

「暮らし」分野での 新たな飛躍に向けて

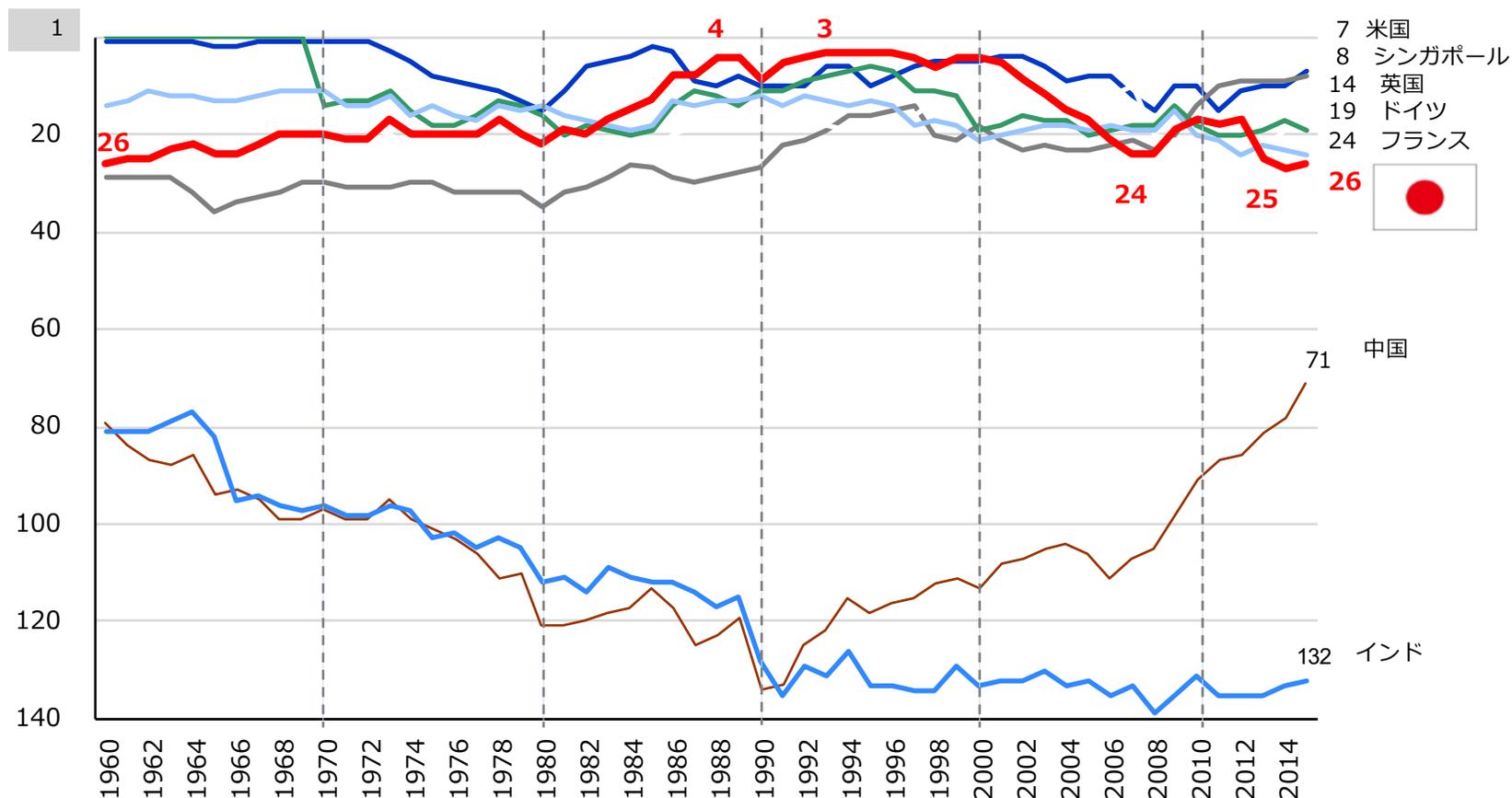
経済産業省
産業構造審議会 新産業構造部会

ヤフー チーフストラテジーオフィサー
安宅 和人

2016年12月22日

1960年代以来の水準

GDP per capita Ranking
(unit=current US\$)



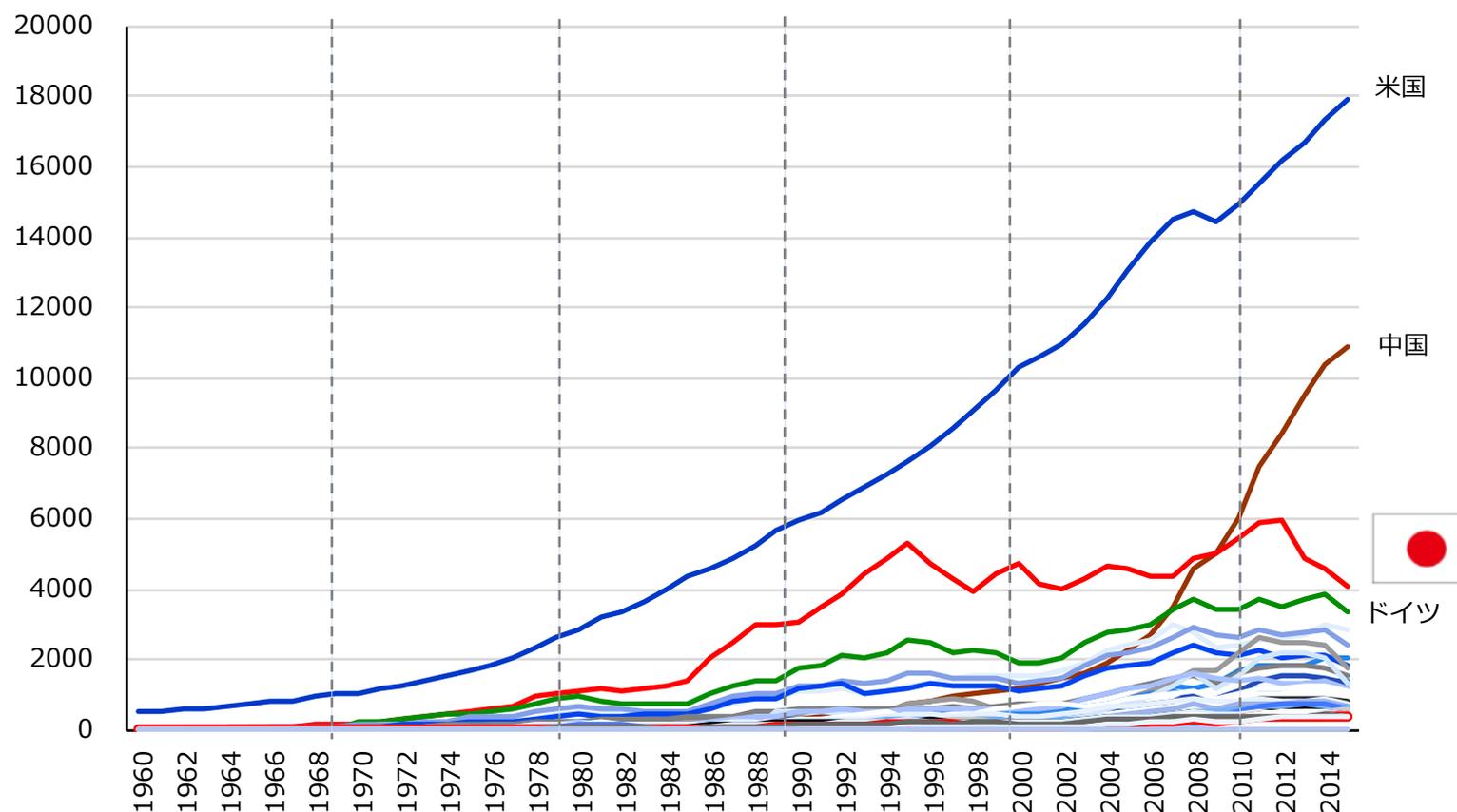
GDP per capita is gross domestic product divided by midyear population.

