

Has Abenomics Revived the Japanese Economy?

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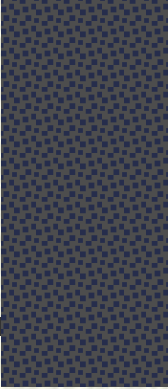
Brad Richardson Memorial Lecture, The Institute for Japanese Studies,
The Ohio State University, Columbus, OH, February 26, 2018

Five Questions

1. Why did the Japanese economy stagnated after 1990?
2. What is Abenomics? Has it worked?
3. Has deflation really ended? Why isn't inflation picking up despite the economic recovery?
4. Is the recovery sustainable? Can Japan grow with declining and aging population?
5. What are the most important challenges for Japanese economic growth?

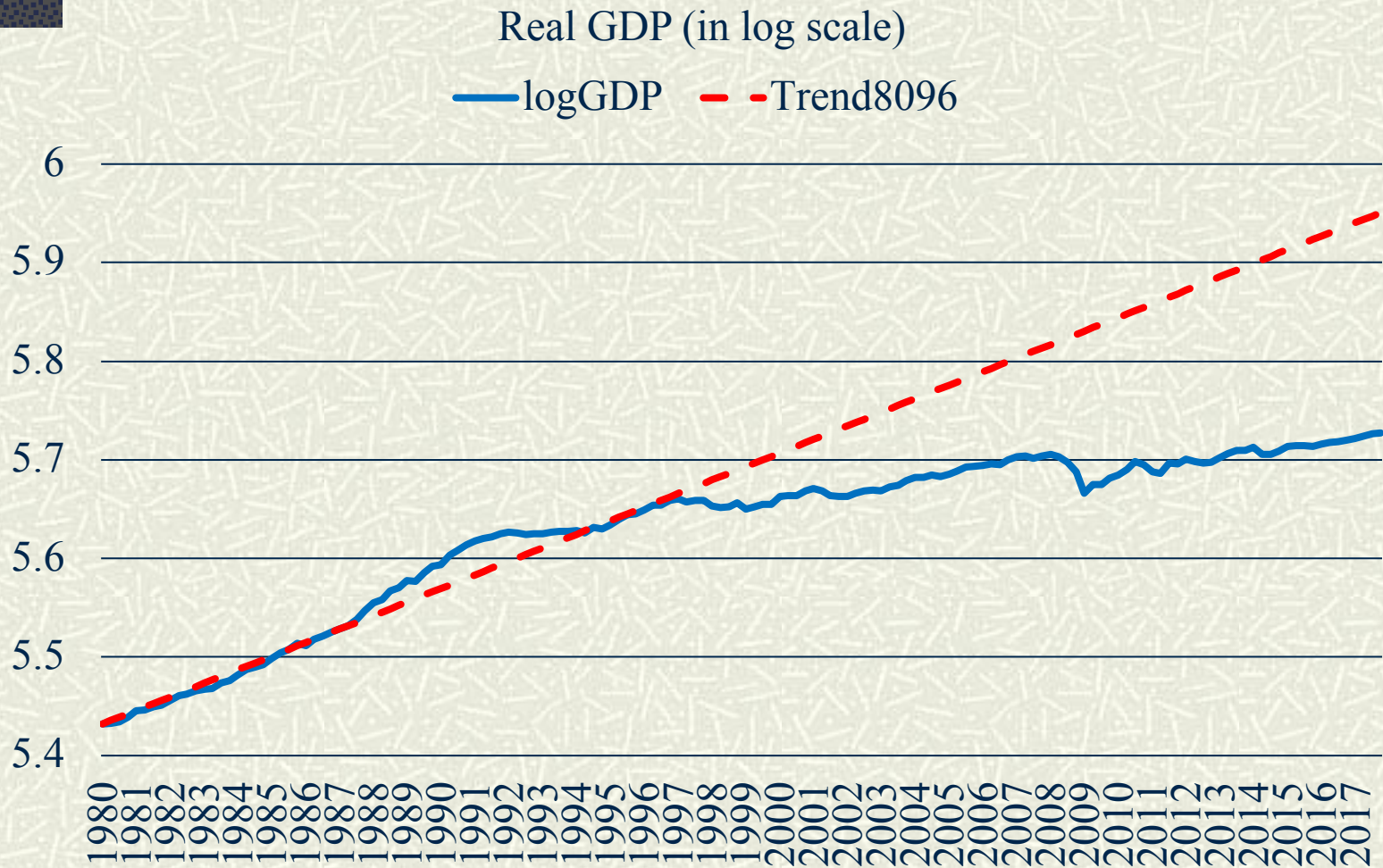
Five Answers

1. Japanese economy suffered from both demand shortage and structural problem.
2. Abenomics is the policy mix of demand stimulus and structural reforms. It has solved the demand shortage but has not solved the structural issues.
3. Dual labor markets in Japan have prevented wage and price inflation so far.
4. It is possible for the Japanese economy to growth with aging and declining population.
5. Increasing economic dynamism is a key to future growth of the Japanese economy.

