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Impact Of AI-Based Manufacturing brought to Value Creation Model of Enterprises

Xinhua Cheng

School of Economics and Management, Xidian University, Xi'an, 710000, China
*Corresponding author: xinhuacheng9@gmail.com

Abstract:

Nowadays, as the technology of AI advances by leaps and bounds, it has been gradually penetrating into every aspect of people's life, for instance, the manufacturing industry. This industry is now standing on the important point changing from large scale, standardized production to automatic and personalized customization with the help of artificial intelligence. However, what's partially different from the past is that AI is no longer a tool using for efficiency improving, but a precious resource on reshaping the industrial competition landscape, reconstructing the value chain of enterprises, and creating new business modes. With the question of how can AI bring revolution on manufacturing industry and facilitate its revolution, and what can manufacture enterprises do to face this revolution, this paper is going to find out the mechanism on how AI-based manufacturing can change the value creation model of enterprises, and make an even deeper discussion on new business modes, strategic changing challenge, as well as organizational change and some other effects that AI techniques have brought to companies, and at last, point out the perspectives on the future development of AI-based manufacturing enterprises.

Keywords: AI-based manufacturing, supply chain, revolution, challenges

1. Introduction

This topic may be one of the hot topics nowadays, because we humans are truly standing on the stages changing from traditional production to AI-based manufacturing. The previous research done by other researchers are various, expanding from specific implement of AI driven production to the challenges and problems AI may bring. After learning and searching for inspiration from their paper, and done some specific research on the future competition mode of AI-based manufacturing, the author based the topic of the research on the competition of comprehensive capabilities centered on data-driven and AI-based, or even more, AI-strengthen core, which is a topic have never be founded in others research, and the author

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firmly believe that this research will be thought-provoking for future researchers. This paper will be divided in several parts, including the introduction of the history of artificial intelligence, the reshaping mechanisms, business model innovation and strategic transformation, challenges and inspiration, as well as conclusion at the final.

2. The born and development of artificial intelligence

The research and development of AI have changed a lot in a few decades before being used in manufacturing. The history of research on artificial intelligence can be dated back to the year of 1956, when a discussion of how machines could perform "intelligent movements" led by a group of researchers in New Hampshire [1]. Since then, many researchers have devoted themselves into the iteration of AI. However, even though it gave birth from human learning mechanisms and most of the researchers at that time thought human-like cognitive AI was well within reach, the progress of developing perceptron, a kind of neural network structure designed by utilizing a weighted sum of inputs to imitate the working of a human neural system [2], have slowed down as the perceptron even cannot dealt with the simplest logic problems, and computational complexity was too hard to figure out [3]. After a long period of time tepid developing, artificial intelligence met another theory which almost save its life, machine learning. Machine learning is a branch of computational algorithms that expand its definition with the growth of time. The invention of machine learning aimed to imitate human intelligence by learning from the environment surrounding by [4]. It has been used in many fields, such as pattern recognition, computer vision, finance, education, big data management, and of course, manufacturing.

There are several benefits when comparing machine learning with perception. First of all, perception use fixed features for recognition, such as color, the shape of edge and so on, which means they can only deal with the data they have learnt before. However, machine learning can not only tackle the data learnt before, they can also learn complex relationship and mode from them, which give them ability to deal with the data they have never met before. For example, in 2017, when Chinese chess player Ke Jie met AlphaGo on the chess table, as what he said, AlphaGo was totally different in three games. On game one, it acted as the sum of all the ancient chess player, so Ke lost only at half a point; game two, Ke felt the trick from himself; game three, Ke found the strategy and way of thinking of AlphaGo was far beyond than what he could imagined, so he surrendered before the game was over. What you can learnt from this case is the second advantage of machine learning, the ability to learn by itself instead of set by human beings. When you open a shopping app on your mobile phone, there always turn out to be a block of goods name "guess you like" at first. This phenomenon will turn into a complicated task if programmer classify and showcase these goods directly for you every time, so the only reason to make the event accessible is the devotion of machine learning. AI will get the data from every good you have browsed before, classify and analyze them, and choose the same type of goods you like most or prefer to buy, showcase them to you the next time you open the app. In a word, machine learning, especially deep learning, are based on generalization, which means observe one kind of individuals to deduced the general description of it [5]. The expectation of artificial intelligence has also been adjusted. In the past, most of the researchers expect AI fully replaced what human can do, but now they are more focus on the sight of enabling analytics, which can also be defined by AI tools are a helper for the knowledge field of human experts in manufacturing industry rather than replace them [6].