Source: World Bank national accounts data, and OECD National Accounts data files. Excluded countries which data is not available in 2015.

5年でドイツに並ばれかねない状況

Trend of GDP

(Top 30 countries in 2015, unit=current billion US\$)

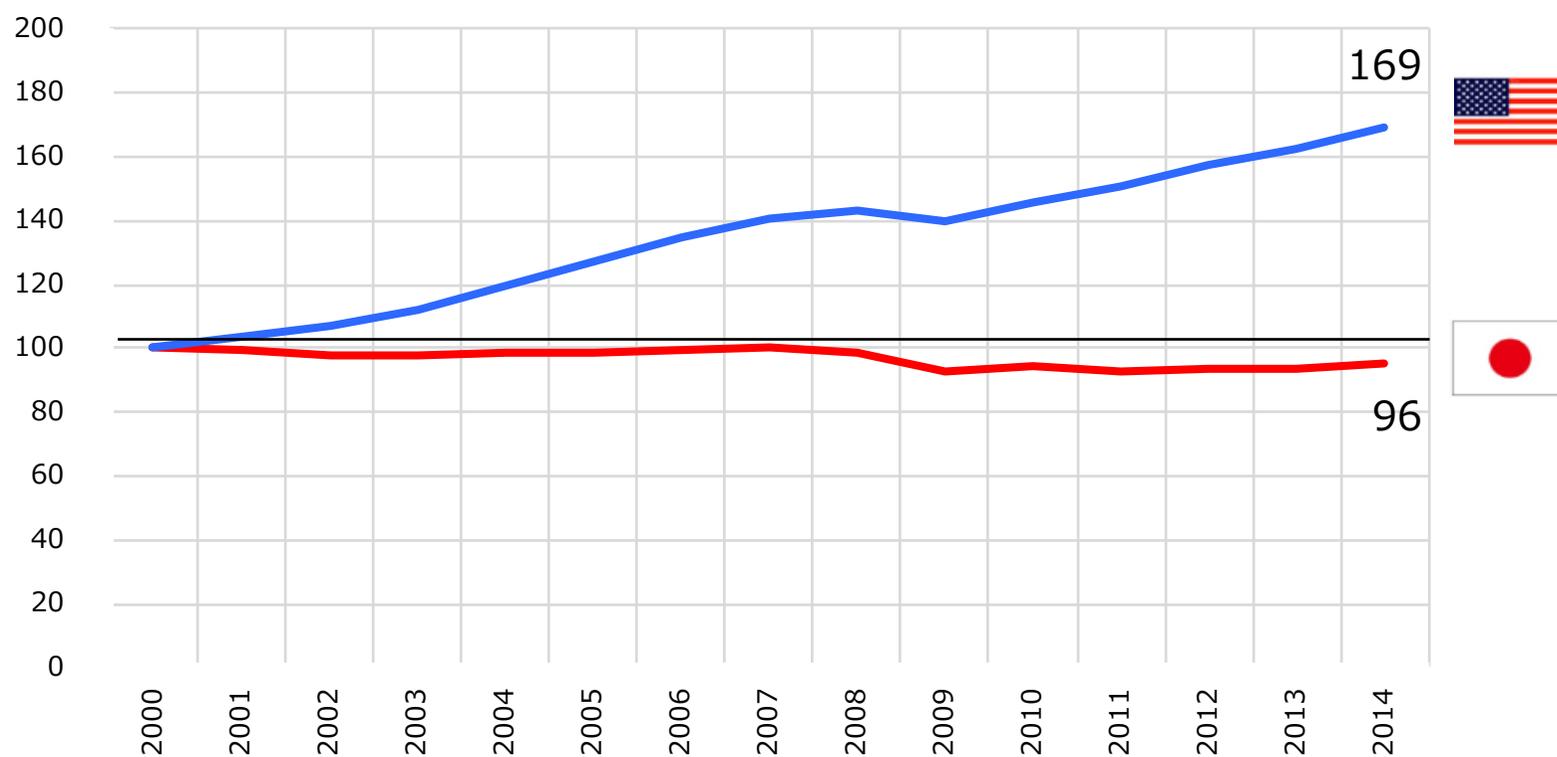


GDP is at purchaser's prices

Source: World Bank national accounts data, and OECD National Accounts data files. Excluded countries which data is not available in 2015.

忘れられた人たちの反乱と言われた米国も

GDP trend
(Index with the year 2000 as 100)

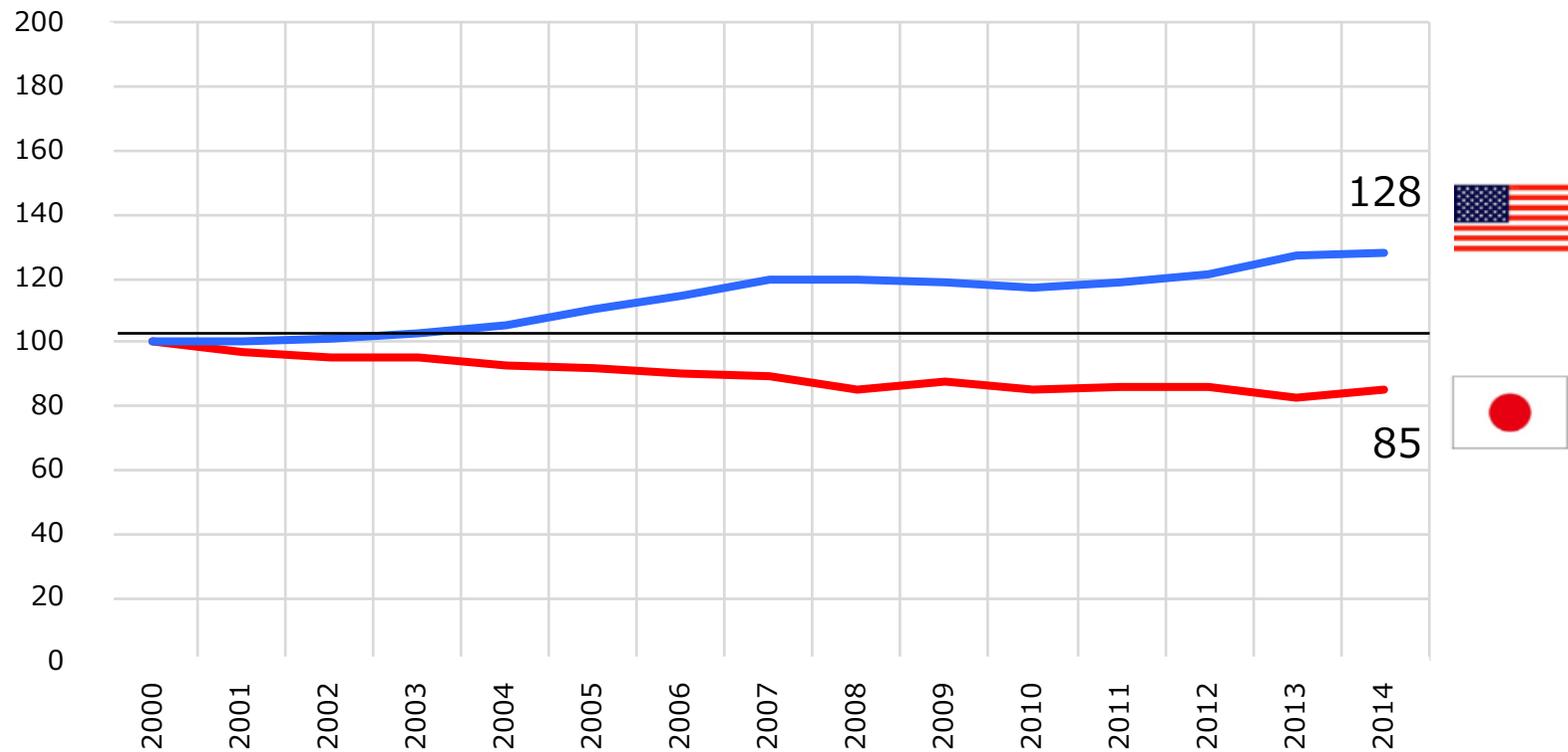


※ "nominal" GDP

Source: JPN; Statistic of Cabinet Office, Government of Japan, USA ; Bureau of Economic Analysis