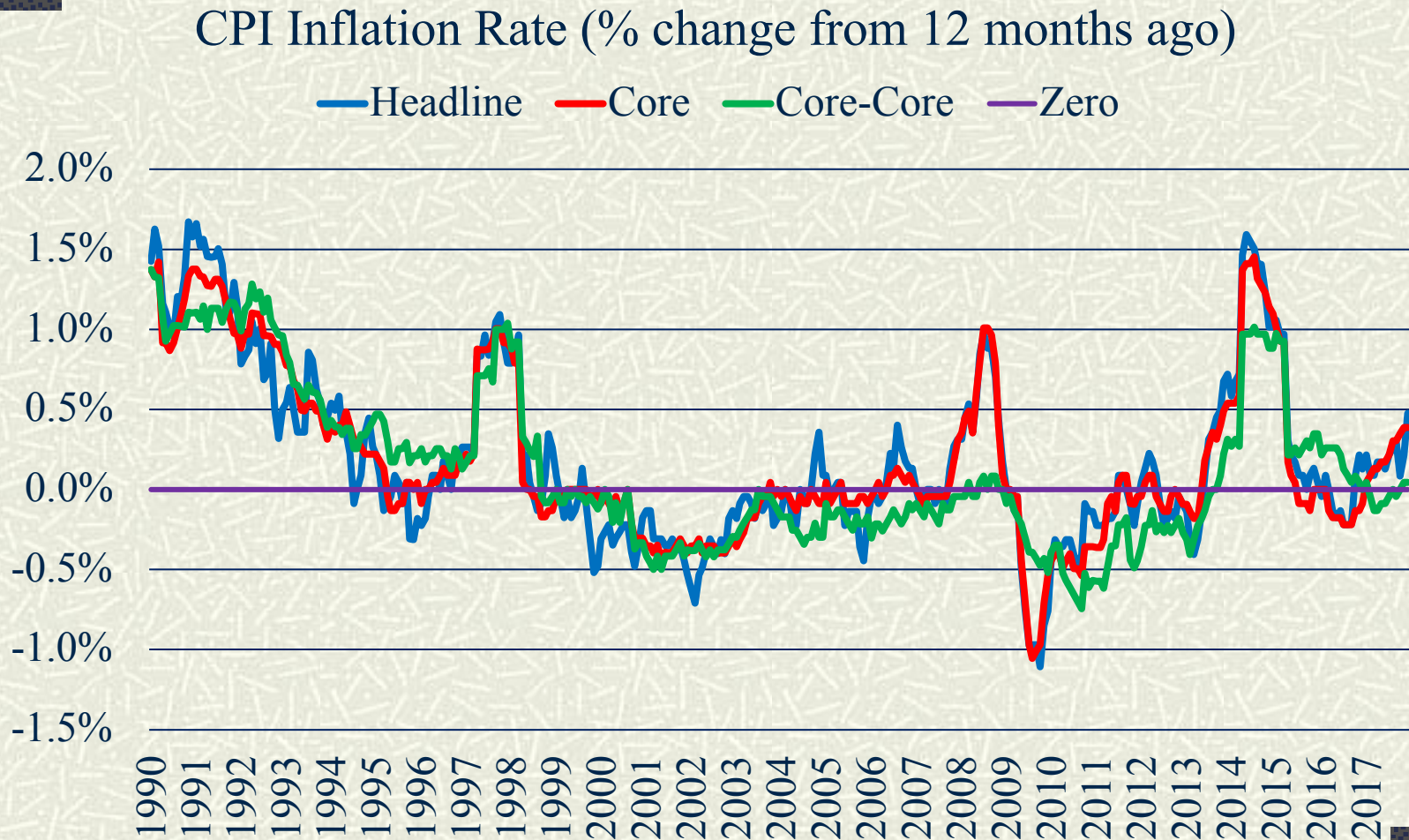


1. Stagnation of the Japanese Economy

“Lost Decades”



Mild but Persistent Deflation



Demand Shortage or Productivity Growth Slowdown?

- # Deflation suggests the demand shortage was a more serious constraint, but that was not the whole story
- # If the demand shortage had been the only problem, Japan would have experienced deflation “spiral” not mild and persistent deflation
- # Both the demand shortage and the supply side problem were behind Japan’s “lost decades”



2. What is Abenomics? Has it worked?

Abenomics has tried to tackle both demand shortage and supply side problems

Three Arrows



1. Bold Monetary Policy



2. Flexible Fiscal Policy

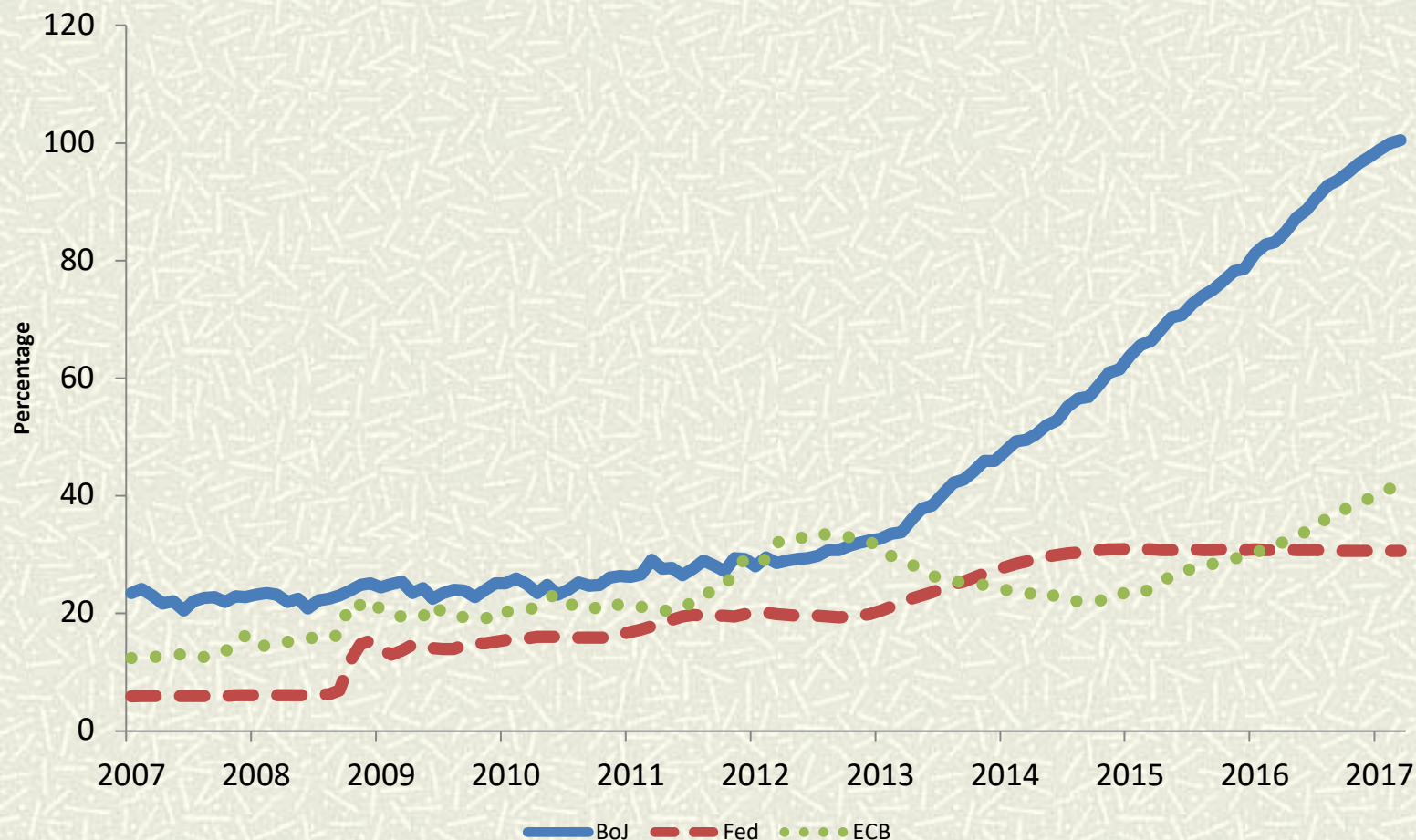


3. Growth Strategy to Promote Private Investment

- Combination of expansionary macroeconomic policy and structural reform to expand potential output

Bold Monetary Policy: BOJ's Quantitative and Qualitative Easing

Central Bank Total Assets (percent of 2008 GDP)



Has Abenomics Worked?

- # Divide the question into two parts
 1. Has Abenomics stimulated the aggregate demand enough to get the Japanese economy out of deflationary state? (Mainly on first and second arrows)
 2. Has Abenomics succeeded in raising the potential growth rate through structural reforms? (Mainly on third arrow)
- # I do not evaluate the efforts for fiscal consolidation, which is supposed to be a part of the second arrow, in this presentation.