3. Reshaping mechanisms of AI in manufacturing

3.1 Product research and development

Product research and development (R&D) was a difficult task before AI was invented. It has several drawbacks, which include low success rate, long cycle of researching, and management difficulty [7]. However, with the help of AI, product research and development are facing a dramatic change. Compared to traditional product research and development, AI-based product research and development gain several benefits, such as a more precise prediction of market trend, the improvement on product design efficiency, less risks in product R&D progress, as well as better quality of product.

With the help of consumer database, AI can analyze and classify historical data, forge a prediction structure, and predict what consumer prefer in a high accuracy [8]. AI can handle mountains of chaotic data in a short time, and conclude a regular pattern of consumer's shopping preference. For instance, AI can detect that consumer A prefer to buy a cheaper one comparing to a permanent standard, while consumer B would choose to buy a better one with a higher price. This technique can help company do better in directly manufacturing and marketing. What's more, a large language model of AI can analyze textual data from social media, videos, comments, announcements, and other sources, in order to create a deeper understanding of consumer's mood and rising trends [8]. In addition, AI can improve the efficiency of product design by using genetic algorithms. Inspired by natural principles of selection, re-

searchers have discovered an ultimate scheme for designer to find a solution which satisfy multiple constraints and goals. The combination of genetic algorithms and convolutional neural networks can improve the convergence rate in 30 percent faster, and can optimize the quality of the solution method. Study from the cases in car engineering and electronic consuming, this scheme can improve the design efficiency up to 25 percent, reduce the manufacturing cost by 20 percent, and accelerating the launching time of products by 15 percent [9].

What's more, AI can reduce the risks in product R&D progress. In pharmaceutical manufacturing industry, the increasing fierce of global R&D competition, growing impact of biosimilars and generics, as well as a stricter regulation are all the challenges to the existing structure of pharmaceutical companies. However, AI can identify, analyze and categorize the main risks in drug discovery and value exploit systematically by using the data from millions of ingredients of drugs and analyzing the effects and side effects of them [10]. It can also ensure the quality of the product. For instance, a reliable battery technology can not only devote in decarbonization on transportation electrification and smart power grid, but also strengthen the supply chain of battery. Researchers conducted an investigation on how to lengthen the battery life, and found that with the help of AI-based manufacturing, factory can detect every data on the production line, including temperature, pressure, and formula composition, to make sure batteries have sustainable high-quality. Besides, AI can also be added into the battery to monitor the aging percentage of it, or make some intervention to lengthen the battery life. The intervention may include strategies on battery charging and discharging management, warnings before sharp decline of battery performance [11].

3.2 Supply chain

The combination of AI and supply chain management stands for a revolutionary paradigm change, which provides unprecedented opportunities for modern enterprises to enhance their operational efficiency and resilience [12]. Supply chain includes six parts, which are planning, procurement, production, logistics, sales and reverse logistics process. The following is an example on why supply chain is a crucial part in manufacturing. The was a Sweden battery factory named Northvolt. When it was born in 2016, the Sweden government and the mainstream media of Europe called it "The light of European battery", as at that time China almost captured the market of high-performance battery, and Europeans wished it to break through this situation. However, although it possessed some large shareholders like BlackRock, Goldman, European investment bank and Volkswagen group and financing the starting capital of over 10 billion US dollars, it still faced many troubles. First of all, as a factory which headquarter located in Sweden, the workforce is less efficiency and much more expensive than Asian factories. What's more, Northvolt was particularly aggressive in investment and construction, before the first factory can produce lithium battery smoothly, it invested building factories in Germany and Canada at the same time, with the total investment plan of nearly thirteen billion dollars, which is even more than their starting capital. Also, there are some quality problems of their products. In 2024, an order from BWM have been accused for the low quality of battery cell, and the delivery time is postponed for every client, which made many companies canceled the corporation with Northvolt. Last but not least, in September of 2024, a worker died accidentally in a severe accident in the factory, which means the factory needed to be shut down to let the government investigate this event. With the low order and low efficiency, Sweden government and Volkswagen chose to leave, and on third of July, 2025, Northvolt was declared bankrupt.

