



Management and Organizational Practices Survey in Korea

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Outline

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II. Measuring Korea Management, Statistics Korea

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- Survey Design & Timeline



I . MOPS Pilot Survey

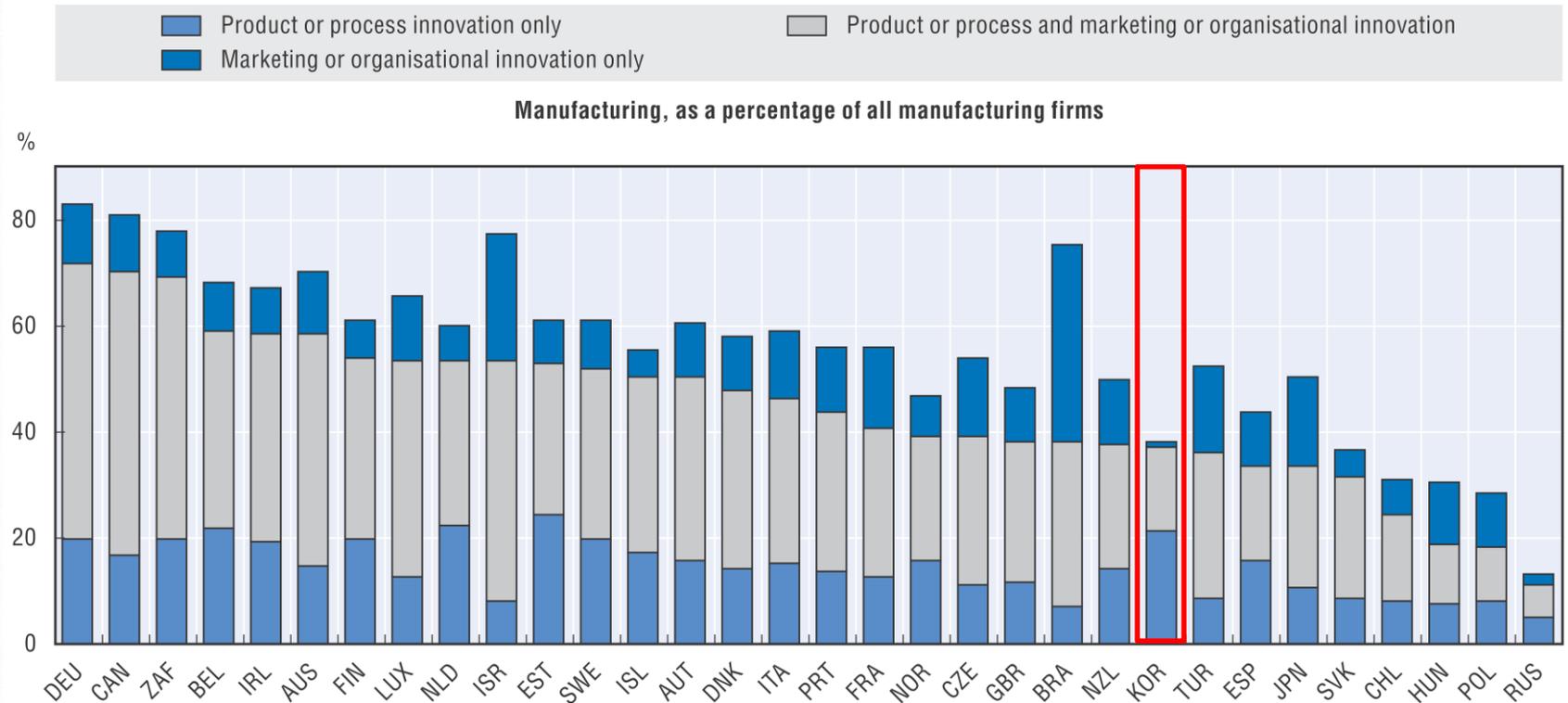
Sunghoon Jung(Korea Development Institute)

Motivation

- Number one country (at least quantitatively) in technology innovation.
- So, why do we still feel that Korea is not innovative enough?
- If any, what needs to be done more?
- For managerial innovation, don't even know about the current state.
 - Need to come up with reliable statistics.
- This research tries to fill the deficiencies.

