CHINA’S DIGITAL TRANSFORMATION
AN ANALYSIS FROM A SOCIO-ECONOMIC PERSPECTIVE
CHINA IS A LEADING COUNTRY IN DIGITAL ECONOMY

Retail E-commerce Transaction Value

<table>
<thead>
<tr>
<th>Year</th>
<th>CHINA</th>
<th>U.S.</th>
<th>Rest of the world</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>495</td>
<td>64.6</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>2016</td>
<td>1,915</td>
<td>33.5</td>
<td>24.1</td>
</tr>
</tbody>
</table>

Mobile payments, 2016

<table>
<thead>
<tr>
<th>Region</th>
<th>CHINA</th>
<th>U.S.</th>
<th>Rest of the world</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>790</td>
<td>74</td>
<td>11x</td>
</tr>
<tr>
<td>U.S.</td>
<td>74</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Global unicorns, June 2016

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of unicorns</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHINA</td>
<td>34</td>
<td>47</td>
</tr>
<tr>
<td>REST OF WORLD</td>
<td>12</td>
<td>45</td>
</tr>
<tr>
<td>U.S.</td>
<td>19</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: McKinsey Global Institute (MGI), CHINA’S DIGITAL ECONOMY: A LEADING GLOBAL FORCE, August 2017
CHINA’S DIGITAL PORTION OF THE GDP

Source: China Academy of Information and Communication Technology (CAICT), Ministry of Industry and Information Technology (MIIT)
The digital economy refers to a broad range of economic activities that includes using digitized information and knowledge as the key factor of production, modern information networks as the important activity space, and the effective use of Information and Communication Technology (ICT) as an important driver for efficiency-enhancing and economic structural optimization.
The ICT portion (tech sector, such as Information Technology, telecommunication, the internet sector)

The integrated component

THE DIGITAL COMPONENTS OF THE GDP

Source: China Academy of Information and Communication Technology (CAICT), Ministry of Industry and Information Technology (MIIT)
“No pure internet enterprise will exist in future society. All “traditional” industries and enterprises will have the genes of the internet, and the border of digital economy and real economy will vanish at last.”

“未来的社会将不会再有纯粹的互联网企业，所有的“传统”产业和企业都将融入互联网的基因，数字经济与实体经济的分野，终将消失。”

——Huateng Ma
Chairman of the Board and CEO
TWO FUNDAMENTAL INGREDIENTS

SUPPLY SIDE

DIGITAL INFRASTRUCTURE

MASSIVE USER ADOPTION RATE
GOVERNMENT AS A POLICY MAKER, INVESTOR, INNOVATOR, AND CONSUMER

1994.4
The National Computing and Networking Facility Project

2000.4
4 Major network: CSTNET, CHINANET, CERNET, CHINAGBNET realized interconnection

2000
The birth of China’s Mobile Internet

2009.1
The "Internet of Things" strategy

2009.11
The birth of the “3G” era

2009
The "Internet of Things“ strategy

2013.12
The birth of the “4G” era

2013.8
The "Broadband China“ strategy

2015.3
The “Internet Plus“ strategy is Proposed in Government Work Report

2017.8
The State Council launched “AI Development Plan“
“INTERNET PLUS”

- Big data
- Internet of Things
- Cloud Computing
- Entertainment
- Government
- Health Care
- Manufacturing Industry
- Tourism
- Transportation
- Artificial Intelligence
- Education
- Business
- Finance
- Internet of Things
- Agriculture
- Business
CHINA’S UNIQUE INTERNET ECOSYSTEM