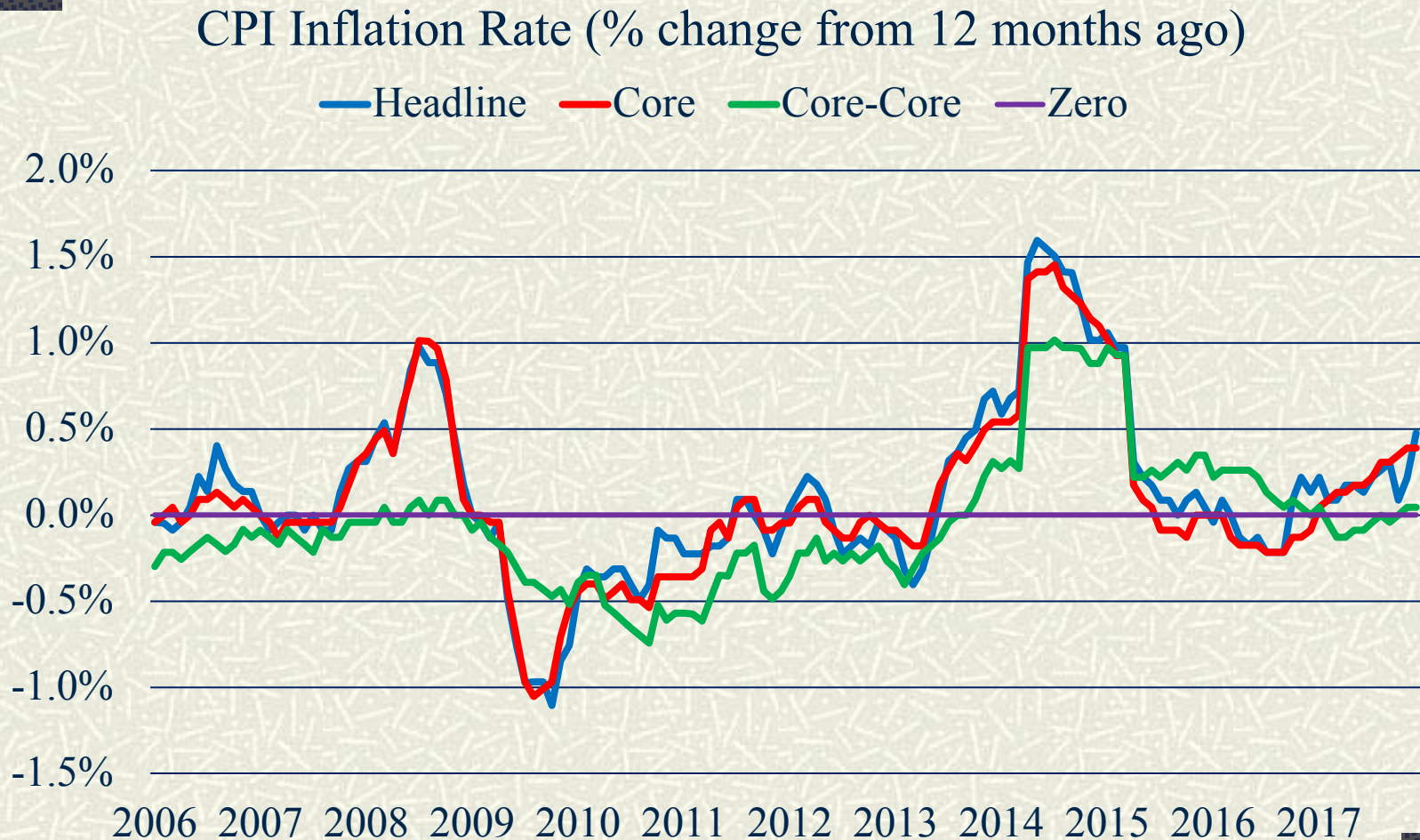
Abenomics as demand stimulus seems to have had positive effects

- # Some success in fixing the demand shortage: output gap has shrunk, the unemployment rate has fallen, and the labor market has been
- # Deflation may have ended but the target inflation rate of 2% has not been achieved.
- # Wage inflation has not risen significantly, yet (more on this later)

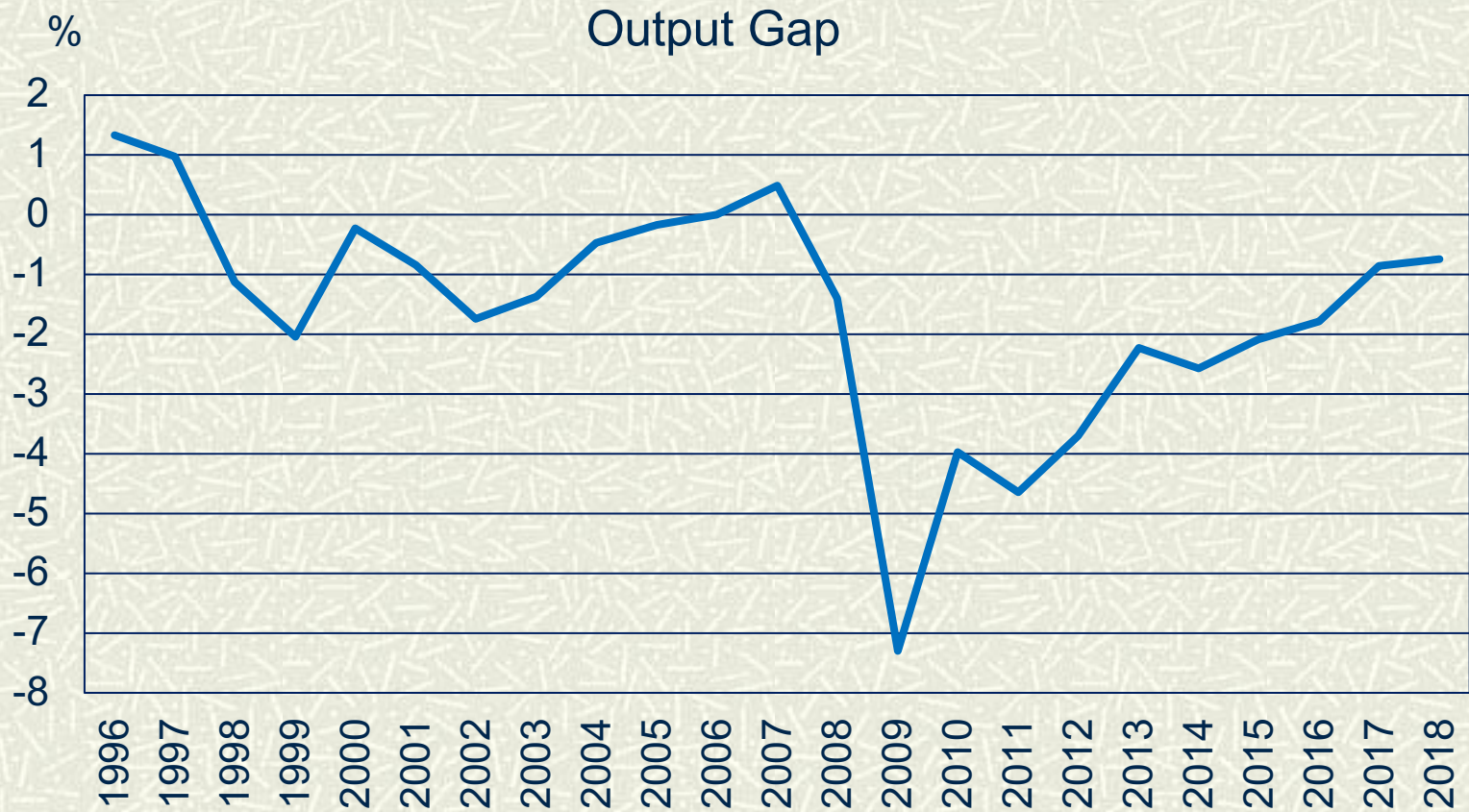
Positive Economic Growth



End of Deflation?



