

# **BUSINESS TRENDS IN THE DIGITAL AGE:**

## **Evolution of Theories and Applications**

### **数字化时代的十大商业趋势** (英文版)

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# Foreword I

**Prof. Wu Jinglian**

Renowned Chinese economist

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By virtue of the great breakthroughs in digital technologies, the information revolution, which began in the 1950s, initiated an upsurge in mass entrepreneurship and innovation at the turn of the century. In the digital age, a dazzling array of novel ideas, technologies, products and business models spur companies forward, while those who react sluggishly will fall into ruin. Even as they cleave to the proven models, traditional industries will still need to tap into the colossal mobile Internet community to achieve global reach. In our ever-changing world, making the most of the present and seeing into the future are no small tasks. Through mining and analyzing mountains of data, Prof. Zhu Xiaoming and his team have identified ten mega business trends (big data, cloud computing, platforms, mobile Internet, software-defined anything, outsourcing and crowdsourcing, the demand-driven model, the long-tail market, digital finance, and the O2O model), offering us a vivid and richly detailed panorama of the digital age.

No matter for business or pleasure, this book offers a wealth of knowledge and insight for the reader.

## Foreword II

**Prof. Liu Ji**

Renowned Chinese strategist

Honorary CEIBS President

Former Vice President, Chinese Academy of Social Sciences

It is a rare to find a book of such timeliness and insight into the business strategies of the digital and Internet age.

Dr. Zhu Xiaoming, CEIBS Professor of Management and former President, has an extensive background in science and engineering. He rose through the ranks of businesses and governmental bodies and has acquired vast management experience in the process. Over the past decade, he has engaged in teaching and research at CEIBS. His wealth of knowledge and experience is reflected within this work, which offers penetrating theoretical analysis and many fresh ideas.

As a professor of an international business school, I am deeply impressed with his industry and intellectual rigor. The data in the book are based on extensive research and surveys of companies, and Prof. Zhu deserves special praise for the array of topical cases used to illustrate and support the book's views. This is a work that will be of great value and interest to the academic, political and business communities.

# Author's Preface

**Dr. Zhu Xiaoming**

Professor of Management and Former President (June 2006 – March 2015), CEIBS

In the age of digital technology and Internet, user-centric thinking, iteration, platform, freemium and sharing have caught on; the tide of openness and inclusiveness, deconstructing and disintermediation have sprung up; garage culture, café culture and grassroots culture have taken hold all over the world.

Which underlying business trends merit special attention? In my mind, ten mega business trends in the digital age described in this book demonstrate sound logic: Trend I, Trend II, Trend III and Trend IV, “Big Data, Cloud Computing, Platforms and Mobile Internet”, predict the changes in infrastructure; Trend V, “Software-Defined Anything”, focuses on changes in productivity; Trend VI, “Outsourcing and Crowdsourcing”, anticipates changes in production organization; Trend VII, “Driven By Demand”, explains the changing forces of economic growth; Trend VIII, “Long Tail”, forecasts an altered competitive landscape; Trend IX, “Digital Finance”, analyzes changes in financial entities and technologies; Trend X, “collaboration”, probes into changes in operations models.

*Business Trends in the Digital Age* will give you some enlightenment as to how to gain a solid foothold in the market amidst fierce competition. This book is also a must-have to innovation, investment, M&A, business transition and start-ups for entrepreneurs.

Some readers may ask why digital technologies can change business trends. One of the basic theories in economics and management is to reduce transaction costs, and transaction costs can be reduced by addressing information asymmetry. In the digital era, data can be mined, resources be shared, long-tail

and blue ocean strategies can be leveraged to drive down costs and enable companies to transform themselves and thereby reshape the industries and rewrite the business trends.

In the age of digital technology and Internet, it has been quite common that “following trends” outweighs “building up advantages”. Thus, those who follow the beaten track may breathe a sigh of regret that they have been “out” before getting down to SWOT analysis.

It is my great honor that *Business Trends in the Digital Age* has received the first prize for academic works at the 4<sup>th</sup> Chinese University Press Book Awards. We are convinced that academic works can't be separated from teaching (in particular case teaching). Only by continuous learning and interaction in the class can academic works be as fresh and compelling as ever.