Medianは増えている

Household Income median trend
(Index with the year 2000 as 100)



※ nominal base

Source: JPN; Comprehensive Survey of Living Conditions, USA ; United States Census Bureau,

ここまで弱くなったのは特にこの5年

GDP per capita Top20
(unit=current US\$)

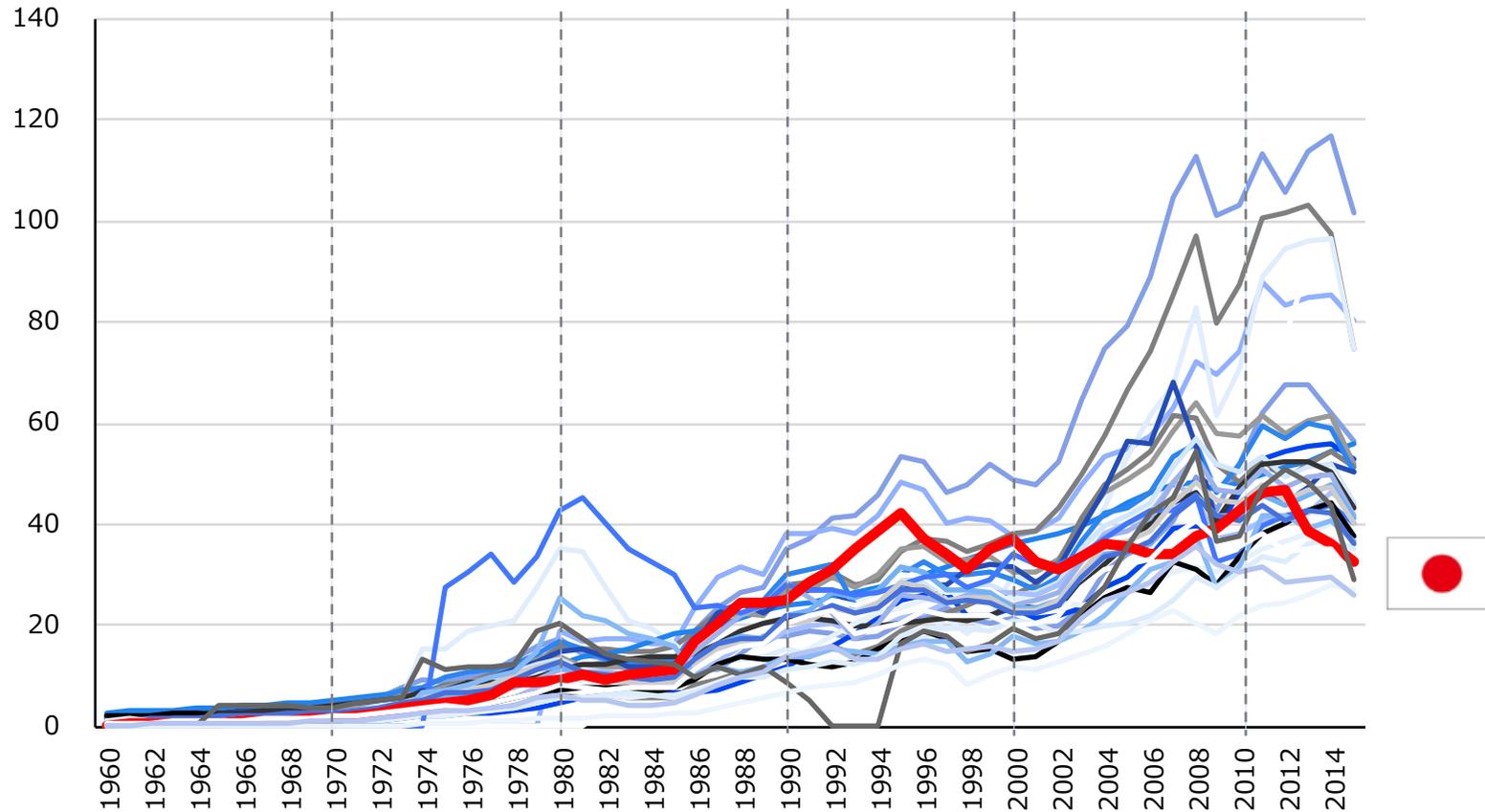
Rank	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
1	United States	Kuwait	United States	United Arab Emirates	United Arab Emirates	United Arab Emirates	Switzerland	Luxembourg	Luxembourg	Luxembourg	Luxembourg	Luxembourg
2	New Zealand	United States	Sweden	Qatar	Qatar	United States	Luxembourg	Switzerland	Norway	Norway	Norway	Switzerland
3	Canada	Sweden	Luxembourg	Kuwait	Brunei Darussalam	Switzerland	Sweden	Japan	Switzerland	Iceland	Switzerland	Macao SAR, China
4	Luxembourg	Luxembourg	Canada	Sweden	Kuwait	Qatar	Finland	Denmark	Japan	Switzerland	Qatar	Norway
5	Sweden	Canada	Kuwait	Luxembourg	Switzerland	Brunei Darussalam	Norway	Norway	United States	Qatar	Denmark	Qatar
6	Australia	Iceland	Denmark	Norway	Luxembourg	Norway	United Arab Emirates	Germany	United Arab Emirates	Ireland	Macao SAR, China	Australia
7	Switzerland	Switzerland	Norway	Denmark	Sweden	Canada	Denmark	Austria	Iceland	Denmark	Sweden	United States
8	Bahamas, The	Australia	Australia	United States	Saudi Arabia	Sweden	Iceland	Sweden	Denmark	United States	Australia	Singapore
9	Norway	Denmark	Bahamas, The	Canada	Norway	Luxembourg	Japan	Netherlands	Qatar	Sweden	Netherlands	Denmark
10	Iceland	Norway	Netherlands	Brunei Darussalam	Iceland	Iceland	United States	United States	Sweden	Netherlands	United States	Ireland
11	United Kingdom	New Zealand	France	Netherlands	Denmark	Kuwait	Germany	Belgium	United Kingdom	United Arab Emirates	Ireland	Sweden
12	Israel	Bahamas, The	Belgium	Australia	Netherlands	Denmark	France	United Arab Emirates	Ireland	United Kingdom	Canada	Iceland
13	Denmark	France	Qatar	Belgium	Belgium	Japan	Austria	France	Netherlands	Finland	Austria	Netherlands
14	France	Finland	Germany	France	France	Australia	Canada	Iceland	Hong Kong SAR, China	Austria	Singapore	United Kingdom
15	Belgium	United Kingdom	Iceland	Iceland	United States	Finland	Netherlands	Finland	Austria	Belgium	Finland	Austria
16	Finland	Belgium	Finland	Saudi Arabia	Germany	Bahamas, The	Italy	Singapore	Finland	Canada	Belgium	Canada
17	Netherlands	Netherlands	United Kingdom	Finland	Finland	Netherlands	Belgium	Hong Kong SAR, China	Canada	Japan	Japan	Hong Kong SAR, China
18	Austria	Israel	Italy	Germany	Canada	France	United Kingdom	United Kingdom	Singapore	Kuwait	Germany	Finland
19	Italy	Austria	Austria	Austria	Austria	Germany	Australia	Italy	Germany	France	Iceland	Germany
20	Ireland	Italy	Japan	Japan	Australia	Austria	Qatar	Canada	Belgium	Germany	France	United Arab Emirates
	Japan	26	24			22						26

GDP per capita is gross domestic product divided by midyear population.

Source: World Bank national accounts data, and OECD National Accounts data files. Excluded countries which data is not available in 2015.

