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RETHINKING NETWORKS: EXPLORING STRATEGIES FOR MAKING USERS MORE VALUABLE

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Understanding the impact and influence of “network effects” is essential to understanding value creation in digital markets worldwide.

Platform companies such as Google, Apple, Facebook, Amazon, Linkedin, Airbnb, Netflix, Uber, Twitter, Github and Alibaba rely heavily upon ‘network effects’ both as competitive edge and innovation resource. ‘Network effects’ are their ‘secret sauce’ for success.

Our research seeks to identify key ingredients and recipes for making and improving that ‘secret sauce.’ This brief paper highlights several core principles and practices for facilitating ‘network effects.’

Our work strongly suggests that ‘network effects’ insights are directly relevant to innovators and marketers in a wide variety of global industries: from professional services to retail to health care to manufacturing to transportation to government to the ‘Internet of Things.’

DEFINING NETWORK EFFECTS

As people, processes and technologies grow ever more interconnected and interoperable, ‘network effects’ as economic phenomena and business opportunity become even more important. Data-driven digital economy competitors will increasingly invest in how best to create, cultivate, and monetize them.

Technically, economists say ‘network effects’ – known also as ‘network externalities’ – exist when a product’s or service’s value to users increases as the numbers of users grow. But this traditional definition is woefully incomplete. Quality of use and users matters as much or more to value creation as quantity. In other words, the ‘how’ is as important as the ‘how much.’

As media infopreneur Tim O’Reilly, who coined the term Web 2.0, incisively observed, “A true Web 2.0 application is one that gets better the more people use it. [For example] Google gets smarter every time someone makes a link on the web. Google gets smarter every time someone makes a search. It gets smarter every time someone clicks on an ad. And it immediately acts on that information to improve the experience for everyone else.” This same design sensibility holds true for browsing Amazon and Netflix recommendations; hailing or driving an Uber; seeking or offering Airbnb accommodation;and utilizing smartphone apps.

Platform companies like Amazon rely on network effects for their competitive edge.

The more users participate, the more value and valuable experiences can quickly be generated. And the more value created,the more users and innovative uses materialize. That virtuous value cycle simultaneously disrupts and transforms industries worldwide. Value can exponentially increase as costs only marginally grow. This makes the economics of ‘network effects’ combinatorially compelling.

IN DIGITAL ECONOMIES, SUSTAINABLE SUCCESS COMES NOT JUST FROM IMPROVING PRODUCTS, SERVICES AND USER EXPERIENCES BUT FROM IMPROVING CUSTOMERS, CLIENTS, CHANNELS AND SUPPLIERS, AS WELL.

IN THIS RESEARCH BRIEF

- Network effects are the secret sauce that make platform companies successful.
- Network effects increasingly determine innovation opportunity, value creation and growth in the digital economy.
- Making users better makes better users: network effects Innovators invest in both customer and supplier capabilities.
- The network effects virtuous algorithm: segment; socialize; and skillify.

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FUELING INNOVATION AND VALUE CREATION

One clear but ironic enterprise implication? For all the discussion and debate around 'platforms,' empirical observation indicates the most valuable economic and business impact come from 'network effects.' The main mission of digital platforms may well be making 'network effects' possible. 'Platforms' arguably can be seen as means and media to a 'network effects' end. They should be managed accordingly.

Our preliminary work conjectures that 'network effects' not platforms offer the better and more pragmatic 'organizing principle' for innovation and value creation in the digital economy. Investments enabling healthy and wealthy portfolios of 'network effects' become mission critical to enterprise success.

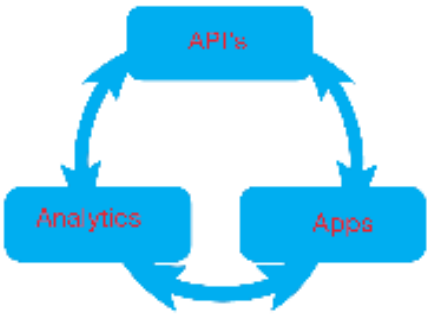
The crucial economic insight: 'network effects' are 'assets'that turn users into assets. Enabling them empowers users to create new value. That value proposition has to be clear from the beginning. 'Network effects' thus become 'de facto' investments in the capital, competence,creativity and capabilities of their participant be they human or machine. (The 'Internet of Things' is arguably the next great 'network effects' marketplace.)

MAKING USERS BETTER MAKES BETTER USERS

'Network effects' don't merely create more value for more users, they rise to the challenge of making more users more valuable both to the enterprise and each other. Network effects are special because they make their contributors more valuable to everyone in and on the network.

Simply put, making users better makes better users. That 'network effects' investment philosophy also serves as an important design heuristic. What tools, techniques and technologies make users 'better'? How might data-driven advice or an innovative app make their network participation more productive? The answers to these questions both invite and encourage innovation.

"NETWORK EFFECTS CAN BE POWERFUL, BUT YOU'LL NEVER REAP THEM UNLESS YOUR PRODUCT IS VALUABLE TO ITS VERY FIRST USERS WHEN THE NETWORK IS NECESSARILY SMALL. PARADOXICALLY, NETWORK EFFECTS BUSINESSES MUST START WITH ESPECIALLY SMALL MARKETS."



Network effects emerge from the API's, analytics, and apps that the enterprise offers.

This is as important for the supplier (developer) side as for customers and clients. Enabling 'network effects' on both sides of two-sided market's is central to this next stage of IT 'Innovation Transformation.'

For example, Uber drivers and iPhone app developers-benefit as much as Google searchers and LinkedIn job hunters from investments in improving their capabilities. The digital access, algorithms and analytics that enhance individual performance on a network simultaneously facilitate and accelerate 'network effects.'

