them."

Future research could look for benefits of multihoming in other relevant settings. For example, "these effects may be even stronger among paid apps on Apple App Store and Google Play," he adds. Similarly, Candy Crush Saga will soon appear on Xbox, as well. Will it lead to extra downloads on Android and iPhones, too?

More information: Francisco Polidoro et al, Porting learning from interdependencies back home: Performance implications of multihoming for complementors in platform ecosystems, *Strategic Management Journal* (2024). [DOI: 10.1002/smj.3601](https://doi.org/10.1002/smj.3601)

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