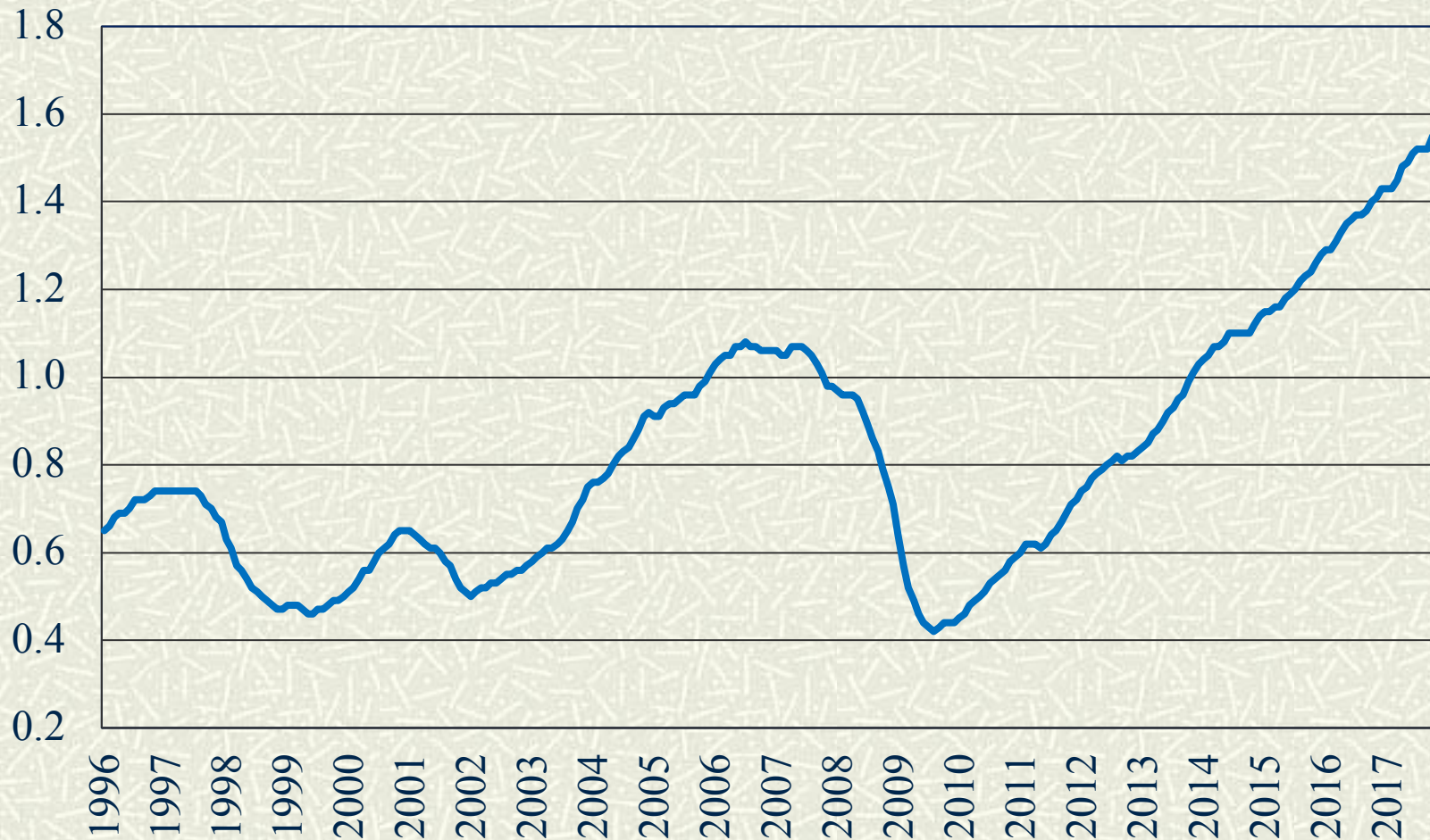
Output Gap is closing



Labor Market is Tightening: Unemployment Rate (% , SA)

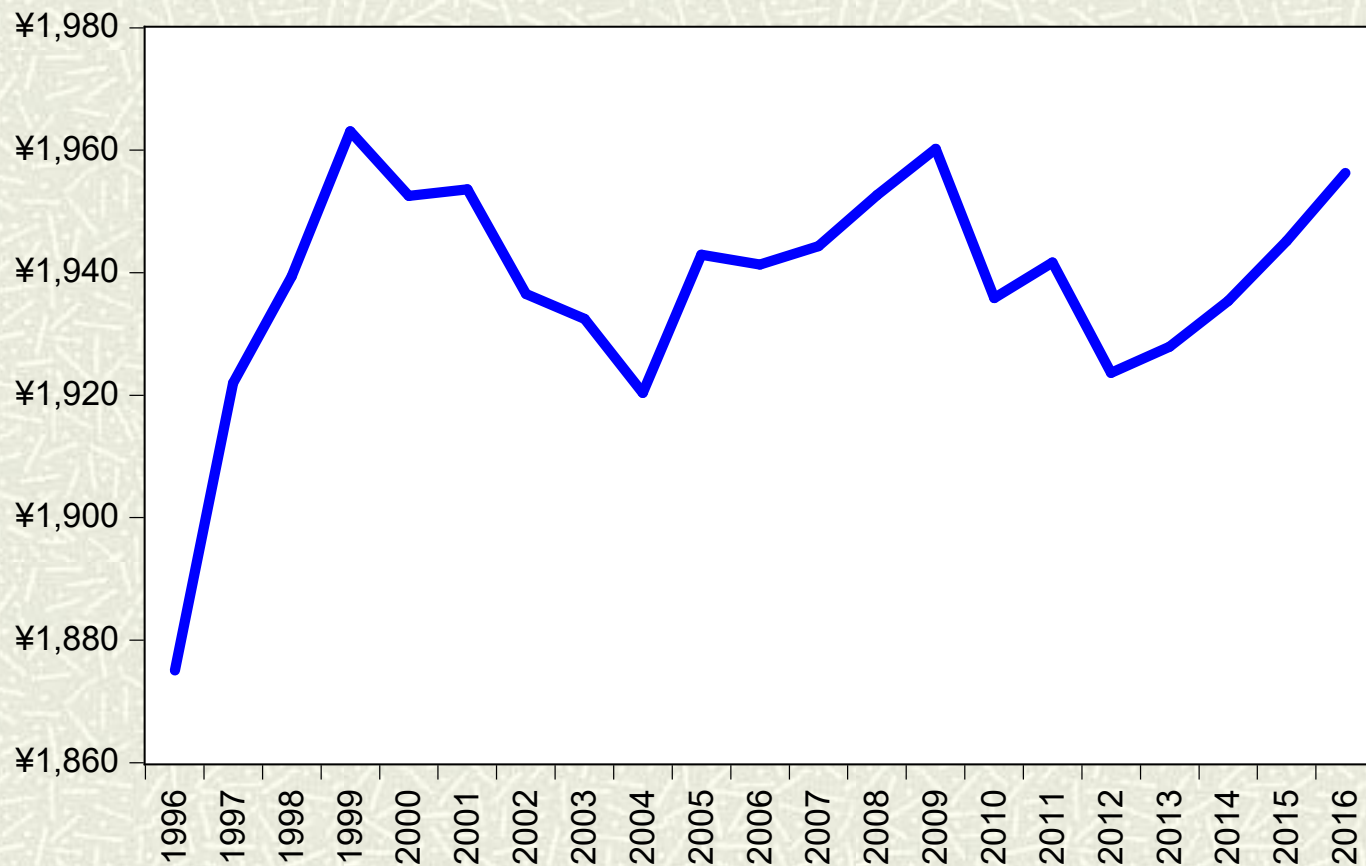


Active Job Opening Rate (SA)



Although Wage Increase has been Moderate

Hourly Wage including Overtime (All Workers)



How about Structural Reforms?