The supply chain can be divided into six parts, as I mentioned before, and AI can take part in almost every place of it, basically. First is planning. AI can formulate plans for production, procurement, inventory, etc., through demand forecasting and order management, creating a guiding framework for the entire supply chain. As one of the largest department stores in the world, Walmart, who also produce products by itself, can predict the sales through machine learning, which is vital to its business operations. The researchers used sales data in the past to create a prediction way combining various of machine learning techniques, called "Walmart sales forecast model". This model can directly influence inventory management, supply chain majorization and promotional strategy development to help Walmart save large number of costs [13]. Second is procurement. This part involves steps like supplier choosing, raw material purchasing, and contract signing, which usually needs to balance the quality, cost, and times of delivery. In modern supply chains, digital management is often achieved on e-procurement platforms, which can also be optimized by AI. AI can search and abstract relevant information across millions of digital data sources, and quickly grasp and arrange in numbers of categories and subjects of procurement using contextual training from procurement market [14]. Third one is production process. It encompasses raw material processing, product assembly, quality inspection, etc. AI can use strategies like efficiency Lean production, agile manufacturing to boost manufacturing. For example, Toyota's just-in-time production model can significantly cut inventory costs. Fourth one is logistic process. It covers three subsystems, which are transportation, warehousing, and distribution. By optimizing route planning and using smart warehousing systems, logistics costs can be reduced and timeliness can be improved. For instance, Kiva robotics system from

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Amazon, which is a kind of smart warehousing system, is using AI for more efficiency. Unlike the automated guided vehicle, which can also be called by AGV in short, Autonomous mobile robots (AMRs) can make decision on their own, and do not need any pre-installed structure to navigate [15]. Fifth is sales progress which includes marketing, order processing, channel management and more, and AI can take part in it as well. From example, the Customer Relationship Management system, or CRM system for short, can be a great carrier for AI in sales. CRM, as a sales process, can be defined as "a macro-level process with combined with numerous sub-processes, such as potential user recognition and customer knowledge innovation [16]. Some researchers build a framework which can help companies arranging and rearranging the data they got from the CRM system with the help of the AI. This technique can help the organization to make fast and automatic decision making without large amount of human intervention, and can be easily fit into the existing CRM systems in the company [17]. The final one is reverse logistics progress. In manufacturing and selling progress there are always some loss and waste, for example, factory may produce some product with poor quality, and they are not permitted to be sold on market, what's more, customers may require return or exchange their goods for some reason, and when the previous goods are not allowed for second selling, they need to be sent back to the factory. With the case from global leading companies, such as Alibaba, Walmart and Amazon, researchers used some secondary data resources from like industry reports, academic papers and company publications to create a deep discussion on the fusion of reverse logistic and AI. The fusion can tackle with some previous problems, including high cost, fraud from customers, low effective tracking systems, and environmental problems. AI can help companies to make automatic and correct decisions on almost every progress, and make sure the transparency of reverse logistic chain [18].

All in all, AI can be easily concluded in every six parts of supply chain and can effectively improve the operation of it. It can also help companies to make fast, correct and automatic decisions, which can reduce the labor cost and make more precise decisions. With AI, company can do better in long-term development.

3.3 Equipment maintenance, repair and operations

Unlike primary production, equipment maintenance, repair and operations (MRO) have faced many challenging problems, such as the information on sphere of activity, dispatching, and space limitation are unclear, which may lead difficulties in equipment MRO conduction [19]. The traditional maintenance method is hard to deal with the complication of equipment MRO, so AI have been put into use. To be honest, there are several drawbacks of traditional maintenance, such as the lack of information accuracy may lead to lack of transparency, which will result in delay of ordering information, lack of planning method, and unprofessional in knowledge and researching. However, AI can learn from text, ERP, and sensor data, and turn expert knowledge into a database to make the data of equipment MRO can be predicted [19]. For example, without predicted maintenance, the manufacturing plan are usually delayed because accidentally fault. Regular maintenance will frequently change pieces of machine tool, but it will increase the cost of maintenance and non-operating hours of machine tool. AI can learn from data in the past to know the exact time of when each component of machine tool will damage. Researchers choose two main elements in machine tool: the cutting tool, and the motor of spindle. They described a sort of data driven modeling approach to investigate wear and tear of the tool and the bearing failures. They found that AI can cut down the cost of down time and increase the reliability of machine tool. Besides, researchers also found that predictive maintenance strategy have the potential through maximizing components' using lives to promote sustainable practices [20]. What's more, when facing equipment repairing, AI can also conclude some schemes with the help of intellectual information support [21]. For example, there is a machine-making company called Dongfang Heavy Machinery, which not only sell machines in China but all over the world. When the mining machinery for Brazilian customer breaks down, AI can point out the fault point after looking through the drawing sheet uploaded by engineers. Then, it can find the nearby spare parts warehouse and change the piece in a short time. When the machine tools in German factory have parameter abnormalities, AI can remote command the local operators to change program in order to stay away from a large-scale machine tool break down.