Innovative Manufacturers

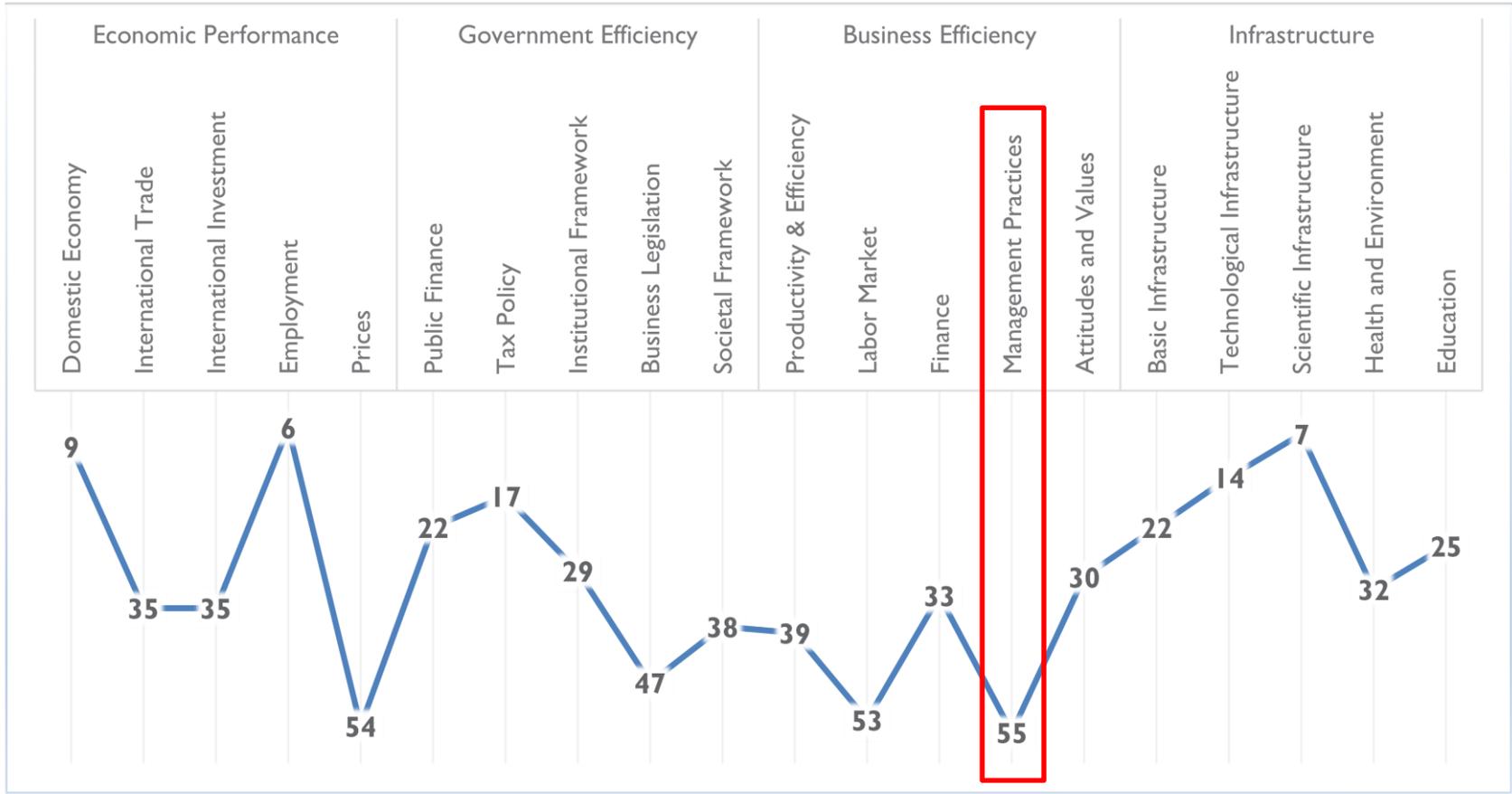
Figure 2.6. **Innovation in manufacturing and services, 2008-10**



Source: OECD (2013a), *Science, Technology and Industry Scoreboard 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2013-en.

