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Book review

Vojtěch Kotrba

Prague University of Economics and Business,
Faculty of Economics,
Prague,
Czechia

✉ vojtech.kotrba@vse.cz

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The Voltage Effect: How to Make Good Ideas Great and Great Ideas Scale

by **John A. List**

Currency, 2022.

In 2022, American professor John A. List published a new book titled "The Voltage Effect: How to Make Good Ideas Great and Great Ideas Scale", which quickly became a bestseller. In this book, the author summarizes one of the areas of his recent academic (mainly at the University of Chicago) and commercial work (at companies such as Uber and Lyft). The author often mentions his colleagues who have implemented many of the experiments with him, such as Anya Samek and Steve Levitt. The main contribution of the book is the description and experimental validation of the idea's path to scale. This may be the idea of an entrepreneur who wants to break into a large enough market with their company, or it may be the idea of a politician who wants to improve the lives of the citizens of their country at the lowest possible cost. The author also presented the book as part of a lecture at the Prague University of Economics and Business in May 2022 on the occasion of receiving the honorary degree of Doctor oeconomiae honoris causa.

The author is an active and well-cited economist, mainly engaged in field experiments. His research began with an examination of the market for memorabilia baseball cards and their specific characteristics. His experiments took him from Florida to Costa Rica, then to Africa, Asia, and finally to the University of Chicago, one of the top economics universities in the world. In 2002, he was a member of George W. Bush's cabinet. In politics, it is particularly crucial to extend an idea to the national level and to test its functionality and concrete impacts with data. However, as the author notes, little of this is being done.

According to Straight Talk on Evidence (2018), 50% to 90% of ideas fail during the scaling process. There is no single characteristic that guarantees an idea will scale. In the first part of the book, in five chapters, the author describes five basic obstacles that an idea must overcome to have a chance at success. He also emphasizes the importance of data and knowing how to use it. In the second part of the book, the author gives advice in four chapters on how to maximize the potential of an idea as it scales. Throughout the book, the author uses many examples from the real world and from

experiments he has conducted, making it easy for even non-specialist readers to understand the ideas presented. From a scholarly perspective, the fact that the list of scholarly sources is not clearly cited in the text may be considered a slight shortcoming. While sources can normally be found at the end of the book, in the text the reader is not able to fully check their relevance. However, given that this book is aimed at a wider audience, this may have been a deliberate choice. Academic readers may need to accept this.

In the first chapter, the author focuses on the first obstacle that an idea must overcome to scale and become successful. Companies often try to validate an idea by piloting it first, but a pilot may offer positive conclusions that do not necessarily guarantee the idea's scalability. This phenomenon, called false positivity, involves various distortions that can reassure the entrepreneur of the correctness and scalability of the idea, even though it ultimately fails on a larger scale. Examples of this include confirmation bias and bandwagon bias. When testing an idea, we often have a natural tendency to selectively focus on facts and arguments that support our view and ignore those that contradict it. As a result, the success of an idea can be confirmed when we unconsciously overlook its shortcomings.

The bandwagon bias was introduced by Solomon E. Asch (1956) in his now-famous experiment, which involved judging the correspondence of line lengths in two images. Subjects were asked to identify which line in the second picture matched the line in the first picture. In addition to the subjects, an actor who knew the true target of the experiment participated in the experiment. When the actor deliberately gave a wrong answer, the number of wrong answers from the subjects increased. This bias has many applications in marketing, for example, as the desire to fit in influences consumer decision-making. However, it can also cause false positivity for policymakers.

The author's recommendation is to replicate pilots several times to prevent false positives. Real-world examples show that people often repeat pilots before making a decision. For example, when getting to know a partner, they may go on multiple dates before deciding to get married. It is also possible to seek multiple opinions about a medical problem, although this is less common in the Czech Republic than in the United States. The author particularly emphasizes the importance of accurate medical diagnoses. According to Johns Hopkins Medicine (Martin A. Makary and Michael Daniel 2016) over 250,000 Americans die each year from misdiagnosis, making it the third most common cause of death after heart disease and cancer. In this case, a false positive can have fatal consequences.

