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G G AT THE **MOST** FUNDAMENTAL LEVEL, MARKET-BASED MANAGEMENT IS A HILOSOPHY AND METHODOLOGY TO ENCOURAGE

THAT CREATE VALUE FOR BOTH A COMPANY AND SOCIETY. - FROM "THE SCIENCE OF SUCCESS" BY CHARLES KOCH

BY JERRY SIEBENMARK AND PHYLLIS JACOBS GRIEKSPOOR

The Wichita Eagle

harles Koch once got a call from the chief executive of another company wanting to know more about Market-Based Management.

Could Koch come to the company and put on a one-day seminar about his business theory?

"I said I could do that, but first of all let me ask you why you want it? How are you going to use it?" recalled Koch, chairman and chief executive of Wichita-based Koch Industries Inc. "Because for you to make it worth your while ... you and the other top leaders in your company are going to have to seat themselves in this philosophy and develop the art of applying it in a way that gets results.

"'Oh,' he said, 'No, no, no. We thought there would be a few nuggets we could pull in.'

"I said, 'Well, this, then, isn't worth your time or mine." It's clear that in Koch's new book, "The Science of Success: How Market-Based Management Built the World's Largest Private Company," the business theory he has worked decades to develop is not a self-help book for managers or corporate leaders.

What Koch espouses in the book, which discusses the development of MBM and how it's applied at Koch

Industries, is that MBM is a way of thinking, not an outline for doing.

"It's a philosophy, a way of approaching the world," Koch said in a recent interview in his third-floor office at the company's headquarters. "You take all these (theoretical) models together and with experience see how they work. You can't just do it with a checklist."

'Creating value'

MBM is rooted in an amalgamation of disciplines ranging from economics to biology and anthropology to psychology. At its core it is as much a theory of political science as one of business management.

"Fundamental to Market-Based Management is that we want to create value in society, so that should be the starting point," Koch said. "Above all, it means that we each do everything to the best of our ability, lawfully and with integrity.'

Within a framework of thinking first of what it is the customer values, the manager must decide how to create and deliver a product of more value to his customer than that of his competitors.

"So what the manager would ask himself would be: 'Am I not



Charles Koch, 71, credits his education and his father's influence with the origin of Market-Based Management.

only getting results with my decision, but am I improving faster than my competitors? Am I anticipating the changes in what my customers value?'

"Competitors are improving, people's values are changing, technology is changing, politics are changing, you've got to be out on the front edge if you...want to survive and succeed long term," Koch said.

Learning that approach is a complex process, he said, and it requires ongoing training.

Koch admits that accepting, learning and applying MBM is not easy for people. But he has no tolerance for those who won't.

"There are people, good people, who've been doing different things for 40 years, and they're not willing to change, and they're not interested in doing this," Koch said. "Well, they're going to have to move on because...we can't make this work if we have a whole bunch of people that don't want it to work or aren't willing to make the effort to make it work."

For managers it's critical that they be proficient in MBM. They have to know the theory as well as a master chess player knows the game of chess.

"That's when you begin to be able to innovate," he said. "When you don't have to think about the parts, you can focus on your objective. And the parts are so second nature to you that you don't think of it."

Leaders also have to have an "automatic" understanding of MBM so they can pass it down through the ranks.

Only through mentoring employees on MBM and providing them feedback on how well they are or aren't applying MBM can it effectively spread throughout an organization.

"Every leader needs to be a role model for these principles, because people will spot hypocrisy a mile away," he said. "If (people) don't get that feedback, it's going to take (them) much longer and it will be more painful to learn."

Genesis of MBM

Koch, 71, credits his education and the influence of his father with the origin of Market-Based Management, even though he didn't initially think of it in terms of a business application.

"Part of it is probably studying engineering. I could see that the natural world was governed by fixed laws and that these laws could be understood and applied to improve the human condition," he said.

"And it may be my father had a tremendous thirst for knowledge. He had a great

library, and he became quite an outspoken anti-Communist because of his experiences and...he could see the misery that it was causing.

"So he became quite a student of political theory and philosophy. And he was an avid reader of history, and it may be that combination of an engineering background and discussion with my father of books I read and he had me read.

"I was interested in society as a whole. OK, Communism was very destructive. What about all the other forms? What works, what doesn't?

"And I just started reading everything I could get my hands on, what I thought would shed some light on that," Koch said. "And as I went through that I've developed a philosophy of how we can best live and work together to improve the human condition. So it was without any master plan, any thought I would apply any of this to an organization."

But the more Koch read about things such as opportunity costs and cutomers' subjective values, "I just started naturally in meetings bringing up these things.