- # Main structural policies are in the growth strategy
- # First growth strategy under Abenomics was formulated in June 2013 (Japan Revitalization Strategy: Japan is Back)
- # The growth strategy has been revised annually since then.
- # From the start, the growth strategy has been a mixture of structural reform policies that would enhance the potential growth and old-fashioned industrial policies with questionable effects
- # The growth strategy is now becoming more and more like industrial policy

2014 Revision of the Growth Strategy

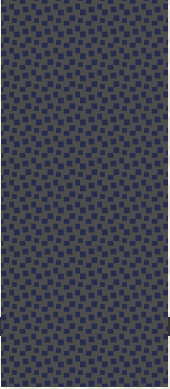
10 Key Reforms

1. Enhancing corporate governance
2. Reforming investment of public and quasi-public funds
3. **Accelerating industrial restructuring and venture businesses, promoting provision of funds for growth**
4. Corporate tax reform
5. **Promotion of innovation and a robot revolution**
6. **Enhancing women's participation and advancement**
7. Enable flexible working practices
8. **Attracting talent from overseas**
9. **Aggressive agricultural policy**
10. **Vitalizing the healthcare industry and providing high-quality healthcare services**

Mixed approach continues with little new ideas (Investments for the Future Strategy 2017)

■ Five basic paths to achieve “Society 5.0”

1. Targeted policy support for **healthcare, automotive products, distribution and production networks, economic and social infrastructure, and fintech**
2. Development of an **innovation-friendly “ecosystem”** with shared data platforms and increased labor mobility
3. **Administrative and regulatory reform** emphasizing evidence-based policymaking and reduction of red tape.
4. **Corporate governance reforms**
5. Building a system that supports the interregional flow of people, things, data, and money to create a “**positive cycle of regional economic growth**”



3. Has deflation really ended? Why isn't inflation picking up despite the economic recovery?

Yuji Genda (ed.) (2017). *Why doesn't the Labor Shortage Raise the Wages?*

We identify four promising hypotheses

1. Dual labor market matters, part-time workers paid and treated much differently than full-time workers
2. Downward nominal wage rigidity makes any wage increase irreversible
3. Hiring freeze in the 1990s and reduction of on the job training (also decline of seniority wages)
4. Price regulation in some industries where labor shortage has been acute (e.g., nursing, elderly care, etc.)

Why Has Wage Inflation Been Low?

- ▣ Decomposition of change in the (weighted) average wage

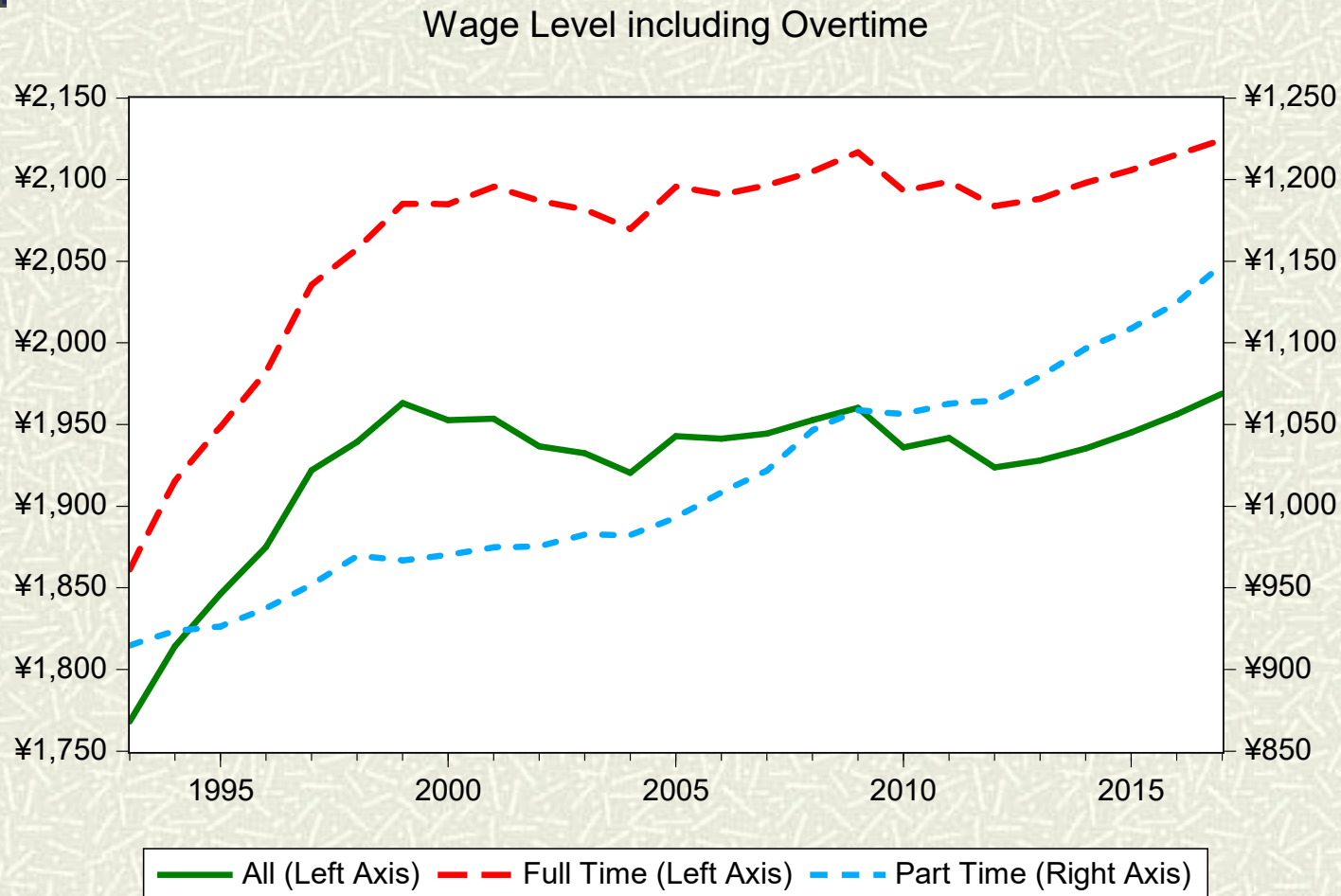
$$\Delta (\sum_i \theta_{it} w_{it}) = \sum_i \theta_{it-1} \Delta w_{it} + \sum_i \Delta \theta_{it} w_{it-1} + \sum_i \Delta \theta_{it} \Delta w_{it}$$

(Within Effect) + (Reallocation Effect) + (Covariance)