Korea in IMD Competitiveness Yearbook (2018)

COMPETITIVENESS LANDSCAPE



Survey Design

- A Korean version of the MOPS as a pilot survey
- Sampling Strategy
 - 1,000 target plants aged ≥ 3 yrs in 10 manufacturing industries (KSIC 2-digit)
 - Population: about 32,000 (based on FactoryON DB)
 - Industry distribution in the sample is set to proportional to the population distribution.
 - Stratified by size (# of employees) and industry
 - (i) 10~19 (15%); (ii) 20~49 (30%); (iii) 50~99 (25%); (iv) 100~299 (20%); (v) ≥ 300 (10%)
 - The target sample consists of three groups:
 - (i) single plants (63%); (ii) plants in multi-plant firms (12%); (iii) foreign-invested plants (25%)
- Surveyed from late August to Early November in 2018.

Korea MOPS vs. US MOPS

Korea MOPS	US MOPS (2015)
A. Management Practices + Organization	A. Management Practices
	B. Organization
B. Use of new technology , Data & Decision Making	C. Data & Decision Making
C. Uncertainty	D. Uncertainty
D. Background Characteristics	E. Background Characteristics

- **The use of ICT*** and the plans thereof being additionally considered under item B

* 7 field: IOT(Internet Of Things), Cloud Computing, Machine(Deep) learning, Big Data & Analytics, Intelligent Robotics, Block Chain, AR/VR

- General facts and financial details being surveyed under item D (Research objectives)

Greetings from Korea Development Institute,
We administer the Management Organizational Practice Survey (MOPS) to obtain a comprehensive information about the management practices of establishments in Korea's manufacturing industry.
Please consider the importance of the survey to take part in it. The information you provided will only be used for statistical purposes mandated under the Statistics Act. We highly value your participation in this survey in good faith.
Thank you.

Production Management (8Qs)

- A1. In the following years, how did your establishment handle issues upon identifying them (defects in products, mechanical breakdown, etc.)?

2014	2017

- ① No actions has been taken
- ② Troubleshoot the problem without any preventive measure
- ③ Trouble shot the problem and took a preventive measure
- ④ Trouble shot the problem and took a preventive measure in addition to taking steps for improvement

People Management (10Qs)

- A8. For each year, what were the major drives that got the employees of your establishment (managers or non-managers) promoted?

Managers		Non-Managers	
2014	2017	2014	2017

- ① Performance and merit
- ② Performance & merit, as well as other factors (seniority, connection, etc.)
- ③ Other factors rather than performance & merit
- ④ Hardly got promoted

Two Additional Questions in Korea MOPS

A11. In each following years, what was the incentive bonus ratio to the total wage/salary in your establishment for the manager and non-manager employees respectively?

- ① 0%
- ② 1-10% (10% and less)
- ③ 11-33% (more than 10% and less than 1/3)
- ④ 11-33% (more than 10% and less than 1/3)
- ⑤ 50% and more (1/2 and more)