"And it just started evolving and building on itself," he said. "Then, years later, as we saw these pieces...we started working at it more systematically." While Koch arguably knows MBM as intimately as anybody in the company, he sometimes stumbles in its application.

"I screw up a lot," he said. "Are you kidding me?"

Which brings him to the challenge process, a concept he says is often the greatest single change from the typical business model that managers and employees new to Koch notice.

It's a subset of the five dimensions of MBM—vision, virtue and talents, knowledge processes, decision rights and incentives—but a piece that's "absolutely" critical to successfully using MBM.

What it involves is simple: If an employee hears or sees an idea or practice and doesn't feel it meets the standards of creating value, Koch wants them to challenge the idea, even if it's coming from him or another top executive.

"I have a lot of ideas," he said. "Most of them are terrible. But what saved me—well, to the extent I've been saved—is that ...I want to get people with the best knowledge and insights in each one of those key aspects and get a challenge from them.

"This system isn't going to work unless people feel free to speak up."

It has been in the past couple of decades that Koch, with the help of key executives such as Rich Fink, Bill Hanna and Joe Moeller, began to formalize and implement MBM.

In the book, Koch credits the business theory with helping to create a company that has grown more than 2,000-fold in the past 46 years.

'Fundamental changes'

The company has had successes and failures in applying MBM.

One success has been implementing a culture of compliance, something Koch calls "10,000 percent compliance, 100 percent of the people doing the right thing 100 percent of the time."

Getting there has not been easy. "As early as the '80s we were thinking that we were gaining ground. We were doing everything," he said. "Then something would happen. And I'd say, 'My goodness, we're not nearly where we need to be. So we're going to go back and retool it, applying these principles."

"So we'd do it again, and we went through that many times. Finally, we said: 'Stop. We are going to make fundamental changes and make sure that compliance is integrated into every aspect of the company."

That meant paying scrupulous attention to a wide set of rules and regulations on environment, safety, audit, legal integration and other areas.

The key to finally achieving compliance, Koch said, was "to have an approach that reaches the hearts and minds and changes the habits of every employee. Because in today's environment just one person who does one thing wrong one time can do irreparable harm to the company."

How did the company reach those hearts and minds? Accountability, Koch said, especially among leaders.

"For example, we had one top leader in a group and something had happened and, I said, 'How could that happen?,' because we knew better," Koch said.

"We set up systems to overcome that, and somebody didn't do his job properly.

"And the person said... Well, we knew this person was a risk. We'd known that for two or three years. We just didn't get around to dealing with him." "I said, 'How could you let that happen?'

"He said, 'Well, I didn't even know him. I mean, I wasn't responsible.'

"I said, 'Hold on. You're in charge of who's hired, who's fired, the training, the systems, everything. If we can't hold you responsible, who do we hold responsible? I mean, if you didn't enforce that with the first-line supervisor and all the way up, and make sure this didn't happen, then it's as much or more your fault than it is the people on the front lines.'

"And once we got that message out and started affecting people's compensation and positions, then we really got everybody's attention."

Koch said the company has had other successes in applying MBM within its Koch Nitrogen business group—which produces and markets nitrogen fertilizers—and its ranching operations.

By applying MBM to those operations, Koch Industries has attained environmental stewardship, made smart acquisitions and achieved the kind of growth and value MBM purports to bring to an organization, Koch said.

MBM misses

But some experiments haven't gone well. And some—notably Koch's rapid expansion into the agriculture industry in the late '90s, topped by the 1998 acquisition of animal feed giant Purina Mills—created significant losses.

About a year after acquiring the company, Purina filed bankruptcy and Koch Industries said it had lost \$109 million in capital it had invested in the \$670 million acquisition. In 2001, the company completed a divestment of its remaining stake in Purina.



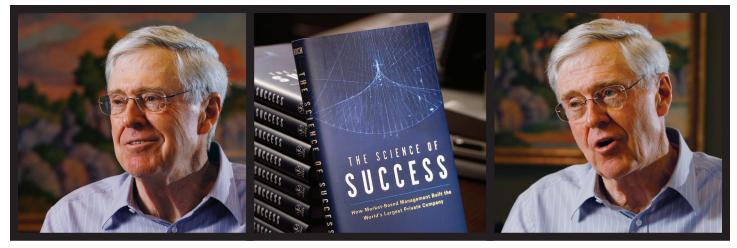


Photo courtesy of Koch Industries, Inc.

Charles Koch said the Purina deal was one where his company "used... some of the buzzwords on it, but we really didn't apply it (MBM)."

A core component of selecting acquisitions is choosing those businesses that match Koch's capabilities, as well as ones where applying the basic concepts of MBM will add value.