3.4 Energy consumption and environmental protection management

Nowadays, the antiquated manufacturing management mode has become a huge burden for company developing. The management system cannot receive the exact situation of the factory clearly, and the program made by higher authorities is hard to be consider as accurate and feasible as the can truly be taken into action. That will cost huge energy waste instead. On one hand, workers and equipment in factory are not able to receive the exact manufacturing plan and command from manager, which will lead to over production of goods and product backlog in warehouse. On the other hand, for the machine tools that are not been put into production, the waste of space,

workforce, energy, and equipment will also be a stumbling block for the factory [22]. Let's take Envision group for example. It is a Chinese factory devoted in AI conducting and clean energy using, and its scheme of factory intelligent control system have been accepted by many electric vehicle enterprises. This scheme can collect the data from factory equipment, production order, and outer environment all the time, and calculate the best production mode to save energy with the help of AI algorithm. For instance, at night, when production order is decrease, the system can adjust the operating speed of some machine tools automatically, and turn up the temperature of unmanned workshop to save energy. After using this system, the factory's electricity costs have decreased by 18% per month, which will lead to nearly 3 million yuan saving annually.

It is also worth noting that when facing environmental pollution, AI can also contribute its own part to protection. To be honest, once human set up a factory for manufacturing, it will definitely do harm to the environment, because set up a factory needs a piece of land with no trees or grass on it, so plants need to be cut down. What's more, transporting raw material and products will cost energy, as well as producing them. This phenomenon may happen more rapidly in primary energy producing industry, like oil and gas drilling platform, as they may do more harm to the environment, or even worse when oil and gas leak from the rig. Hopefully, AI can use its strength in tackling this problem. With the help of enormous computing power, AI can utilize numbers of technologies in order to offer some tools easy to be used by health, safety and environment (HSE) professionals. These sorts of tools made from artificial intelligence and machine learning can help HSE professionals go further in environment protection, such as lessen the oil and gas leaking, cut down waste when producing primary energy, keep the safety of water field surrounding and protecting the biological diversity. They can sound the alarm when air pollution level is beyond permitted and when harmful gases are leaking from the drilling platform. What's more, they can detected ocean creatures nearby and prevent from disturb or hurt them as much as possible. They can also find out a better method when purify oil and gas in order to cut down harmful pollutant [23]. In a word, AI can play a significant role in environmental protection by mitigating the negative impacts on industrial activities.

4. Business model innovation and strategic transformation behind reshaping

4.1 Business model changing

With the improvement of human's living standards, people are no longer satisfied in standardized products. Instead, they are more obsessed in service of personal customization. For example, in the past there are only few luxury brands which offered cars customization service, such as Benley and Rolls-Royce. At that era, there existed some car company using machine tools to make cars, like the Ford model T, but these kinds of cars are totally industrial product made by factory pipeline, which means they are exactly the same to each other except colors. The low prize of them may be attractive to worker's family, but not to the upper class. For the wealthy family, they prefer a car with their favorite color, high quality leather, unique shape while regardless of the prize. These demands need unique assembly process done by human's hands, as the technology of factory at that time is not able to produce DIY product industrially, so the lead time of the car may be postponed to nearly two years. But nowadays, with the help of AI-based manufacturing, even ordinary family can enjoy the service of customized when buying cars. In the smart factory, cars are no longer looked the same. Data and instructions are sent from AI control center to the robots, and they will pick the unique colors, shapes and materials parts to assemble your personal car, and all of the process of creating a customized car may only happened within half an hour, which is much more efficient than the past. Also, the prize of the car is lower, as the factory do not need to hire a large group of craftsmen, including some companies which are still persist in their "craftmanship", but using AI-based robots to build them behind. This revolution may also happen in other aspects, such as house decoration and travelling industry. Consumer can tell their request to the company, and company can build the virtual model for consumer to choose with the help of AI, and creating them especially for clients. All in all, this change is truly a huge progress on human's welfare.