半ば一人負け

Trend of GDP per capita
(Top 30 countries in 2015, unit=current 1,000 US\$)

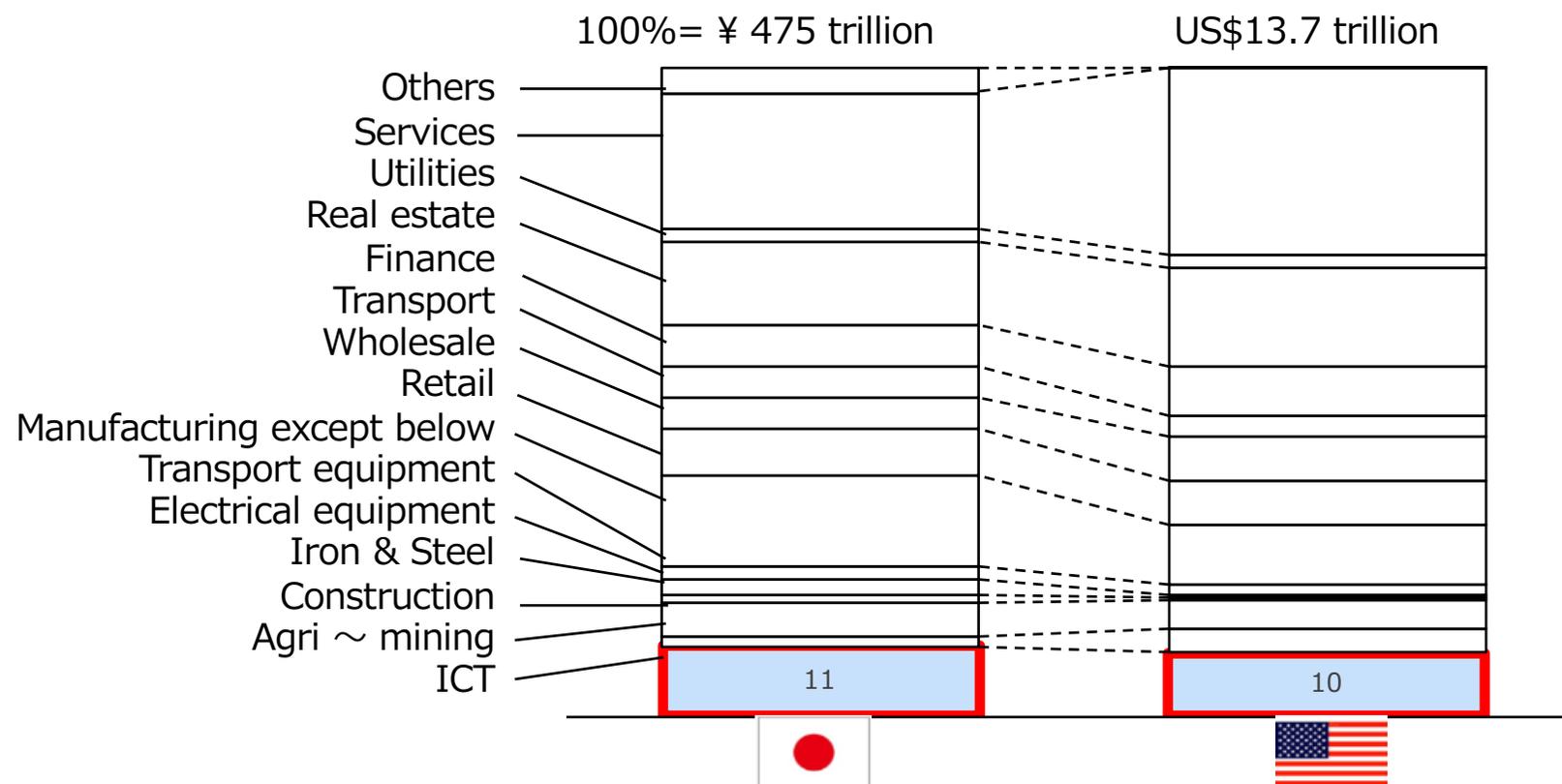


GDP per capita is gross domestic product divided by midyear population.

Source: World Bank national accounts data, and OECD National Accounts data files. Excluded countries which data is not available in 2015.

ICTセクターの割合の問題ではない

GDP by industry
(%, as of 2014)

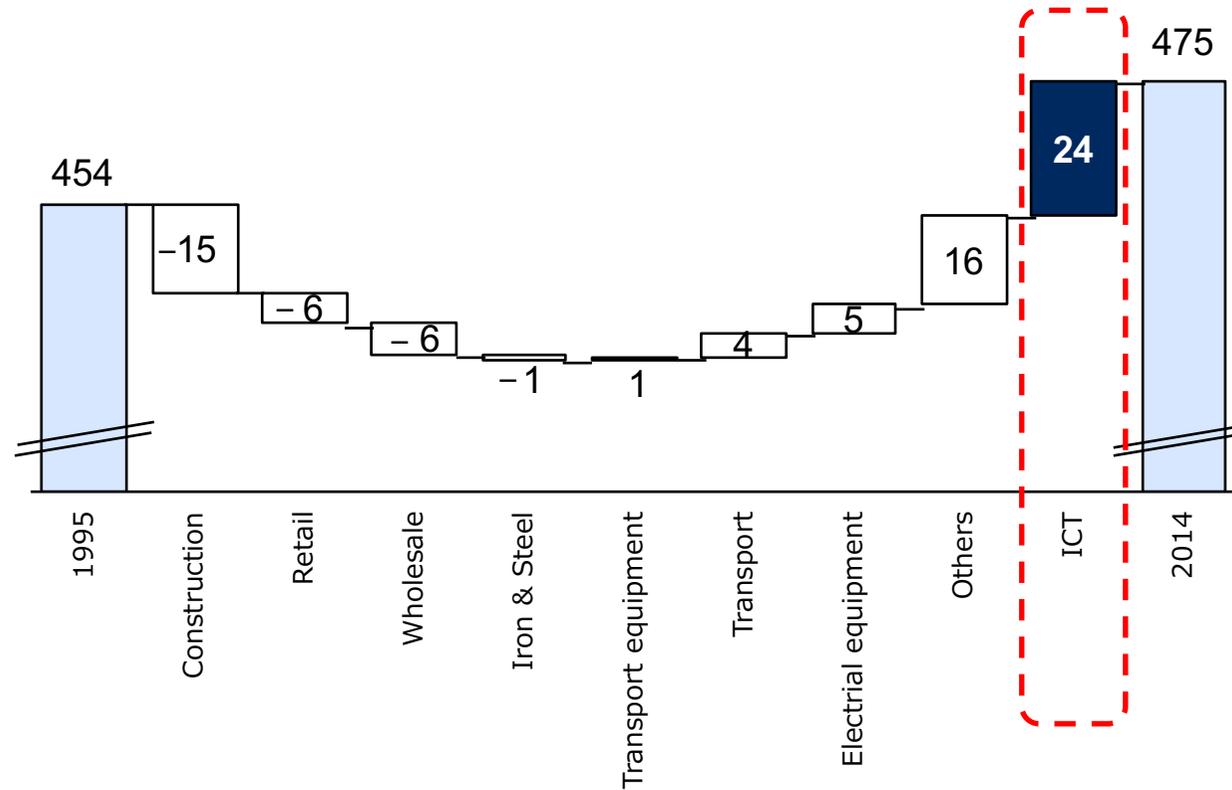


※ "Real" GDP, among Private industries

Source: JAPAN; 2016 White Paper, Information and Communications in Japan, USA; Bureau of Economic Analysis