In hindsight, he said, Koch Industries managers thought they knew what they were getting into.

They didn't.

"There were all sorts of problems in Purina that today we would uncover in the first week that we didn't uncover," he said.

He does not consider Purina a real failure, rather a painful lesson.

True failures, he said, are lost opportunities, the things you should have done but didn't.

"We learned a lot from the Purina mistakes," he said. "I'm not sure I could ever stand that much learning again."

The lessons learned, he said, have enabled Koch to truly apply MBM to its nitrogen fertilizer business, to turning around the troubled fertilizer assets it bought from a bankrupt Farmland Industries and to expand that business with last year's acquisition of Simplot's Canadian fertilizer assets.

Spreading MBM

Koch said the application of MBM through the entire company is still a work in progress.

In fact, he said he'd give Koch Industries a four on a scale of one to 10 in terms of applying MBM.

"Now some of our groups I'd give up to a seven, or 6½," Koch said.

"Others I'd put at a two."

He said with the acquisitions of Invista and, more recently, Georgia-Pacific, "Well, we haven't even scratched the surface." "Our people have done a great job there in getting it through, and out of 50,000 employees there are probably 3,000 or 4,000 that have some understanding of it, and a few hundred that have probably a good understanding of it. (But) a lot have barely been exposed to it."

Hence the book. The reality is, it will be years before the Georgia-Pacific people—Invista, too—are thoroughly versed in MBM.

"And I'm not blaming them," Koch said.
"This is not something you give somebody a two-page leaflet and say now you know."

Nor, he said, can he even guess where MBM will be a decade from now.

"All those businesses that say they have a 10-year plan and really believe that it's going to work out, they're already doomed," he said. "They've stopped being ready for change."

He says Koch had to draft a 20-year plan for Farmland's assets for the bankruptcy court.

"But nobody here took it seriously," he said

Some of those projections worked out and some didn't, he said. But it doesn't matter.

What matters is staying open to anything that needs to be done.

"In reality, the future is unknown and unknowable," Koch said. "You just keep pushing."

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NEWS2USE

The growth of Koch Industries, Inc.

UNDER CHARLES KOCH

Koch Industries and its affiliates employ 80,000 people in nearly 60 countries, generating annual revenue of about \$90 billion. The company employs about 1,800 at its Wichita headquarters, 4111 E. 37th St. North.

In the 46 years since Charles Koch joined the company, the value of the S&P 500 has grown 122-fold. During that same period, Koch Industries' value has grown more than 2,000-fold. Here are some of the major moves Koch Industries has made since Charles Koch took over:

- 1969 Acquires majority interest in Pine Bend Refinery in Minnesota
- 1970 Builds natural gas liquids plant in Medford, Okla.
- 1979 Acquires real estate portfolio from Chrysler
- 1981 Acquires refinery in Corpus Christi, Texas, from Sun Oil
- 1986 Acquires C. Reiss Coal Co., a 100-year-old Great Lakes company
- 1988 Begins construction of Texas Pipeline
- 1989 Purchases John Zink Co. of Tulsa, which specializes in the development of combustion technology for the petrochemical and petroleum industries
- 1992 Acquires United Gas Pipeline, now Gulf South, an 8,000-mile system
- 1993 Acquires Elf Asphalt
- 1997 Acquires Delhi Group, a large natural gas pipeline and processing company
- Acquires Glitsch International, a Dallas-based company that provides products and services for the petroleum, refining, petrochemical, chemical and gas-processing industries
- 1998 Forms KoSa, after acquiring 50 percent of Hoechst's polyester division
- Acquires Purina Mills
- Acquires a specialty oil refining facility in Rotterdam
- Forms Koch Ventures, a venture capital firm with \$150 million invested
- 2001 Acquires full ownership of KoSa
- Forms Entergy-Koch LP with Entergy Corp.
- 2002 Flint Hills Resources, Koch Pipeline Co. and Koch Chemical Technology Group become stand-alone companies
- 2003 Koch Nitrogen acquires fertilizer assets from bankrupt Farmland Industries for \$293 million
- Increases stake in Colonial Pipeline to 27.8 percent
- Enters lubricant base oil business with

half-interest in Excel Paralubes

■ Enters negotiations for DuPont polyester business

- 2005 Acquires Georgia-Pacific for \$21 billion; becomes world's largest privately held company, according to Forbes magazine
- 2006 A Koch Nitrogen subsidiary agrees to acquire Simplot, a Canadian fertilizer business
- 2007 Flint Hills Resources acquires Huntsman Corp. chemicals and polymers business for \$761 million, its largest acquisition