ASSESSING ROI OF NETWORK EFFECTS

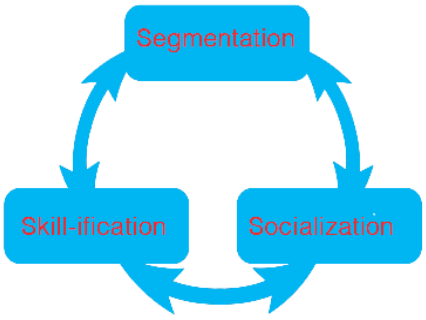
This fundamentally shifts strategic investment perspective. In digital economies, sustainable success comes not just from improving products, services and user experiences but from improving customers, clients, channels and suppliers, as well. This challenges marketing and innovation executives to explicitly address key questions about assessing returns on their 'network effects' investments:

- How do we make it easier for our users to participate and create 'connections' they see as valuable?
- How do we make it easier for ourselves to identify value from user participation, contributions, and links?
- How should we (re)organize ourselves to best harvest the value of 'network effects' to measurably boost the quality, opportunity, and 'user experiences' of our offerings?

No 'cookie cutter' methodologies or algorithms for answering these questions exist. But our work offers simple yet powerful research frameworks to effectively begin. The 'Triple-S' research framework, for example, has been successfully employed by organizations around the world seeking to usefully experiment with 'network effects.' It asks executives to deconstruct 'network effects' into three interrelated components: segmentation, socialization, and skillification.

SEGMENTATION

Organizations identify specific 'user segments' – within customers, channels, developers, suppliers, etc. – they deem particularly important or valuable. For example, the customers who make the most referrals; the suppliers who propose the most innovations; the channels that enjoy the most loyalty, etc. The '80/20 Pareto Principle' is a popular discriminator; i.e., which 20% of customers are the most profitable; which 20% of suppliers create the most problems, etc. In short, which users does the organization want to target,invest in and create 'network effects' around?



The Virtuous S-Cycle: The enterprise value proposition relies on segmentation, socialization, and skill-ification.

SOCIALIZATION

The number and power of social media platforms – inside the firewall and out – is impressive. Between Yammer, Chatter, Sharepoint, LinkedIn, Pinterest, Twitter, YouTube and Yelp, etc., users are spoilt for choice. Their abilities to communicate, coordinate, self-organize and share high-bandwidthinformation continue to increase.

Different platforms evoke different relationships and results. For example, Sephora, the global French cosmetics company, found that its Pinterest community contributors spent roughly 10 times more on its products than Facebook followers.

The point is not that Pinterest is a superior promotional platform for cosmetics over Facebook but that different social media platforms likely facilitate different kinds of 'network effects.' Organizations not only need to define how they want users – and user communities – to share, they must decide how they want to measure their 'RONE' – Return on Network Effects.'

SKILLIFICATION

Skillification is about creating new capabilities in users and user communities. Sharing and editing imagery,for example, represents a capability that goes beyond sharing and editing text. Skillification means enhancing human capital.

Google, for example, found that its best and most satisfied customers used 'Google Analytics' well.Consequently, the company launched its first-ever global MOOC in 2014 to teach Google Analytics. Making users better, makes better users. Other companies use YoutTube videos to train users or offer apps to build valuable new user capabilities. New capabilities create new opportunities for complementing and/or supplementing existing 'network effects.'

THE POWER OF THREE

The deliberate interdependencies between these three themes is central to the framework's effectiveness. [See S-Cycle graphic.] Explicitly linking Skillification to Socialization to Segmentation provides a potent method for enabling network effects to examine network effects. Managing them each independently or functionally is a recipe for failure.

To wit, 'segmenting' users makes it easier to encourage 'socializing' between them and targeting 'skill-ification' offers for their real and anticipated needs. 'Socializing' users allows organizations to identify relevant 'segments' to serve and/or 'skillify,' as desired. 'Skill-ification' offers encourage users to 'self-segment' and 'socialize' advice and comment around the proffered apps and capabilities.

Organizationally, network effects are shaped by how well the enterprise segments, socializes, and skillifies customers and clients, as well as developers and suppliers. How do users share and socialize the information and insights that matter most (to them)? What skills and capabilities make users more valuable to themselves, each other and the enterprise? The Triple-S framework offers a relatively simple, safe and scalable way of exploring these issues. Additionally, data-driven enterprises can identify and capture the Triple-S relationships in two-sided markets: that is, firms can see how Triple-S customer behaviors influence Triple-S responses from developers. Conversely, they can monitor how Triple-S 'network effects' from developers invite and ignite new 'use cases' from customers and clients.

This approach is consistent with what venture capitalist and PayPal co-founder Peter Thiel observed about 'network effects' success in his book, Zero to One:

"Network effects can be powerful, but you'll never reap them unless your product is valuable to its very first users when the network is necessarily small. Paradoxically, network effects businesses must start with especially small markets.

Facebook started with just Harvard students — Mark Zuckerberg's first product was designed to get all his classmates signed up, not to attract all people of Earth. This is why successful network businesses rarely get started by MBA-types: the initial markets are so small that they often don't even appear to be business opportunities at all."

Technically and architecturally, of course, network effects emerge from the APIs (Application Programming Interfaces), analytics and apps the enterprise has on offer. [See graphic on page 2.] These directly map to the Triple-S segmentation, socialization, and skill-ification framework; the organizational challenge becomes creating virtuous cycles between apis, analytics, and apps instead of managing them independently.

Whether this should be led by a CNEO – Chief Network Effects Officer – or overseen by a 'Network Effects Council' is open to debate. What appears beyond dispute is that the pervasive and transcendent nature of 'network effects' requires specific and explicit top management attention. Ironically but appropriately, the more innovatively organizations use 'network effects' to create value, the more valuable they will become.

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