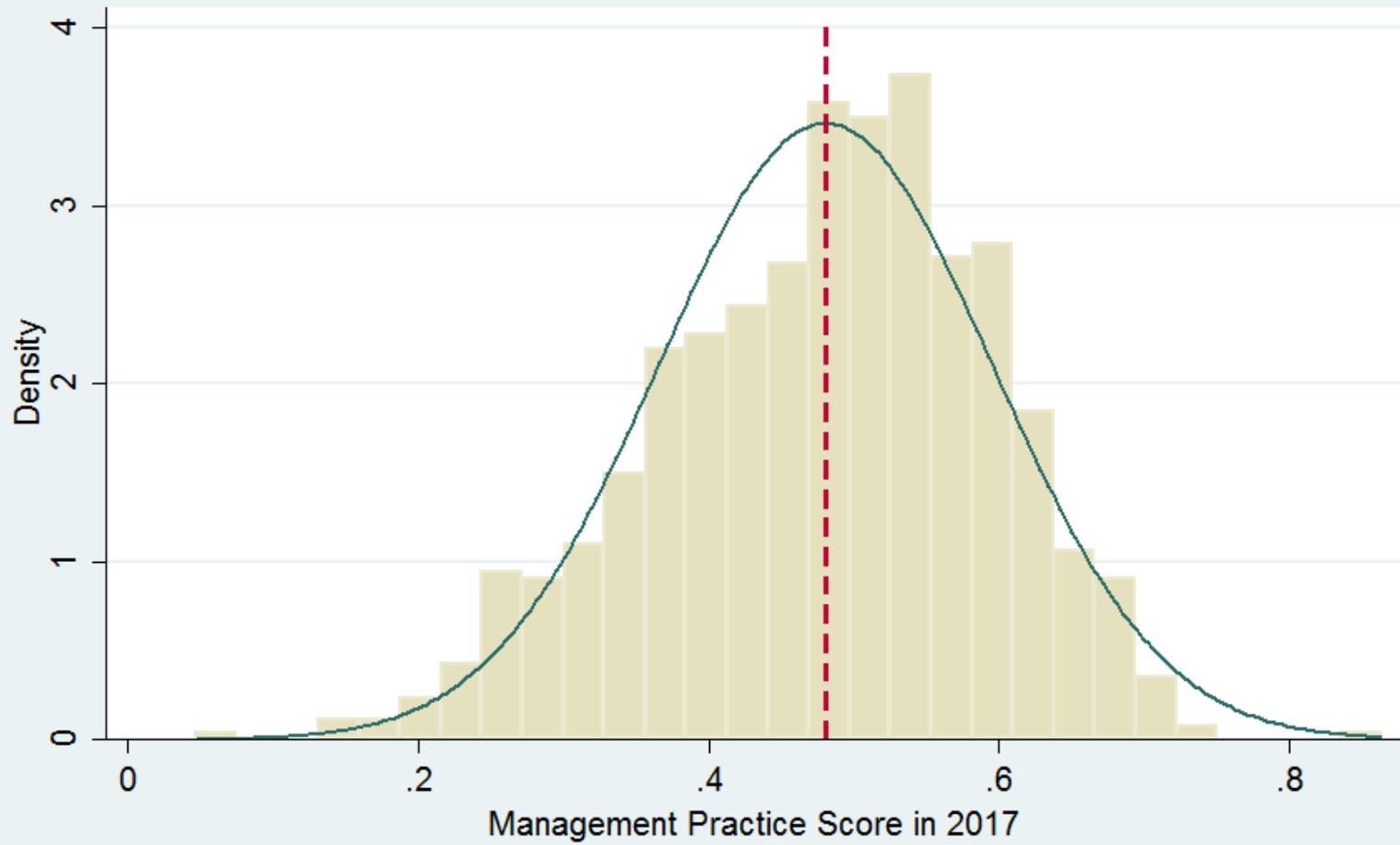
Managers	
2014	2017
Non-Managers	
2017	2017

- Question on the portion of incentives
 - Pay system in Korea is quite different from the US.
 - Salary = Base pay + Allowances (Bonus, family support, overtime work...)
 - Base pay usually depends on years of service (or seniority).

Number of Plants in the Sample

KSIC Industry (2-digit Code)	Plant Size (by Number of Employees in 2017)					Total
	10~19	20~49	50~99	100~299	≥300	
Food Products (10)	15	36	36	49	8	144
Wearing Apparel & Fur Articles (14)	6	9	5	5	1	26
Chemicals & Chemical Products (20)	11	28	18	32	6	95
Pharmaceuticals (21)	3	8	4	11	4	30
Fabricated Metal Products (25)	14	46	25	13	2	100
Electronic Comp. & Comm.Equip. (26)	15	39	26	25	14	119
Medical, Precision, Optical Inst. (27)	16	20	7	12	3	58
Electrical Equipment (28)	16	24	16	7	6	69
Other Machinery & Equipment (29)	27	41	37	29	8	142
Motor Vehicles & Trailers (30)	6	29	25	39	23	122
Total	129	280	199	222	75	905

Results : Distribution of Management Practice Score (MPS)



Notes: Mean=0.481; Median=0.493; 10pct=0.323; 90pct=0.619; Std.Dev.=0.115.