4.2 strategic transformation

Platform-based enterprises may become an industrial ecosystem leader through integrating the supply chains with the help of AI. Throughout the Fortune global 500, Changhong Holding Group is a typical example of that. Changhong has devoted in building a smart supply chain management platform since 2019. The core of the platform is a system driven by AI technology, which can integrate supplier data to achieve tracking the whole process of raw material purchasing, goods transporting, and inventory management. With the data from historical orders, market trend and production plan, AI can predict the need of materials for production while controlling the error rate within 5%, and shortened the traditional three-day procurement approval process in 10 minutes. With the help of this platform, Changhong has achieved real-time information exchange with more than 70,000 registered suppliers, which build up a huge supply chain around the country to make sure the quality and quantity of the raw material.

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What's more, Changhong also make corporations with other companies in manufacturing area. For example, in product research and development stage, Changhong created an "AI Molecular Simulation system" with a university, which can reduce the traditional "trial-and-error method" from 18 months to no more than 6 months. In corporation program with chip suppliers, Changhong established and "AIoT Joint Laboratory" to develop intelligent control modules with lower energy consumption and high sensitivity. In a word, by integrating the supply chain with the help of AI, Changhong has promoted upstream and downstream enterprises from "physical connection" to "intelligent symbiosis", forming an enormous manufacturing system building on digital data and AI, and has become an industrial ecosystem leader.

5. Challenges and inspiration on transformation stage

5.1 Challenges

Although there are numerous advantages we get from AI, there are still some challenges we have to face on transformation stage. First of all, the wide spread of AI technologies in factory may cause increasing unemployment risk among middle and low post. For example, in the past there used to be a row of workers standing beside pipeline to producing goods. But now with the help of AI and robots, the whole pipeline may only need few people for monitor, and that will cause a huge decline on workforce need. Researchers collected data from 4241 observations, and pick 2820 representative sample of them. With the help of wavelet-based methodology base on Quantile-on-Quantile regression, they found that from January 2013 to August 2024, AI brought negative impact on unemployment level in a certain degree, especially when AI was between 0.6 and 0.7 quantiles [24]. This phenomenon may cause by AI replace workers faster than emergence of new jobs and the transformation of skills. So, the whole society should find out a way to move smoothly from workers to AI-based machines with workers. Second problem is the decision risk. As we know, due to the difference between data for training, different AI mode may cause algorithm differences. For example, although OpenAI announced that there training data for ChatGPT is from "wet texts publicly available" worldwide, its replying often showcases the values of American citizen, while the testing data of DeepSeek are also mainly come from its own country, Chinese. This mode may cause some problems in cross-culture determination in manufacturing.

If AI is being used in analyzing market trend and predict product need, these kind of data for minorities may cause misunderstandings, or even make terrible mistakes, such as sex, culture or race discrimination. This will mislead enterprise in decision-making, and cause energy waste and product overstock. So, companies need to optimize training data and algorithm design to ensure that the AI models are fair to users from different regions [25]. The last one is technological and security threat. AI-controlled machinery and robots may break down and make workers get hurt, but who should shoulder the responsibility is not clear yet. Should factory shoulder the responsibility? Maybe, but it is security checker who miss the broken part. Should security checker shoulder the responsibility? Not quite, because it is AI itself who mainly check the broken pieces. So, should the company that invented the AI shoulder the responsibility? Of course not, because there is no extra evidence that point out the design defects of the AI. To break through this barrier, governments should take some actions and set up a new law on duty allocation for this sort of events.