On this occasion, we, Zhu Xiaoming(朱晓明) and Song Bingying(宋炳颖) would like to express our thanks to Ning Yingzi(倪英子), Ren Yifan(任轶凡), Li Rui(李蕊), Cao Xuehui(曹雪会), Luke R. Krawec, Wang Yan(王燕), Wang Chen(王晨), Zhou Wei(周伟), Huang Xie'an(黄协安), Xu Qian(许茜), Yu Rui(俞睿), Zheng Youjia(郑幼佳), Zhao Nan(赵楠), Fan Jingjing(范晶晶), Guan Peng(关鹏), Zhang Yu(张羽), Xiao Yingjun(肖颖君), Zhu Yezi(朱叶子), Shi Tianyu(施天瑜), Huang Chengyan(黄成彦), Ma Lan(马蓝), Wang chengde(汪承德), Jiang Junzhe(姜浚哲), Wang Danping(王丹萍), Zhu Yifan(朱轶帆), Zhang Yingwen(张颖文), Ma Ning(马宁), and Zhang Junrui(张郡芮) for their great efforts made in translation and proofreading of the book, and special thanks go to Yang Yemin(杨烨旻), Han Feng(韩丰), Chen Haimin(陈海闽), Xie Jun(谢隽), Lee Yong-Fatt(李永发), Wu Shengshan(吴晟姗), Meng Hao(孟浩), Tian Minwei(田珉炜), Ma Li(马利), Jiang Jiawei(姜嘉维), Li Angda(李昂达), Wang Yi(汪毅), Zuo Jiqing(左冀卿), Wang Dongqing(王东卿), Sun Wei(孙伟), Deng Qin(邓琴), Dmitry Andreev, Ramiro Gomez Lopez, Alberto Miranda Ordone, Kevin James Shimota, Upendra Pratap Singh from CEIBS MBA 2016 & 2015 cohorts for their excellent voluntary work in the whole translation and proofreading process. I still remembered that on January 17 one of CEIBS MBA students Wu Shengshan asked me during the book launch ceremony if this book can be translated into English through crowdsourcing. If the second edition of the book is to be released in the future, I will definitely write a case on translation through

crowdsourcing and add it into the second edition.

In the age of digital technology and Internet, everyone has an opportunity to realize their dreams. For entrepreneurs or educators, nothing matters more than commitment for them to follow the ever-changing business trends or to keep pace with the fast-growing S&T innovation. Only by trying to surpass the front runners and going beyond ourselves can we make a foray into uncharted territory to create a brave new world.

CEIBS Shanghai Campus  
December 2015



# Preface

The ICT (Information Communication Technology) Revolution is a “story about the service sector”. . . By virtue of the ICT, efficiency in the service sector has substantially risen in tandem with its transition.

—*The Choice of China's Growth Model* (2013 edition), Wu Jinglian

I find that the great thing in this world is not so much where we stand as in what direction we are moving.

—O. W. Holmes (1841 – 1935)

On October 22, 2014, Prof. Samuel Chao Chung Ting, a Chinese-American scientist who received the Nobel Prize in Physics in 1976, delivered a lecture as part of the Master Class Series on CEIBS Shanghai Campus. He noted, “It is my first time to deliver a speech to MBA and EMBA students at a business school.” It was also the first time CEIBS had hosted a Nobel Laureate in Physics for a lecture. As noted by Prof. Ting, physicists are capable of not only seeing beyond the edge of the Milky Way ( $10^{25}$  meters) and observing more distant galaxies, but also probing entities as small as quarks ( $10^{-17}$  meters). From the largest galaxies to the tiniest particles, our point of view about the objective world changes over time; from basic research to applied technologies, the frontiers of science have been pushed forward and the number of applications has grown.

Although Prof. Ting's lecture dealt with physics theory and applications, the basic idea also applies to the business world. Since the division of labor and market transactions began, people have sought new ways to reshape the business world. From macroeconomic trends to micro organizations, economic law to business strategies, and technological innovation to business model innovation,

we have gained deeper insight into the business world and enhanced the diversity of business applications.

In the digital and Internet age, companies may be facing the toughest competition, the fastest business shifts and the largest number of innovations in history. New ideas, models and businesses are mushrooming. Business schools need to keep pace with the times to help entrepreneurs understand the business trends in the digital age so as to grasp opportunities for innovation. This is why we named the book *Business Trends in the Digital Era: Evolution of Theories and Applications* (hereinafter referred to as *Business Trends in the Digital Era*).

To understand these business trends, we need to delve into the works of management gurus, including *The Choice of China's Growth Model* by Wu Jinglian, *The Theory of Economic Development* by Joseph A. Schumpeter, and *The Practice of Management* by Peter F. Drucker, while making management theory part of our own business practices.