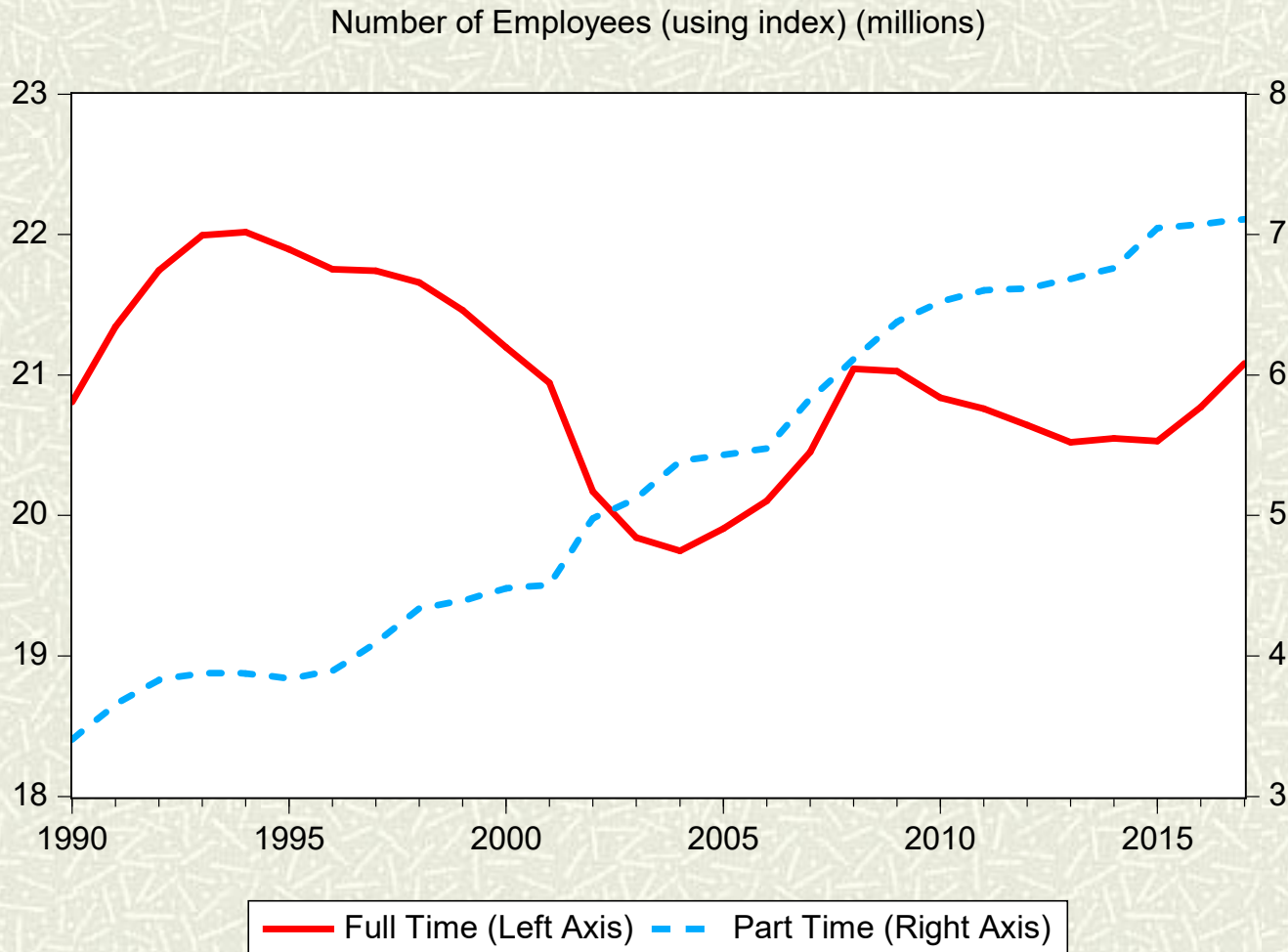
- ▣ Full-time vs. Part-time Wages

Period	Total	Within	Reallocation	Covariance
2008-2010	-1.37%	-0.43%	-0.98%	0.04%
2010-2012	-1.08%	-0.63%	-0.46%	0.01%
2012-2014	1.54%	1.82%	-0.27%	-0.01%
2014-2016	-0.28%	0.06%	-0.36%	0.02%

Different Wage Levels (Full-time vs. Part-time)



Changing composition of employment (Full-time vs. Part-time)



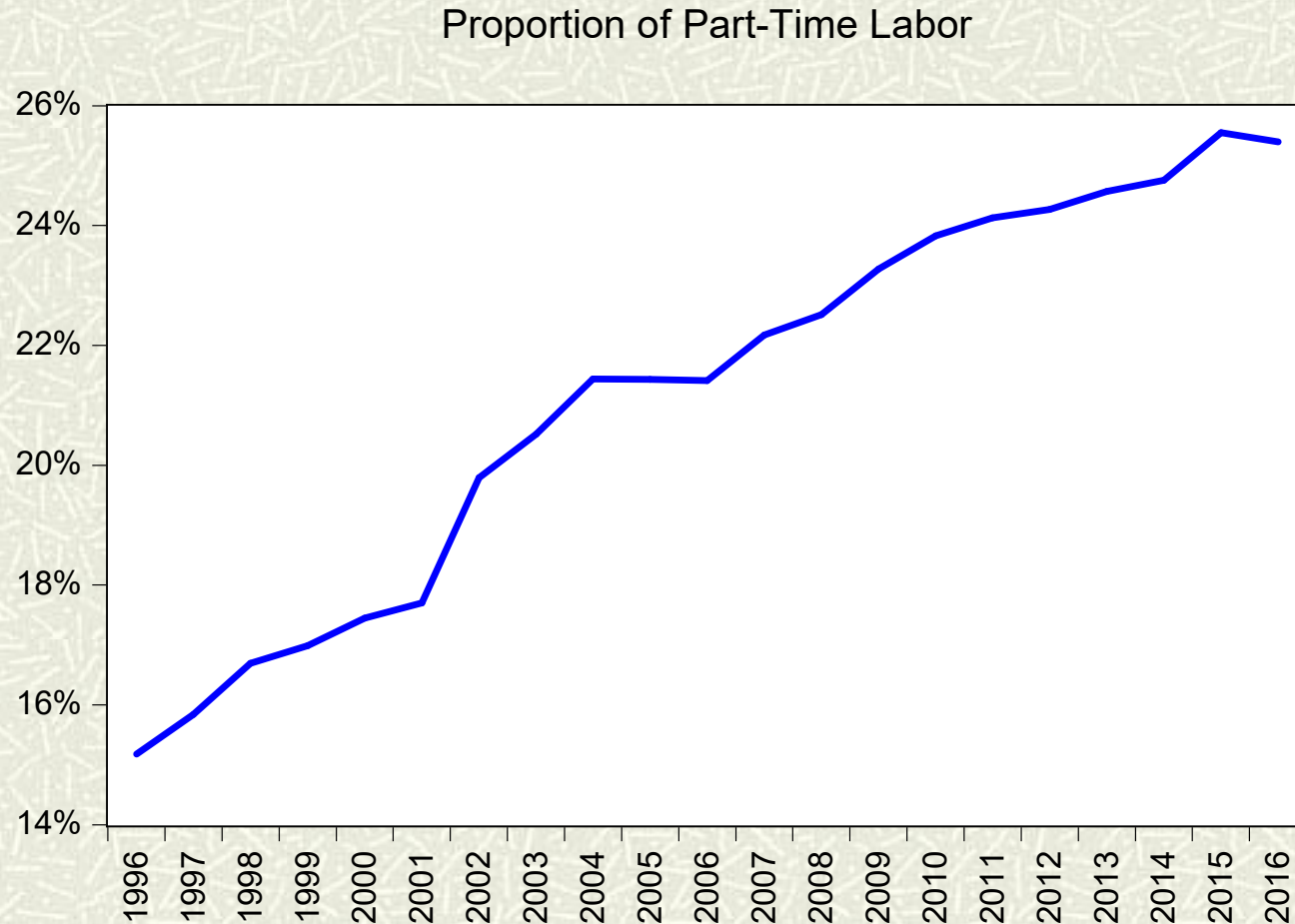
Full-Time Workers Wages and Slack 1998Q1 -2017:Q3