5.2 Inspiration

As per my perspective, technological progress is a double-edged sword, containing both huge opportunities and significant risks. We do face some challenges on transformation between traditional manufacturing and AI-based manufacturing, but the key lies in how to apply and manage the new technologies. Steve Jobs once said, "Innovation is the ability to see change as an opportunity, not a threat.", which reminds me a story. When the cars are firstly invented, London was a city with 300,000 horses and over 100,000 coachmen. At that time, people chose carriages for traveling. But when cars appeared, everything changes. People would rather choose a fancy, fast, advanced black box for traveling, rather than slow and smelly carriages. So, coachmen accused cars to the court with the reason of "cars may make horses frightened" to prevent them from being used, because they would earn tiny amount of money if cars replace all the carriages. Under their influence, the British Parliament passed the law of "Locomotive Act", which is also known as the "Red Flag Act", made strict restrictions on the speed of cars and qualification of drivers to ensure the interests of carriages industry. Nowadays, this sort of events almost happened in every factory in manufacturing area. Workers are the same as coachmen, while AI and robots can be considered as cars. As we all know, AIs and robots will definitely replace workers on day, as they are cheaper in maintenance and easier to control, or because it is the trend of development, but something works the same as what "Red Flag Act" do should be launched as soon as possible to deal with the conflict. Without it, the whole world may get into trouble very soon, as a large part of people lost their jobs and have nothing to do to earn a living. With the help of the law, workers can get some time for breath and learn how to work with AI and robots, factories can keep

producing products and regardless of losses from strike, the whole society and nation will also operate smoothly as before, and everybody can gain welfare from the advance of technology.

As the old saying goes, “There are a thousand Hamlets in a thousand people’s eyes”. Also, when facing the tremendous change of reshaping and transformation stage, different enterprises may share different ideas and solutions, and the following are some my own perspectives. First of all, elevate AI to a core strategic height and rethink the value position and business model. Enterprises should do research on their upstream suppliers and downstream buyers, and analyze the company should whether change their value position and business model or not. For example, the suppliers have the ability to supply various raw materials, our competitors have also taken step in personal customization, and the buyers are willing to buy DIY products, should we put more time and money on upgrading our factory to AI-based factory in order to produce them? Should we need to introduce AI control system in our factory, or the traditional mode is already satisfied the production plan, so we need not to spend capital on upgrading it? What’s more, it should be a warning to all the enterprises that data is a precious procession of the company and should be taken care of safely. We have heard may stories of enterprises shut down because of data stolen or leaking. It’s easy for your competitor to take steps on preventing you when they got the data on the structure of you supply chain, or your newest product which haven’t launch yet. Also, enterprises should hire more staffs who are expertise in both manufacturing and AI, as the trends of mixing AI and manufacturing is more and more influential. Company should also encourage old staff to learn knowledge of AI, in order to preventing them from being fired when the factory no longer needs craftsmen anymore.

6. Conclusion

Without doubt, AI is reshaping almost every part of global manufacturing, including product research and development, supply chain, equipment maintenance, repair and operations, energy consumption and environmental protection, and so on. It does bring some problems as well, and the challenges also inspire the enterprises on making themselves better. The competition in the future manufacturing industry will be a competition of comprehensive capabilities centered on data-driven and AI-based, or even more, AI-strengthen core. Every enterprise should pay attention to data from upstream suppliers, factory censors and downstream buyers, and carefully protecting them from leaking out. At the same time, AI techniques using in decision making and trend predicting are all crucial part of future development. From “traditional experience trial-and-error” to “intelligent co-creation” , from “rigid production” to “flexible intelligent manufacturing”, from “linear chain” to “intelligent collaborative network”, from “generalized push” to “accurate insight and value-added services”, AI is always by your side. Nobody can refuse the growth of the technology instead of accept and conform to it. As Abraham Lincoln used to say, “... government of the people, by the people, for the people ...”, and it is my conviction that with the collective efforts of the whole company, we can also make AI “of the people, by the people, for the people”.

There is one more thing the author wants to remind you, is that between the competition of different enterprises, it is consumers who are the true beneficiaries. For example, car customized used to be a distant word, but with the help of AI-based manufacturing, we can all enjoy the service of it. Actually, the whole world will make progress with the energy of benign competition, as it was what our ancestors experienced in the past. Without competition, the land of America may never be discovered, without the cold war, the technology of weapon may not be advanced so fast. We are now living in a world full of competition, the only way to win the competition except enhance your ability is your thoughts about it. If you think the task is too difficult to tackle it, then you may lose the game, but when you think the problem is difficult but I can overcome it, then you will be the winner. This theory also make sense in this period of reshaping and transformation. If a company can suffer from it, it will receive a precious gift from this era, a gift more precious than capital, fame, technology and any other things, which is a determined mind. This gift can help them tackle any difficulties on their way to success, until forever.

In a word, improve ability on data-driven and AI-strengthen, have a positive mind of competitors, and the enterprise will be success in the future manufacturing competition.

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