This book originated from the lecture notes Prof. Zhu Xiaoming and his research team prepared for students. So far, no fewer than ten classes have taken Prof. Zhu's course. Converting the lecture notes into a book didn't seem overly difficult, at least until we actually put pen to paper. First, in class, we can supplement our lecture notes with PowerPoint presentations or with audio and video materials to capture and hold students' attention. But in writing the book, we had to rely on key points of view, content and internal logic, rather than on auxiliary tools. What also important were ensuring the writing itself was vivid and that the cases were up-to-date. Second, for students, we need to boil down the course content into lecture notes to bring out its essence; for readers, we must instead go to great lengths to expound our views and strengthen them with cases. Third, as digital technologies and business models are advancing by leaps and bounds, we need to keep abreast of and incorporate developments in the issues and cases referred to in the book, ensuring we can substantiate our points of view with up-to-date information.

We have poured all our mental and physical energy to writing the book. Seeing the book published provides us with a great deal of comfort, as our efforts have borne fruit at last. It is my sincere hope that the book will serve not only as a textbook for business schools, but also as a guide to innovation, investment, M&A, business transition and start-ups for entrepreneurs.

<b>Introduction</b>	<b>A Business World Reshaped by Digitization</b>	<b>1</b>
<b>Chapter 1</b>	<b>Big Data—From Raw Data to Big Data</b>	<b>13</b>
1.1	Getting a Glimpse of Big Data	14
1.1.1	The Essence of Big Data	14
1.1.2	The Evolution of Big Data	16
1.2	The Value of Big Data	17
1.2.1	A Mass of Data: A Gold Mine Rather Than a Treasure Chest	17
1.2.2	Data Mining: A New Business Competence	18
1.3	The Application of Data Mining	20
1.3.1	A Boost to Financial Institutions	20
1.3.2	Big Data Application in the Pharmaceutical Industry	26
1.3.3	Alibaba's Secret to Success: Big Data	28
1.4	Entrepreneurs: How Far Away Are You From Big Data?	33
1.4.1	Will Big Data Support Cross-Sector Innovation?	34
1.4.2	How Should Small Companies Embrace Big Data?	35
1.4.3	You Have the Technology, but Do You Have the Talent?	36
1.4.4	Structural or Non-Structural Data?	37

1.5	Conclusion .....	39
<b>Chapter 2</b>	<b>Cloud Computing—From Offline Computing to Cloud Computing .....</b>	<b>40</b>
2.1	What is the Cloud? .....	43
2.2	What Is New about the Cloud? .....	45
2.3	The DNA of Cloud Service .....	48
2.4	The Cloud in Business .....	52
2.4.1	Kingdee Helps Companies Look to the Clouds .....	52
2.4.2	Yonyou Seizes a Cloud Opportunity for Transition .....	53
2.4.3	AliCloud Propels Yu'E Bao behind the Scenes .....	54
2.5	The Cloud in Our Lives .....	55
2.5.1	Remote Collaboration: Cloud Office .....	55
2.5.2	New Experience: Sound Cloud .....	56
2.5.3	Massive Space: Cloud Storage .....	57
2.6	The Future of the Cloud .....	58
2.7	Conclusion .....	62
<b>Chapter 3</b>	<b>Platforms—From the One-sided Market to the One-sided + Two-sided Market .....</b>	<b>63</b>
3.1	The Catalyst of Platforms: The Internet .....	64
3.2	A Keyword of Platforms: Connection .....	68
3.2.1	Platforms' Connection Goal: Becoming Multi-lateral and Diversified .....	69
3.2.2	Connection Method: Interaction and Win-Wins .....	71
3.3	Platform Advantages: The Ecosphere and Big Data .....	73
3.3.1	The Systematic Advantage of Platforms: The Ecosphere .....	74
3.3.2	The Platform's Twin: Big Data .....	75
3.4	Three Factors in the Success of Platforms .....	76
3.4.1	No cost .....	77
3.4.2	Openness .....	80
3.4.3	Maximization of User Value .....	81
3.5	How to Build A Successful Platform Enterprise .....	83
3.6	Conclusion .....	85