日本の伸びは極端にICTに依存

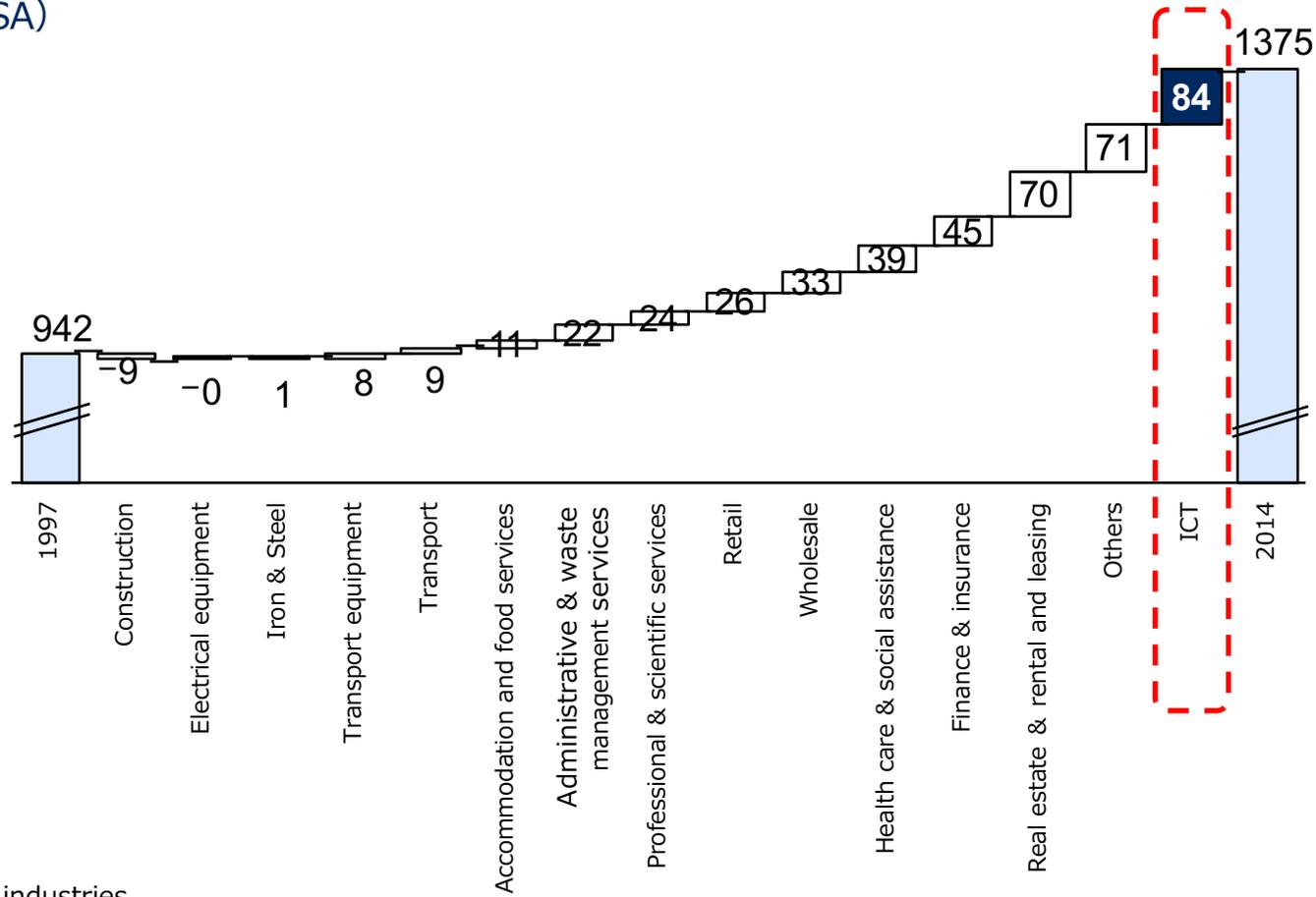
GDP growth contribution by industry
(trillion yen; Japan)



Source: GDP transition in real market sizes by sector in Japan (2016 White Paper, Information and Communications in Japan)

あらゆるセクターをICTをテコに伸ばす必要がある

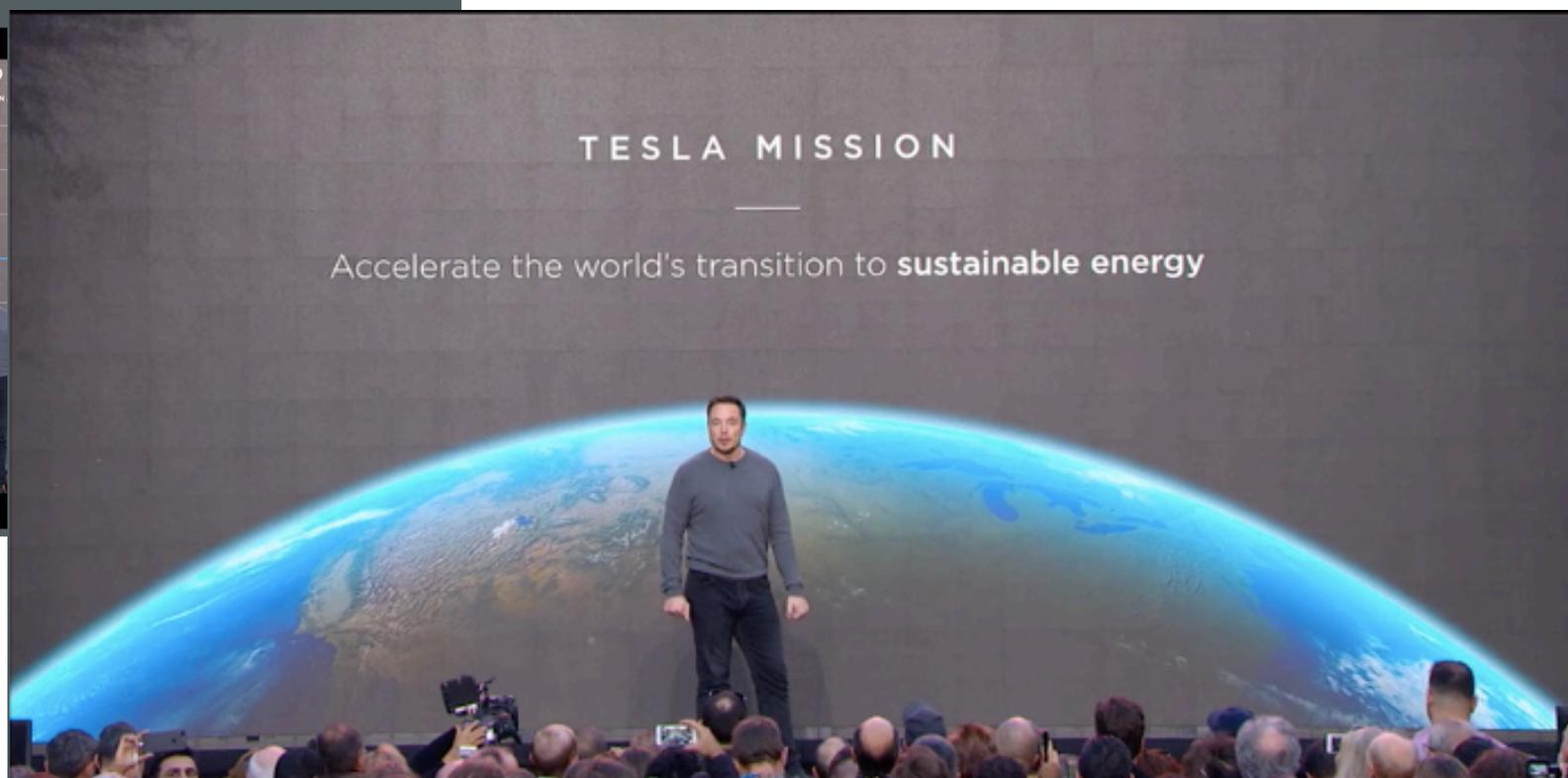
GDP growth contribution by industry
(10 billion US\$; USA)



※ "Real" GDP, among Private industries
Source: USA ; Bureau of Economic Analysis

暮らすということの未来としてのキーワード = 現在課題のアンチテーゼ

Announcing Powerwall 2 and the Solar Roof



資料 : <https://www.tesla.com/powerwall?redirect=no>

どのような未来をつくりたいのか？

起こっている課題

- 温暖化が止まらない
- 消費電力の激増（このまま行けば三倍必要）

- 経験の希薄化

- 100歳まで生きる社会
- シニアの激増、サードライフ問題
- 若者が足りない

- 個別の最適化では限界

作るべき未来の方向性（例）

Sustainable、、、環境に優しく、リサイクルも徹底

- 低消費電力、、、燃料電池、ニューロチップ、
- 低カーボン、、、solar、地熱、風力、波力
- AIグリッド的な消費電力の最適化
- 消費化学物質の最適化
- シェアラブル & メンテナンスのさらなる発展