At the end of this chapter, the author addresses the problem of the duper effect, in which the results of a pilot are falsified to expand an idea. The main motivation for falsifying results is the presence of too-high incentives. If a person in a company is only rewarded for successfully testing an idea, they will have a higher incentive to cheat. The author suggests a solution to this problem is to hire an independent tester who has no incentive to make the pilot a success.

In the second chapter, the author focuses on knowing your customer. He illustrates the importance of this obstacle by testing paid VIP membership customers of Lyft, where he served as the chief economist for a time. He divides Lyft customers into two groups: the first group will drive more often after obtaining a discounted membership, and Lyft will make money from these customers because of their increased frequency

of driving. The second group will ride just as often, but at a cheaper discount, resulting in a loss for the company. The fundamental question is what the ratio between these groups of customers is. Paid VIP membership did not pay off after a thorough piloting at Lyft. Another example given by the author is schooling in Chicago Heights, a poor suburb of Chicago, in which he sought to raise the level of education and increase the likelihood of a better life for those from that background. The author was successful in this endeavor, but it was not without complications. In Chicago Heights, various incentives were put in place to encourage parental involvement in their children's education. However, these incentives only worked for Hispanic families. For African Americans and whites, the same incentives did not work. The reason for this was that only Hispanics were multigenerational, meaning that if a parent was unable to help a child with preparation, a grandparent could substitute.

The author adds the example of Gopuff, which initially focused only on food delivery for students (such as tobacco, alcohol, and snacks) but was interested in expanding. To do so, the company had to discover which other customer groups it could target. Gopuff decided to focus on parents as its next customer group and started offering a range of products for this type of customer, such as diapers, baby food, and medicine. The company was successful in this venture and then the COVID-19 pandemic hit, causing the company to grow by 400 %. In the Czech environment, Rohlík is a similar company.

However, the problem of proper targeting also applies to academic settings that study people. Social sciences, such as psychology, sociology, or economics, can also be subject to selection bias. Experiments in these disciplines are most often conducted on so-called "WEIRD" populations, i.e. populations from Western, educated, industrial, rich, and democratic societies. Most often, experiments are conducted on university students. Conclusions drawn from testing these subjects are often not valid elsewhere. As an example, the author cites Indians in the Peruvian Amazon, for whom the results show that even if they are unfairly victimized, they will not want to punish the perpetrator. If an idea that has already been piloted is to be implemented, it is necessary to check whether it will be applied to a group with similar characteristics. In the third chapter, the author focuses on factors that cannot be expanded indefinitely. As an example, he cites human capital. If the success of a company is based solely on an excellent manager, that manager cannot be replicated and placed in other companies. This can happen, for example, with chefs of renowned restaurants. The author takes a closer look at Jaimie Oliver, who was surprisingly successful in expanding his restaurant network after becoming famous. However, this success was not based on his skills as a chef, but on healthy, cheap ingredients and simple practices. Over time, it became apparent that there was one factor Jamie had underestimated: the importance of his operations manager, Simon Blagden. After his departure, he was replaced by Jamie's brother-in-law Paul Hunt, who was not as well qualified for the position. He opened new restaurants too quickly in the wrong places and couldn't maintain a positive culture among the restaurant chain's employees, ultimately leading to a decline in quality. From that point on, the entire chain experienced a major downturn.

The author demonstrates the importance of distinguishing between indispensable and dispensable success factors by using the example of a car. The engine and wheels

are indispensable, while the radio is dispensable. If an entrepreneur can expand the indispensable factors, they can succeed. The example illustrates that it is necessary to identify which factors are crucial to the success of a business or idea.

This concept has implications in many sectors. For example, in the pharmaceutical industry, patients must take their medicine for it to be effective. Even if a medicine is good, if patients do not use it, it is useless. The same principle applies to public goods and policies: people need to use them for them to be useful. An empty community center or park is useless. Therefore, it is not enough to find your customers; you need them to start consuming a particular product.

To ensure the spread of indispensable factors for an idea, the author again references the example of Chicago Heights, where financial incentives were used to motivate parents to support their children's studies. The success of this approach in Chicago Heights was so great that other cities wanted to implement a similar approach. One of these cities was London, where financial incentives are not allowed for legislative reasons. Unfortunately, it turned out that financial incentives were essential and without them, the concept did not work in London. Similarly, in many other programs, an indispensable factor may be overlooked, leading to the failure of the program, even though it ran smoothly at the outset.