Variable	Model 1			Model 2		
	Coefficient	Standard Error	T statistic	Coefficient	Standard Error	T statistic
Constant	-0.0051	0.0025	-2.02	0.0012	0.0041	0.30
Q1 Dummy	0.0405	0.0044	9.12	0.0404	0.0044	9.11
Q2 Dummy	-0.0306	0.0021	-14.39	-0.0307	0.0021	-14.94
Q3 Dummy	0.0138	0.0050	2.78	0.0137	0.0050	2.73
AR(1)	-0.7877	0.1391	-5.66	-0.8003	0.1357	-5.90
AR(2)	-0.1810	0.1271	-1.42	-0.1947	0.1254	-1.55
Lagged AJOAR	0.0015	0.0012	1.28			
Lagged UNEMP				-0.0045	0.0024	-1.91
R ²	0.94			0.94		

Part-time Workers and Slack 1998Q1-2017Q3

Variable	Model 1			Model 2		
	Coefficient	Standard Error	T statistic	Coefficient	Standard Error	T statistic
Constant	0.0028	0.0026	1.08	0.0144	0.0061	2.37
Q1 Dummy	0.0076	0.0047	1.62	0.0076	0.0053	1.44
Q2 Dummy	-0.0079	0.0015	-5.32	-0.0080	0.0018	-4.44
Q3 Dummy	0.0035	0.0049	0.72	0.0034	0.0052	0.66
AR(1)	-0.7476	0.1449	-5.16	-0.6105	0.1971	-3.10
AR(2)	-0.0352	0.1687	-0.21	0.1517	0.2337	0.65
MA(3)	-0.0484	0.2031	-0.24	0.1377	0.1975	0.70
Lagged AJOAR	0.0051	0.0010	4.85			
Lagged UNEMP				-0.0089	0.0032	-2.81
R ²	0.70			0.66		

Proportion of Part-Time Workers has been increasing (but stopped rising?)

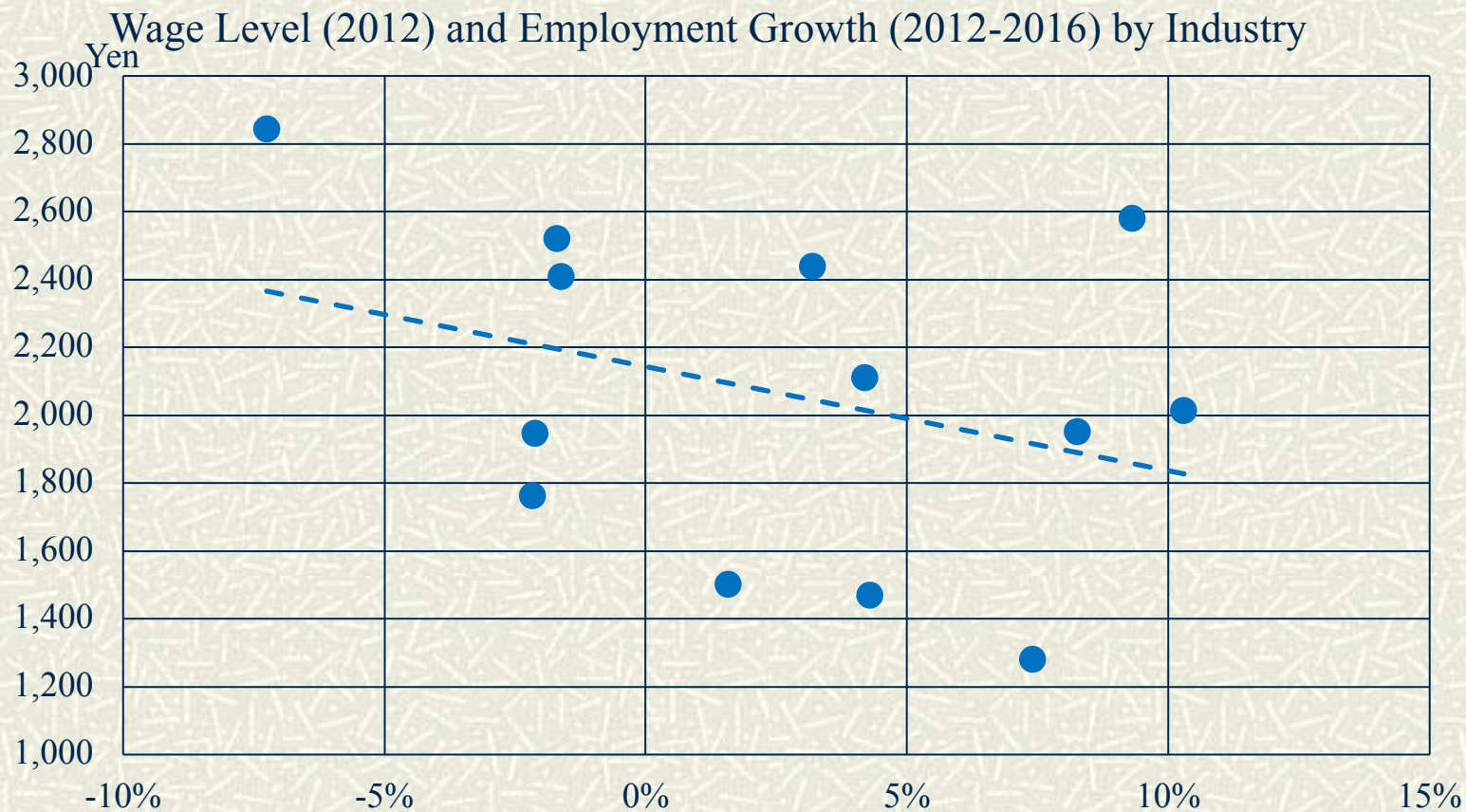


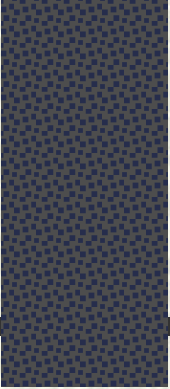
Decomposition by Industry and Full-time/Part-time Difference

Industry and Full-time vs. Part-time

Period	Total	Within	Reallocation	Covariance
2008-2010	-0.72%	-0.42%	-0.24%	-0.07%
2010-2012	-0.85%	-0.88%	-0.27%	0.30%
2012-2014	1.76%	1.91%	-0.14%	-0.01%
2014-2016	-0.11%	0.20%	-0.35%	0.04%

Employment growth has been higher in the industries with low wages





4. Is the recovery sustainable? Can Japan grow with declining and aging population?

How Much Does Demography Explain Japan's Economic Stagnation?

- Many blame Japan's demography as a very important factor behind the economic stagnation in the last couple of decades
- Is it really the case?