より濃い経験 (Richer experience)、、、教育と学ぶ、生きるは一体化

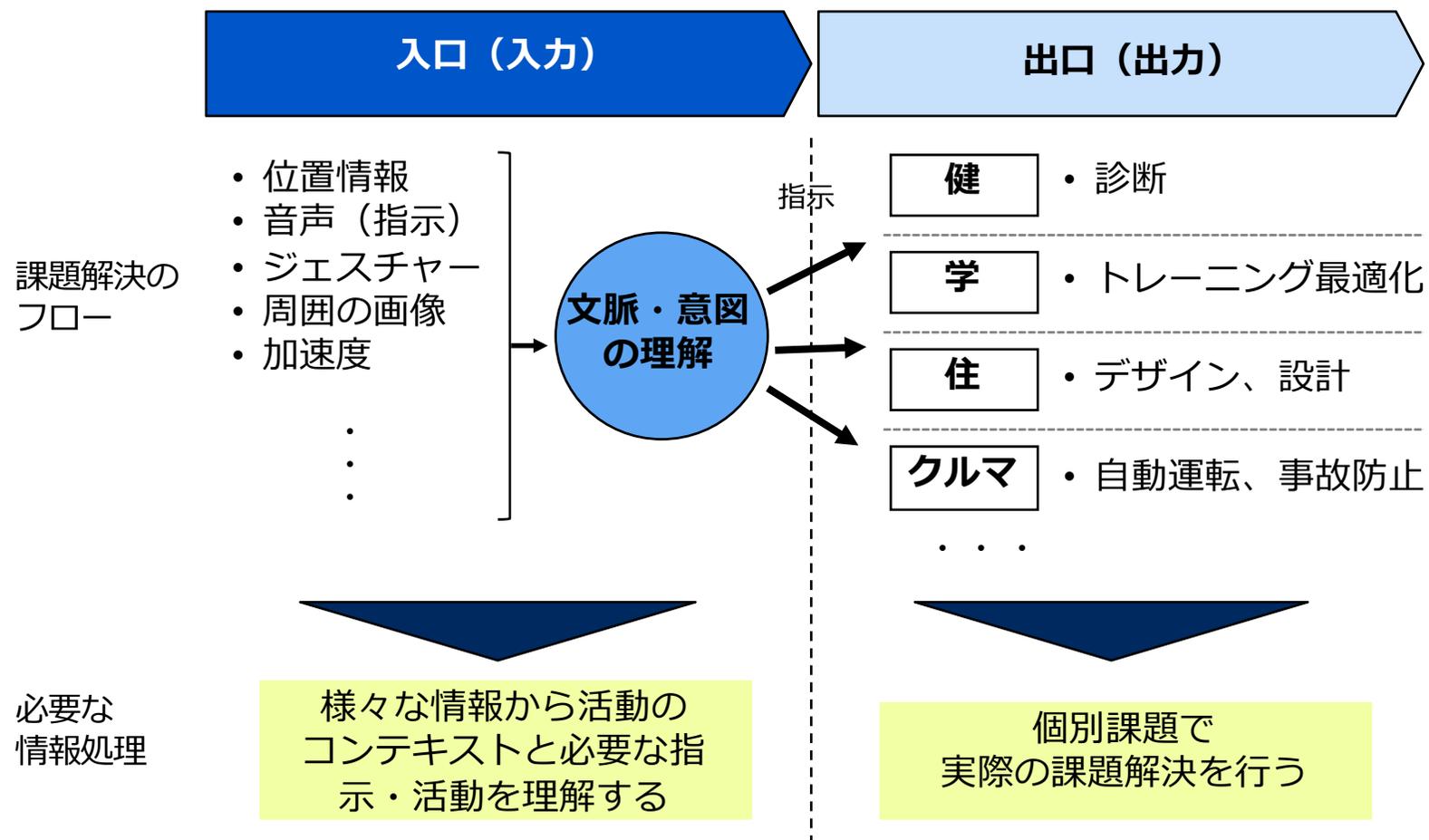
いたわりあい、一生学び貢献し続ける社会

- シニアも元気に
 - 大人も子供から学ぶ
- 劇的な生産性向上

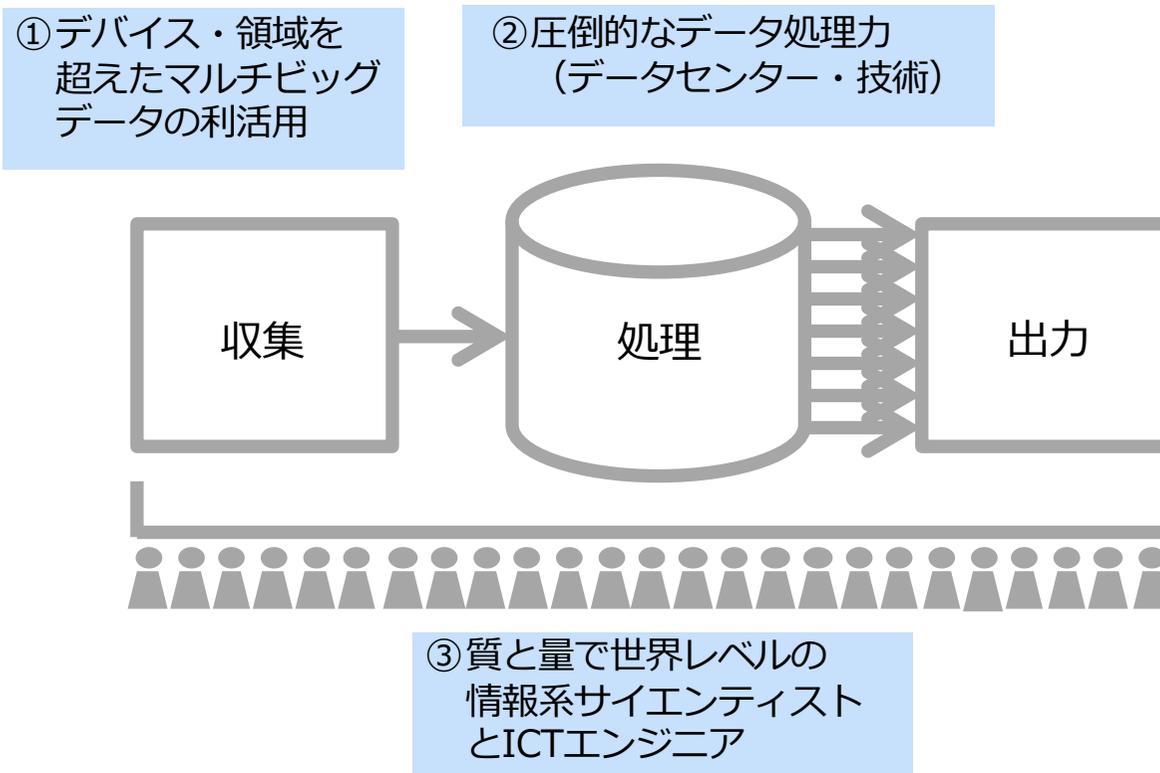
系としての最適を実現

- プロダクト最適 > フロア最適 > 家庭最適
- > コミュニティ最適 > 地域最適 > 国最適
- > region最適 > 世界最適

入口と出口の両面でAI as a Service化が進行

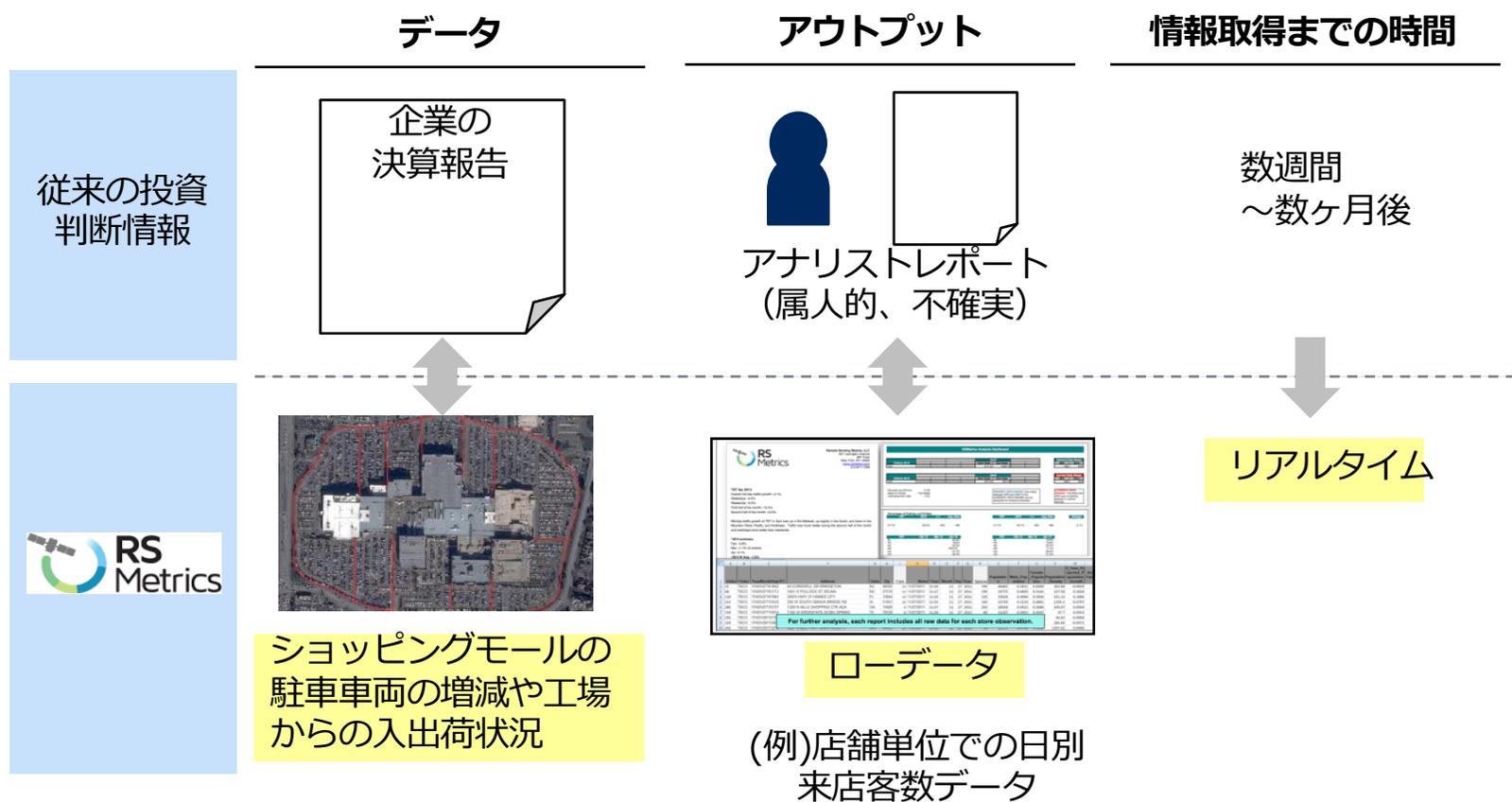


AI×データ戦争における3つの成功要件