In the next chapter, the author focuses on the unexpected consequences that can occur when an idea is disseminated. To illustrate this point, he uses Solomon E. Peltzman's famous paper (1975) on the effects of the introduction of seat belts in cars in the United States. This measure aimed to increase passenger safety, but the unintended consequence was an increase in accidents. Peltzman attributes this to the concept of moral hazard, whereby drivers feel safer after the introduction of seat belts and therefore adopt a more aggressive driving style, leading to a higher number of accidents.

Another unique example comes from a field experiment in 2014 (Dennis Egger et al. 2022), where $1,000 was distributed to 10,000 households in Kenya. The result was not inflation, but an improvement in the living standards of the recipient households. However, a positive unexpected consequence was that even households that did not receive financial support saw an improvement in their living standards. At the same time, local firms also fared better. This shows that unexpected consequences can take the form of negative as well as positive externalities.

The author gives an example of his involvement in baseball fundraising, specifically with the Firebirds youth team. This involved volunteers going door-to-door asking for donations for the team. However, these volunteers were financially motivated, so the author decided to conduct an experiment. He paid one group of volunteers $10 per hour and the other $15. It turned out that the volunteers with the higher pay rate performed better, as expected. However, when $15 per hour was paid to everyone, the effect disappeared. The same result occurred for the $10 pay rate. The wage differential seemed to demotivate volunteers at a lower rate.

Another example of unexpected consequences can be found in Chicago Heights, where children in a program were able to pass on the knowledge they gained to neighborhood children. The positive externality of vaccination in a community is another example. The first benefit of vaccination is a significantly lower likelihood of actual infection or serious consequences. The second benefit is social immunity.

The last chapter of the first part of the book deals with costs. Arivale, a health start-up that develops personalized eating and exercise plans based on genetic predispositions, serves as an example. The company's plan was unique and useful, but the price was too high for many people to afford. Arivale initially expected to be able to reduce costs over time, but it was unable to do so. If a firm has high input costs, it needs to produce a large enough quantity that its average cost goes down, allowing it to lower the price. Examples of this include electricity generation and distribution, film production, and pharmaceuticals. Arivale started at a price of $3,500 and was unable to decrease it. Blood tests are expensive, and health consultants still cost the same, even with more clients. The author notes that Arivale overcame the first four obstacles, but failed at this fifth one. It could be argued that the author is not completely precise in his argument regarding Arivale's customer knowledge. While he argues that there would be demand for the company's product at a high price, price is an essential part of the product, and thus customers may not be interested in it.

The problem of high cost also affects other innovative products, such as space travel. While it is popular, the price is extremely high. However, Space X is taking the appropriate approach by trying to reduce the price by reusing rocket components. Costs also tend to be a major issue in the public sector, where incentives to seek lower prices often fail.

The author starts the second part of the book by discussing the use of incentives for higher company earnings. He begins with an example from Uber, which implemented a tipping feature in its app in an attempt to increase revenue. However, in an anonymous app where customers are not exposed to comparisons with other customers, the introduction of tipping did not work, and only 1% of customers paid tips regularly.

In contrast, a successful implementation occurred in the Dominican Republic, where there was a problem with tax collection. Specifically, around 60% of households and businesses avoided paying taxes. The author conducted an experiment to improve this statistic. Two types of letters were sent to households and firms as part of the field experiment. The first warned of the possibility of imprisonment, and the second promised to publish the names of non-payers. Both options improved tax collection, with the former slightly more successful than the latter. Therefore, social comparison worked as an incentive for better behavior in this case, although less so than the second option.

He applied the successful use of social comparison as an incentive for better behavior to transport aircraft pilots to reduce fuel consumption and emissions. A letter was sent to pilots about their personal fuel consumption and that of their colleagues, while also appealing to the environmental impact of their activities. The result was significant fuel savings and emissions reductions. According to the author, this idea should also be applicable to households and electricity consumption, which is currently a very topical issue.