Baidu 百度

Tencent 腾讯

Alibaba

滴滴

JD.com

mi

Huawei

Lenovo

oppo

vivo

中国移动

China Mobile

China unicom 中国联通

China Telecom
TWO FUNDAMENTAL INGREDIENTS

SUPPLY SIDE
DIGITAL INFRASTRUCTURE

DEMAND SIDE
MASSIVE USER ADOPTION RATE
CHINA IS THE WORLD’S LARGEST MOBILE MARKET

724 Million
CHINA

52%+ of China’s Population Utilize Mobile Access

733 Million
Europe and North America

Europe and North America’s Population Utilize Mobile Access

Rest of the world

Source: CNNIC, eMarketer
FROM A “TREND FOLLOWER” TO A GLOBAL “TREND SETTER”

BIKE-SHARING

CASHLESS LIFESTYLE

DRONES
“WE BUILT THIS COUNTRY WITH ONES AND ZEROES!”
THE DIGITAL CIVILIZATION

- **The Stone Stool Civilization**: ~12,000 BC
- **The Agricultural Civilization**: 12,000 BC-1760
- **The Industrial Civilization**: 1760-1840
- **The Digital Civilization**: Late 19th Century - Early 20th Century

**The Agricultural Civilization**
- **Unsettled**: 12,000 BC
- **Settled & Self-sufficient**: 12,000 BC-1760

**The Industrial Civilization**
- **Mechanical Production**: 1760-1840
- **Mass Production**: Late 19th Century - Early 20th Century
- **Globalization of People, Capital and Products**: 1960s

**The Digital Civilization**
- **PC and Internet**: 1980s
- **Globalization of Data**: 21st Century

The diagram illustrates the timeline of civilizations, highlighting key periods and significant technological advancements.
HOW TO MEASURE THE DIGITAL ECONOMY?
TECHNOLOGY EVANGELIST VIEW ON GDP

• A PARADOX OF DIGITAL CIVILIZATION
THE WORLD AFTER GDP

Lorenzo Fioramonti
TECHNOLOGY EVANGELIST VIEW ON GDP

- A PARADOX OF DIGITAL CIVILIZATION
- A COMPASS TO THE NEW CIVILIZATION
CHALLENGES OF GDP FROM THE HISTORICAL PERSPECTIVE

1. Environment Damage
   - Costs caused by pollutions
   - Costs caused by environmental damage
   - Loss of biodiversity

2. Happiness and Welfare
   - Value of leisure time
   - Value of unpaid work
   - Social welfare

3. Role of Digital
   - Digital changes in production
   - Digital changes in consumption
   - Growth in consumer welfare

### Time Line

1960: Silent Spring
1970: Only One Earth
1980: A New Concept of Development
1990: Human Development Index (HDI)
2000: Beyond GDP
2010: Transforming our World: The 2030 Agenda for Sustainable Development
2020: Measuring the Digital Economy

**Measuring the Digital Economy**

- **PC**
  - Measure of Economic Welfare (MEW)
  - Bhutan GNH Index
  - The Limits to Growth

- **PC & Internet**
  - Net Domestic Product (NDP)
  - The Index of Sustainable Economic Welfare (ISEW)
  - Millennium Development Goals (MDG)

- **Mobile**
  - Green GDP Sustainable Development Index (SDI)

- **AI**
  - Better Life Index
  - Better Life Index

**Bhutan GNH Index**

**Human Development Index (HDI)**

**Better Life Index**

**A New Concept of Development**

**Our Common Future**

**Better Life Index**

**Beyond GDP**

**Green GDP**

**Sustainable Development Index (SDI)**

**Happiness and Well-Being: Defining a New Economic Paradigm**

**Gross National Happiness (GNH)**

**Measuring the Digital Economy**
TECHNOLOGY EVANGELIST VIEW ON GDP

• A PARADOX OF DIGITAL CIVILIZATION
• A COMPASS TO THE NEW CIVILIZATION
• AN INTEGRATION OF HOPE
“OF THE PEOPLE, BY THE PEOPLE, FOR THE PEOPLE”

“为人民谋幸福”
若有光
FUTURE AND NATURE
“Travel to outer space. If the human race is to continue for another million years, we will have to boldly go, where no one has gone before.”

—— Stephen Hawking

2017  TENCENT WE
THANK YOU.