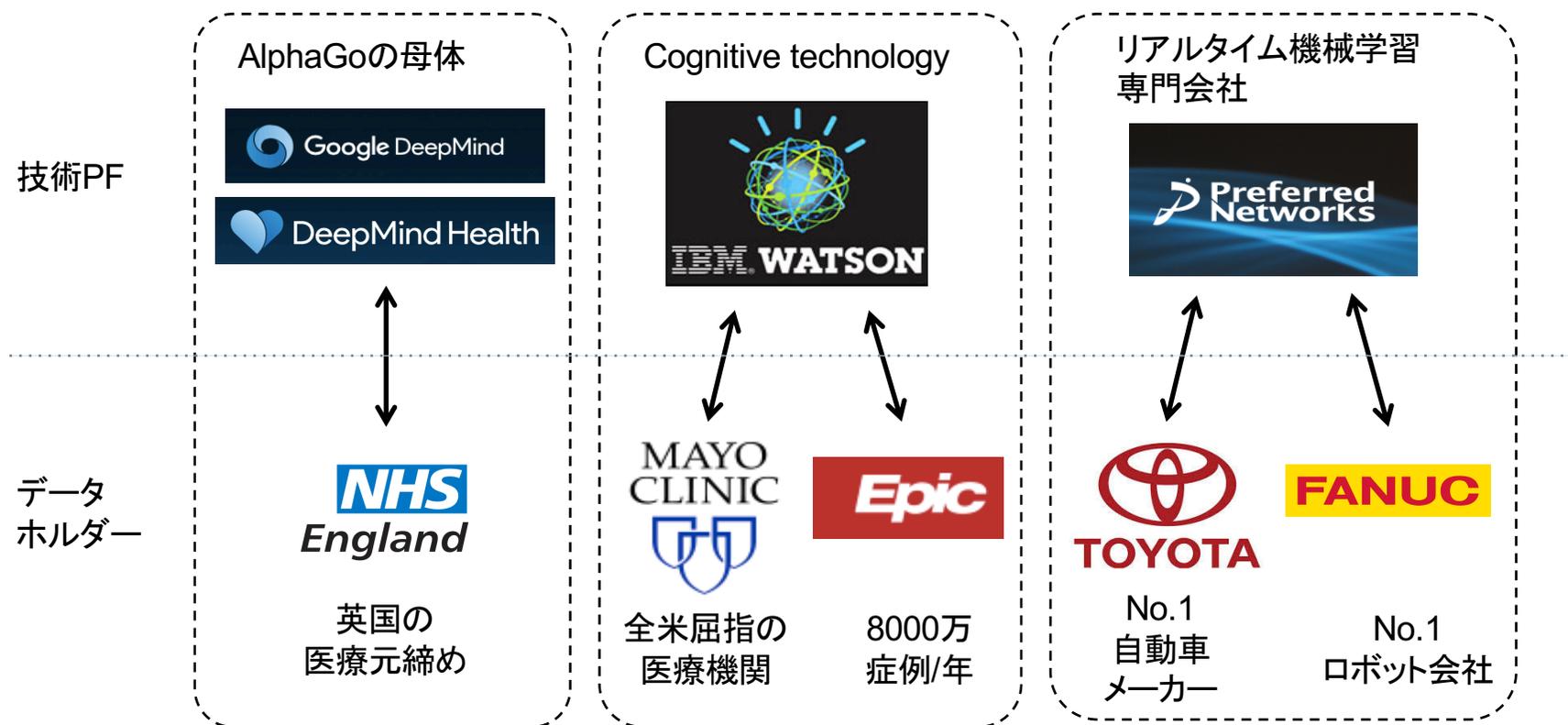
リアルタイムに投資判断情報を提供

RSMetrics社



資料 : RS MetricsのHP、WSJから引用

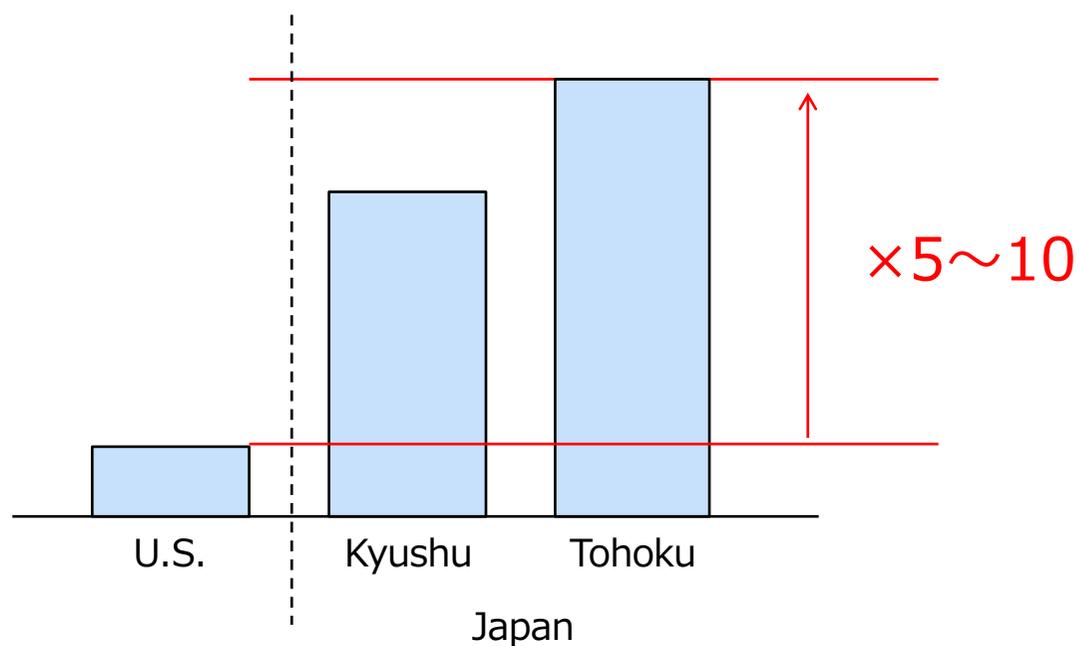
Proprietary data取り込みのゲーム



資料：各種記事検索, <http://bit.ly/1N7kSBj>, <http://ibm.co/29061qS>, <http://newsroom.toyota.co.jp/en/detail/10680141>, <http://www.fanuc.co.jp/ja/whatsnew/notice/osirase20150610.html>