Who is

CHARLES KOCH

Education: Bachelor's degree in general engineering, 1957; master's degree in mechanical (nuclear) engineering, 1958; master's degree in chemical engineering, 1959; all from the Massachusetts Institute of Technology

Career: Engineer, Arthur D. Little Inc., 1959-61; vice president, Koch Engineering, 1961-63; president, 1963-71; president, Koch Industries Inc., 1966-74; chairman and chief executive officer, Koch Industries Inc., 1967-present. Forbes magazine's 19th-richest American in 2006, along with his brother David, with a net worth of \$12 billion

Family: Wife of 34 years, Liz; two children

Special focus: Finding voluntary, market-based solutions to social problems; founder or supporter of the Institute for Humane Studies, the Cato Institute, the Mercatus Center at George Mason University, the Bill of Rights Institute and the Market-Based Management Institute.

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EXCERPTS FROM THE SCIENCE OF SUCCESS

These two excerpts are from Chapter 2, "The Science of Human Action." Reprinted with permission of John Wiley & Sons, 2007.

It is worth noting that our rapid growth has continued even after becoming a large organization with about 80,000 employees. Such results are uncommon among large companies. In 1917, for example, Forbes produced its first list of the 100 largest companies in the United States. Seventy years later, Forbes found that only 31 of those companies were still independent and only 18 remained among the 100 largest in the country. Just two outperformed the market average. Despite all their assets and capabilities, the vast majority of the nation's largest companies could not keep pace.

Our approach to management has enabled us to succeed through decades of dramatic change. Energy prices have risen and fallen in repeated cycles, global competition has intensified, the geopolitical map of the world has been redrawn, the volume of regulation and litigation has soared, new technologies have transformed industries and businesses, and the pace of innovation has accelerated.

Koch Industries has grown through these decades because we've learned to embrace change. Change is ever-present in the marketplace. Companies, products and methods are constantly being replaced by more effective alternatives. Economist Joseph Schumpeter famously described this as a process of creative destruction.

Even successful companies struggle to keep up because, given human nature, we tend to become complacent, self-protective and less innovative as we become successful. It is often more difficult to overcome success than adversity. At Koch Industries, we have countered this tendency, in part, by relentlessly applying our business philosophy. MBM teaches that we must continually drive constructive change in every aspect of our company or we will fail. As a result, we constantly pursue innovations and opportunities thorough internal and external development and acquisition. Similarly, we shed businesses and assets that are unprofitable or worth more to others.

We believe it is essential to drive creative destruction internally, otherwise creative destruction will drive us out of business.

As the company continued to grow, our knowledge and talent pool were becoming increasingly large and dispersed. As a result, I was only able to work with or mentor a decreasing percentage of our employees. In turn, our ability to apply these concepts to achieve results diminished while our opportunity to benefit from them increased. We needed to find ways to teach the theory and practice of our concepts and mental models on a much larger scale.

In the early 1980s, we tried to overcome this problem by incorporating our economic thinking and mental models into an existing management system.

We thought this would be an efficient way to better connect employees with our philosophy, mental models and existing tools. The system we selected was that of W. Edwards Deming. Deming's worked helped us systematize our focus on one aspect of MBM – continuous improvement. By using Pareto charts, root-cause analysis and statistical process control, we sought to measure our progress in clear and meaningful ways.

While we made progress, we also learned valuable lessons. One was that concepts and tools must be used only when they improve results. This point was driven home for me on a

mid-1980s trip to the electrical shop at our gas liquids plant in Medford, Oklahoma. The electricians there were spending a large portion of their time measuring activity and drawing charts instead of doing electrical work. Our people referred to this as "charts for Charles." Many employees thought I wanted charts or descriptions of activity as an end in itself, rather than as a means to improve results. Unfortunately, measurement and chart-drawing became the focus rather than improving performance and eliminating waste.

We also learned that we could not simply graft economic principles and our mental models onto an existing management system, even one as good as Deming's. The problem, as my trip to Medford illustrated, was that we had not provided sufficient understanding of our concepts to enable them to be used to get results. To the person with only a hammer and no understanding, every problem looks like a nail.

Now you know

CHARLES KOCH'S READING LIST

Charles Koch is a voracious reader who drew ideas from dozens of books in the process of formulating his concept of Market-Based Management. Among the most influential were:

- F.A. Harper, "Why Wages Rise"
- F.A. Hayek, "The Counter-Revolution of Science"; "Individualism and Economic Order"; "Law, Legislation and Liberty"; "The Fatal Conceit"; "The Road to Serfdom"
- Ludwig von Mises, "Human Action"
- Joseph Schumpeter, "Creative Destruction"