Another insight from behavioral economics that the author uses for incentives is loss aversion. If a firm wants to motivate employees to perform better by giving them a financial bonus, it is more effective to frame the bonus as an impending loss. Workers will have the bonus added to their paychecks, but if they fail to meet the performance goal, the bonus will be taken away. This option is generally more effective than giving workers a bonus only for performance. The author tested this phenomenon on teachers

by giving them a bonus and requiring them to raise their students' test scores. The control group was promised the same bonus in the future for improved performance. The first group, however, performed overwhelmingly better.

The next chapter discusses the issue of marginal variables, which is familiar to economists, but in the public sector, there are still areas that can be streamlined.

The author was hired by the White House under President G. W. Bush for economic policy analysis. Here, one can imagine mainly a cost-benefit analysis of the policies put forward. Different agencies competed for money from the public budget, but often incorrectly argued about the average benefit of a particular policy per budget dollar. The author tried to flip the situation by examining the benefit of the additional dollar spent rather than the average effect, but he reflects that this is very complicated in the public sector.

In an almost humorous story, the author describes the University of Chicago with a fundraising department that was not very successful. The author found that even at a reputable institution like this university, there are undoubtedly miscalculations of the costs of different options for approaching potential donors. The department even included the sunk cost of building a call center in the cost of reaching potential donors by telephone. As a result, the call center was not used at all, and the department's income rose again when it was reopened.

The next chapter deals with the proper timing of exiting a particular business idea. The prevailing view, especially in American society, is that if you are persistent enough, success will come in time. Many persistent and successful entrepreneurs are then held up as examples. However, the author points out that unsuccessful entrepreneurs are not talked about as often.

He frames the whole idea in his personal experience, considering a career as a professional golfer. He was a decent player at the local and college level and planned to try professional tournaments. One day, however, he discovered that his colleagues were much better than he was and, after a thorough analysis of his performance, he realized that he could never compete with them. So he decided to pursue a career as an economist. This spared him the very likely future disappointment of failing on the professional scene and allowed him to focus on a side of his career at which he excels more.

However, the author reflects that the timing of leaving a particular activity is not easy. However, it is important to remember that when we invest enormous effort over the long term in an activity that we will ultimately fail at, we lose the most precious thing we have: time. It is therefore advisable not to persist in an activity or occupation for which we no longer see a future prospect, but rather to find an area in which we can see a bright future again.

The last chapter focuses on company culture and its essential added value for the company. The author uses a few examples to illustrate this. The first example is two Brazilian fishing villages. The first village is forced by natural conditions to work together in larger groups for fishing. In the second village, it is customary to fish alone because natural conditions allow it. Experiments in these villages have shown that the inhabitants of the first village are more trusting and cooperative outside of fishing. The second example is the toxic culture at Uber, where competition was encouraged above all else. However, undesirable phenomena began to emerge in this environment, such

as a lack of collaboration and discrimination of ideas from people who were not extroverted enough. This proved unsustainable in the long run and eventually led to the decline and the need to restructure the management of the company.

Many companies are already starting from the concept that inclusiveness increases productivity. Efforts to include minorities in many jobs can benefit companies a lot. However, the author shows that these efforts can have various pitfalls. For example, simply stating that a company supports minorities will not bring more minority people into the company. This statement alone will not convince a minority applicant that they have an equal chance of being hired for the position. What helps bring multicultural individuals into the company, on the other hand, is a Corporate Social Responsibility statement. The fact that a company is facing global challenges and wants to be environmentally and socially responsible sends a signal to many individuals. This statement will often bring in better quality candidates, even from minority groups, who are united by a common desire for a better world. However, the author also points out that if a company implements this statement, existing employees may be committing moral licensing, meaning that if my firm is now socially responsible, I as an employee can subjectively afford some immoral acts.

In conclusion, the book is a useful tool for businessmen, politicians, or academics who are interested in extending their ideas to the environment beyond their personal reach. It cannot be said that the book introduces any new revolutionary ideas. Its greatest added value lies in its comprehensive presentation of the topic of idea diffusion.

The author could perhaps be faulted for an occasionally too comprehensive writing style, where far fewer pages would have sufficed to express a simple idea. However, if contemporary literature is to have outreach to mainstream society, this style is largely desirable.

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