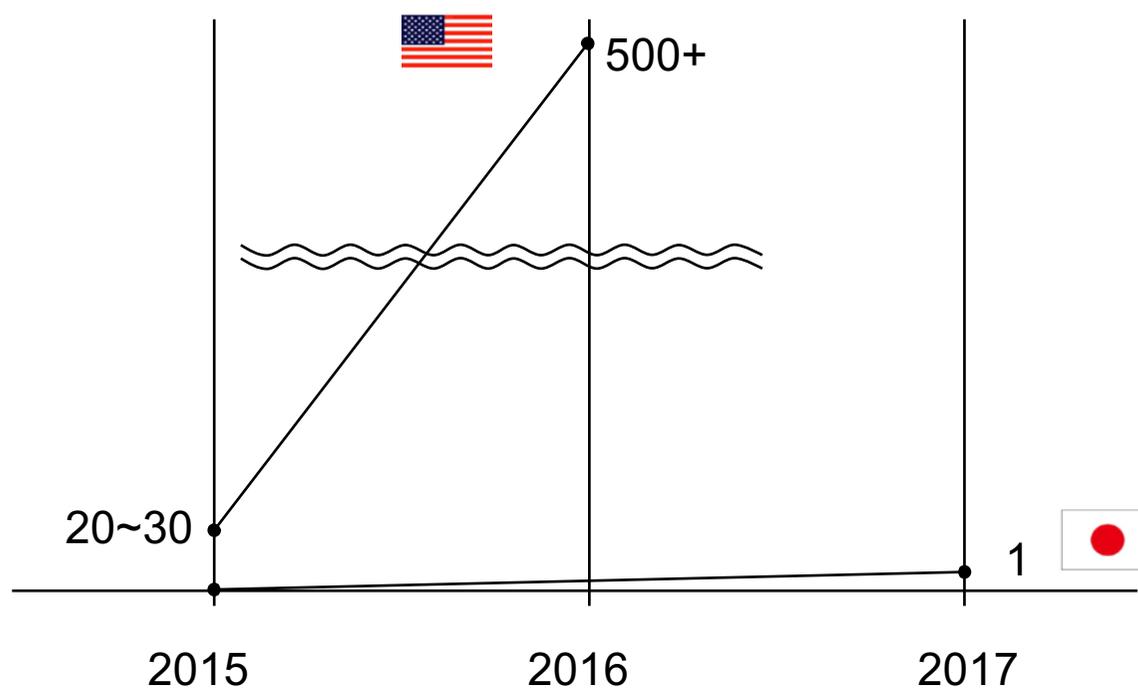
データ処理コストの異様な高さ

cost of industrial electricity (yen/kwh)

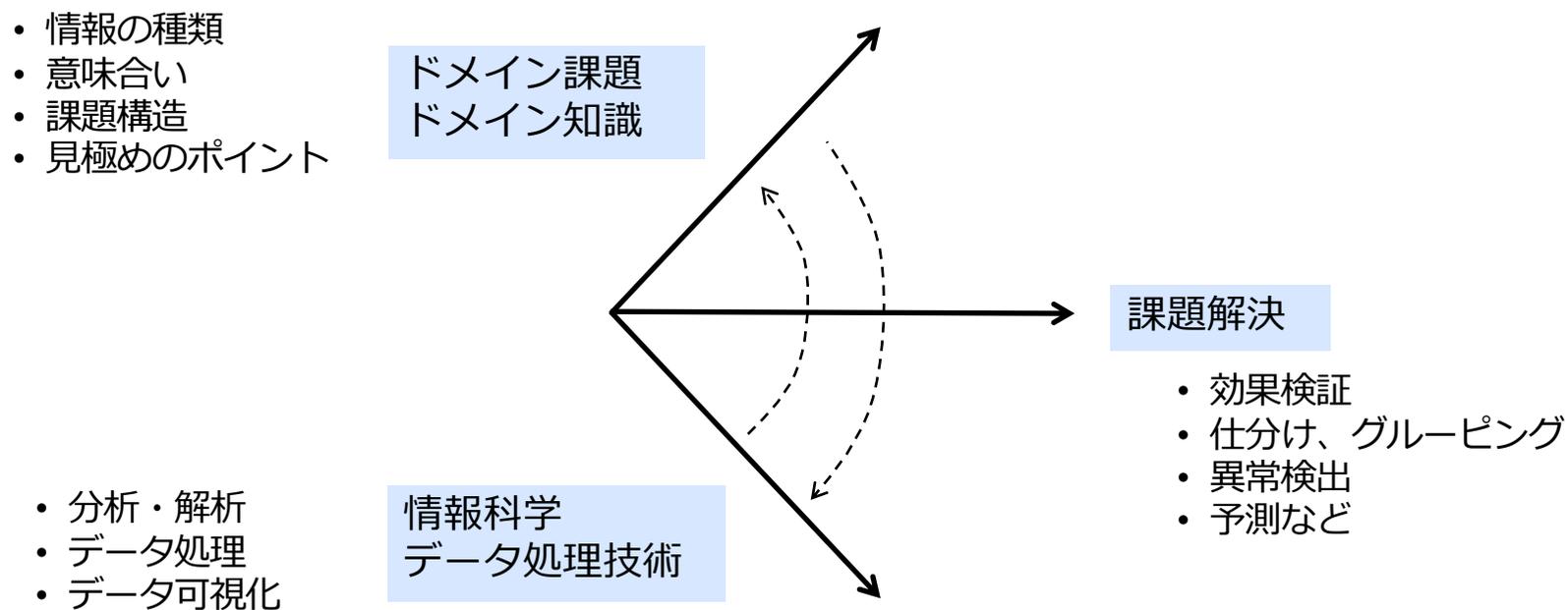


人づくりが決定的に足りていない

Number of data science degree programs



データに関する知識と力だけでは何のバリューも出ない



まとめ

- 生活の進化こそが本丸、、、衣食住遊健快学
- データが手に入るような仕組みづくりが前提
、、、目的別のデータの取り込みと土管を整備
- データ処理コストはかなりのチャンス、、、DC、土管
- 人作り、、、基本リテラシー、スパイクを持つ人材