Growth Rate Decomposition to see the Impacts of Demographic Challenges

$$Y = N \frac{L}{N} \frac{Y}{L}$$

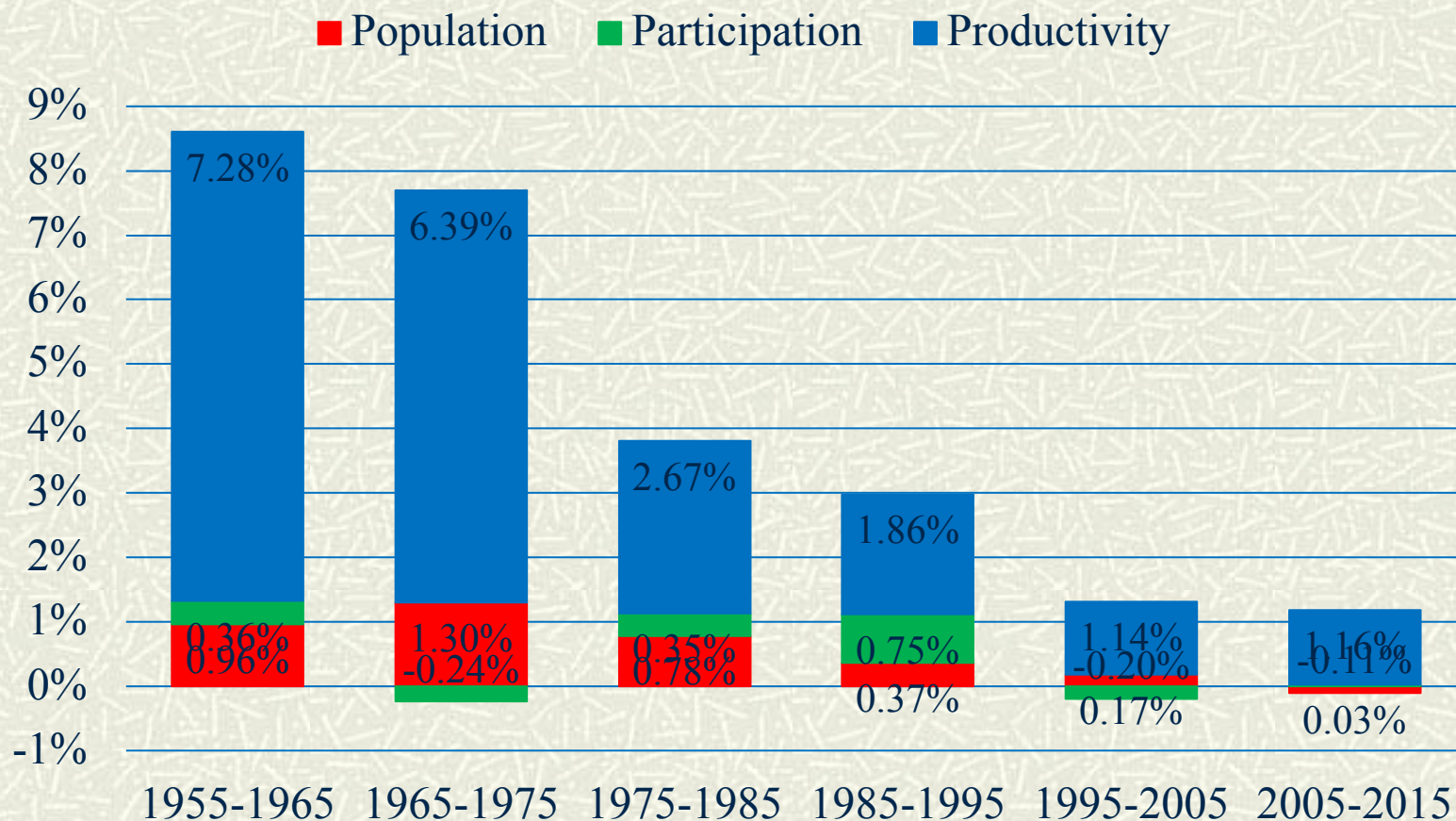
*Output = Population * Participation Rate * Productivity*

$$\% \Delta Y = \% \Delta N + \% \Delta \left(\frac{L}{N} \right) + \% \Delta \left(\frac{Y}{L} \right)$$

Economic Growth
= Population Growth + Growth of Participation Rate
+ Productivity Growth

- Population reduction and decline of participation rate (due to aging) reduces the economic growth rate

Growth Rate Decomposition for Japan: 1955-2015



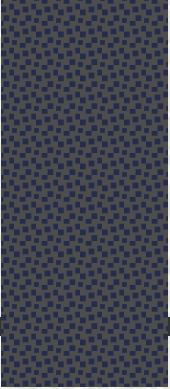
Source: Japanese Cabinet Office (http://www.esri.cao.go.jp/en/sna/data/sokuhou/files/2017/qe172_2/gdemenuca.html)

Demographic Factors Explain only a Small Portion of Japan's Economic Growth

- # Demographic factors explained only around 1% of economic growth during the rapid economic growth of Japan
- # Demographic factors explain only around 1% of economic stagnation
- # More important factor has been productivity growth

Japan cannot blame demographic factors very much

- # Lower productivity growth was much more important factor of the economic stagnation
- # What reduced the productivity growth?
- # One reason: lack of economic restructuring



5. What are the most important challenges for Japanese economic growth?

Economic Restructuring and Productivity Growth

- **Economic Restructuring:** old and inefficient production arrangements are destroyed, and replaced by new and efficient production arrangements; “creative destruction”

Ricardo J. Caballero, 2007, *Specificity and the Macroeconomics of Restructuring*, Yrjo Jahnsson Lecture, MIT Press

- Recent economic research suggests the restructuring is a very important source of productivity growth in developed economies

Productivity Growth Decomposition

$$P_t = \sum s_{ft} p_{ft}$$

P_t : Productivity of industry at time t

s_{ft} : Output share of plant f in industry at time t

p_{ft} : Productivity of plant f at time t

$$\Delta P_t = \sum s_{ft-1} \Delta p_{ft} + \sum \Delta s_{ft} p_{ft}$$

- The change in industry productivity can be decomposed into the **within-plant** and **reallocation** (or between-plants) effects

Finer Decomposition of Productivity Growth

$$\begin{aligned}\Delta P_t &= \sum s_{f,t-1} \Delta p_{f,t} + \sum \Delta s_{f,t} p_{f,t} \\ &= \sum_{f \in S} s_{f,t-1} \Delta p_{f,t} + \sum_{f \in S} \Delta s_{f,t} (p_{f,t} - \bar{p}_{t-1}) + \sum_{f \in S} \Delta s_{f,t} \Delta p_{f,t} \\ &\quad + \sum_{f \in N} s_{f,t} (p_{f,t} - \bar{p}_{t-1}) + \sum_{f \in X} s_{f,t-1} (\bar{p}_{t-1} - p_{f,t-1})\end{aligned}$$

P_t : Productivity of industry at time t

$s_{f,t}$: Output share of plant f at t

$p_{f,t}$: Productivity of plant f at t

\bar{p} with upper bar: Average productivity across firms at $t-1$

Decomposition of Productivity of Manufacturing Industries (% per year)

Period	Total	Within	Betw'n + Cova	Entry	Exit
Total Factor Productivity Growth					
1981-1990	1.81	1.18 (65.5%)	0.13 (7.3%)	0.73 (40.2%)	-0.24 (-13.1%)
1990-2000	1.12	0.55 (48.8%)	0.31 (27.3%)	0.60 (53.1%)	-0.33 (-29.3%)
Labor Productivity Growth					
1981-1990	4.44	3.34 (75.2%)	-0.46 (-10.4%)	1.97 (44.4%)	-0.41 (-9.2%)
1990-2000	2.41	1.15 (47.7%)	0.28 (11.5%)	1.54 (64.1%)	-0.56 (-23.3%)

In Sum

1. Japanese economy suffered from both demand shortage and structural problem.
2. Abenomics is the policy mix of demand stimulus and structural reforms. It has solved the demand shortage but has not solved the structural issues.
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