<b>Chapter 4</b>	<b>Mobile Internet—From PC-Based Internet to PC-Based Internet and Mobile Internet</b>	<b>86</b>
4.1	PC Internet vs. Mobile Internet	87
4.1.1	Huge Differences	88
4.1.2	Catching up and overtaking	90
4.2	Integration and Collision	98
4.2.1	The Integration of Mobile Terminals, PCs & E-consumer terminals	98
4.2.2	The Integration of the Industrial Chain	99
4.2.3	The Integration between Industrial Chains	100
4.2.4	The Integration of Mobile Internet with Traditional Industries	100
4.3	The New Journey from PC Internet to Mobile Internet	102
4.3.1	Tencent: Back to Zero and Starting Anew	102
4.3.2	Microsoft: Two Firsts	103
4.3.3	Fighting for Control of the Traffic Gateway	104
4.3.4	Mergers and Acquisitions that Define Territories	106
4.4	The New Mobile Internet Thinking	107
4.5	Conclusion	109
<b>Chapter 5</b>	<b>Software-defined Anything—From Software-Defined Hardware to Software-Defined Anything</b>	<b>110</b>
5.1	Software-Defined Hardware	112
5.1.1	A Means of Transport or a Computer with Four Wheels?	113
5.1.2	GE's Bet on Software	114
5.1.3	Android Wear: A Software Platform for Wearable Devices	115
5.2	Software Is Pervading Industries	115
5.2.1	How Software is Revolutionizing the Fast-food Industry: "McDonald's on Your Smart Phone"	117
5.2.2	How Software is Reshaping the Construction Industry: the All-powerful BIM System	118
5.2.3	Software-based Farm Management: Cloud, Big Data and Farmaron	121

5.2.4	How Software is Pervading the Finance Industry: Wolfram's Retirement Planning Calculator .....	122
5.3	Software-defined Anything .....	123
5.3.1	The Internet: The Physical Basis for Software-defined Anything .....	125
5.3.2	Software-defined Anything Accelerates the Development of Cloud Computing, the Internet of Things and Big Data .....	127
5.4	The Path to Success in the "Software-defined Anything" Era ...	129
5.4.1	The Verticalization of Software Companies .....	129
5.4.2	The "Virtualization" of Hardware Products .....	131
5.4.3	Have You Found the Right People? .....	132
5.4.4	Where Will the Investment Opportunities Be in the Future? .....	133
5.5	Conclusion .....	135

## **Chapter 6 Outsourcing and Crowdsourcing—From Building All-round Capabilities to Outsourcing and Crowdsourcing ..... 136**

6.1	Outsourcing and Crowdsourcing: Similar but Different .....	139
6.1.1	Links Between Outsourcing and Crowdsourcing .....	139
6.1.2	Outsourcing $\neq$ Crowdsourcing .....	140
6.2	Modern Service Outsourcing Driven by IT Innovations .....	142
6.3	Outsourcing: Why and How? .....	145
6.3.1	The Good News and the Bad News .....	145
6.3.2	Outsourcing Strategies .....	146
6.4	Crowdsourcing: A New Model of Innovation by All .....	147
6.4.1	The Value of Crowdsourcing .....	147
6.4.2	How to Benefit from Crowdsourcing .....	150
6.5	The Maker Movement: The Next Step After Crowdsourcing ...	154
6.6	Conclusion .....	156

## **Chapter 7 Driven by Demand—From Supply Chain to Supply Chain and Demand Chain ..... 158**

7.1	The New Scenario of Demand in the Digital Age .....	160
7.1.1	Reflections on the Traditional Supply Chain .....	161

7.1.2	The Rise of the Demand Chain .....	162
7.1.3	The Changing Rules of the Game .....	163
7.2	Prioritizing User Demand .....	164
7.2.1	Qunar.com: No Model, But Demand .....	165
7.2.2	P&G: The Consumer Is the Boss .....	166
7.2.3	Amazon: Standing in the Shoes of Customers .....	167
7.3	Consumer Demand: Seeing Past the Tip of the Iceberg .....	168
7.3.1	Observing in the Real Environment .....	169
7.3.2	Experience as a Customer .....	170
7.3.3	Precise Demand Prediction Via Big Data .....	171
7.4	How to Create the Demand Chain .....	173
7.4.1	End Users, Not Just Direct Users .....	174
7.4.2	Long-term Partnerships .....	174
7.4.3	Sharing Demand Information .....	175
7.4.4	Learning to Leverage Crowdsourcing .....	176
7.5	Lean Startups and the Demand Chain .....	177
7.5.1	Two Cases .....	178
7.5.2	Steps for Startups to Validate Customer Demand .....	179
7.5.3	Adapting and Adjusting .....	180
7.6	Conclusion .....	181

<b>Chapter 8</b>	<b>The Long Tail Market—From Economies of Scale to Economies of Scale and the Long Tail Market .....</b>	<b>182</b>
8.1	Learning about Long Tail Theory .....	183
8.1.1	The Golden Rule of the Industrial Age: Economies of Scale .....	183
8.1.2	The Rise of the Long Tail Theory: from Chandler to Dixit and Anderson .....	184
8.1.3	The Value of the Long Tail .....	186
8.2	Rethinking “20/80” and “80/20” .....	189
8.2.1	Is the 20/80 Principle Losing Its Meaning? .....	189
8.2.2	Is the Top 20% in the Chart Meaningless? .....	191
8.2.3	Is the Long Tail Market Just the Segment Market? .....	191
8.3	The Forces That Foster the Long Tail Market .....	192
8.3.1	The Rise of Niche Demand .....	192

8.3.2	Reducing the Cost of Customized Manufacturing .....	192
8.3.3	Reducing the Cost of Sales .....	193
8.3.4	More Channels of Discovery .....	194
8.4	Long tail + Blue Ocean .....	196
8.4.1	Long tail vs. Blue Ocean .....	196
8.4.2	Lvmama: Capturing the Long Tail and Exploring the Blue Ocean .....	198
8.4.3	Avoiding the Major Markets, Seizing the Blue Ocean Market, and Heading For Bigger Markets .....	200
8.5	Achieving Success With the Long Tail .....	200
8.5.1	Making the Long Tail Longer .....	200
8.5.2	Reducing Costs As Much As Possible .....	201
8.5.3	The Integration of the Short Head and The Long Tail .....	202
8.6	Conclusion .....	203

## **Chapter 9 Digital Finance—From Traditional Finance to Digital and Internet Finance ..... 204**

9.1	Traditional Finance: Challenged by Cross-sector Innovations ...	205
9.1.1	Alipay: The First to Shake Up the Financial World ...	207
9.1.2	Internet Companies Aggressively Moving into Financial Sector .....	210
9.2	Supply Chain Finance .....	211
9.3	P2P Online Financing Platforms .....	214
9.4	Traditional Finance Transforms into Digital Finance to Fight Cross-sector Rivals .....	216
9.4.1	Industrial and Commercial Bank of China (ICBC): The Leading Giant of Banking Digitalization .....	218
9.4.2	Financial Institutions Trying to Catch up .....	219
9.5	Transboundary Collaboration between Traditional Finance & Internet Finance .....	223
9.5.1	Becoming Partners Rather Than Enemies .....	223
9.5.2	Digital Finance Is an Effective Way to Realize Inclusive Finance .....	225
9.6	Digital Finance .....	231



9.6.1	Capitalizing on Big Data, Cloud Computing, Platforms and Mobile Internet to Promote Financial Innovation ...	231
9.6.2	No Time to Waste: Catching Up with the Advancement of “Techonlogy Forecasting and Financial Innovation” .....	235
9.6.3	Changing Traditional Financial Business Management with Internet Thinking .....	238
9.7	Conclusion .....	240

## **Chapter 10 The O2O Model—From Online/Offline to the O2O**

	<b>Model .....</b>	<b>242</b>
10.1	Online vs Offline .....	243
10.1.1	The Offline Model: Challenged by E-commerce .....	243
10.1.2	The Online Model: Still Rising, But Unable to Completely Replace the Offline Model .....	244
10.2	Online and Offline Integration: Easier Said Than Done .....	245
10.2.1	Online Businesses Test the Water in the Offline Market .....	246
10.2.2	Offline Businesses Move Online .....	247
10.2.3	Are the Two Models Compatible? .....	248
10.3	The O2O Closed-loop: A Model Worth Exploring .....	249
10.3.1	O2O Closed-loop: Why It Emerged? .....	250
10.3.2	O2O Closed-loop: Constituents .....	251
10.3.3	O2O Closed-loop: Who Are the Competitors? .....	254
10.4	The O2O Closed-loop in Our Lives .....	256
10.4.1	The O2O Closed-loop: Accelerating the Transformation of the Lifestyle Industry .....	257
10.4.2	O2O Closed-loop: Boosting the Development of Smart Business Districts .....	259
10.5	Are You Ready for O2O? .....	262
10.5.1	Do You Know Users’ Pain Points? .....	263
10.5.2	Do You Know Where Your Users Are? .....	264
10.5.3	Where Is Your Weakness? .....	266
10.6	Conclusion .....	268