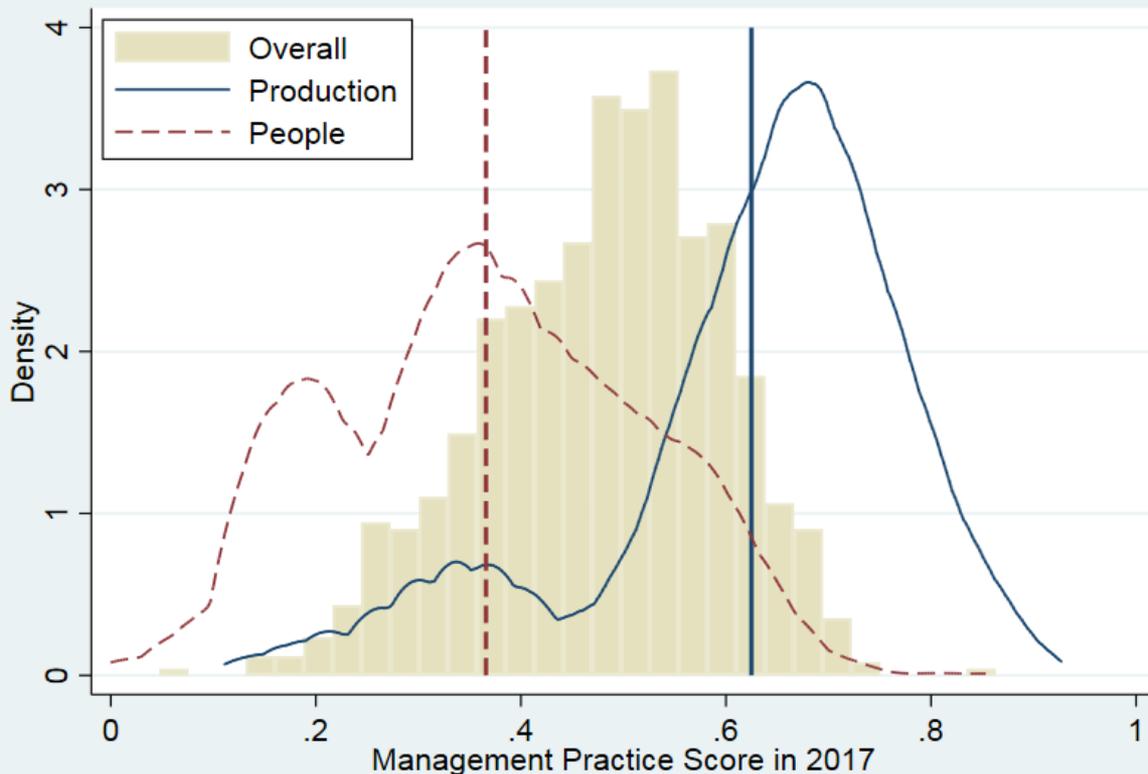
Distribution of Management Practice Score (MPS)

- MPS varies within multi-plant firms.

	Mean	Std.Dev.	Min	Max	Observations
overall	0.549	0.095	0.220	0.738	Establishments=106
between	--	0.072	0.246	0.650	Firms=34
within	--	0.069	0.317	0.775	Max. Estabs. in a Firm=6

- Comparison with the US
 - Average MPS in the US = 0.615 (Bloom et al. 2019)
 - Not directly comparable due to different sampling and additional questions.
 - Still, the overall quality of management practices in Korea seems quite lower than that of the US (Why?)

Distribution of MPS: Production vs. People



Notes: Avg. Prod. MPS=0.625; Avg. People MPS=0.366.

- MPS in the U.S.
 - ▶ Bloom et al. (2019)
- Avg. Prod. MPS
 - ▶ Korea = 0.625
 - ▶ U.S. = 0.643
- Avg. People MPS
 - ▶ Korea = 0.366
 - ▶ U.S. = 0.583

Summary

(Q) How are Korean manufacturing plants managed (and why)?

- The Korean manufacturers show relatively poor management practices.
 - Management practices vary significantly (even within the same firms).
 - People management practice score is very low and does not improve at all.
 - Firms seem to overlook these facts or think they are OK in their management.
- Management practices are tightly correlated with productivity.
 - Better managed plants tend to have higher productivities.
 - Management practices are also complementary to ICT adoption and data usage, which can be essential in the 4th industrial revolution era.
 - Good management practices can even reduce future uncertainty.



II. Measuring Korea Management

Jungsu Choi (Statistics Korea)

Future Directions for the MOPS

- (Units for the Survey) Establishment (having 10 or more employees)
 - * Having establishments as the survey unit is most suitable for intra-company and intra-industry comparison purposes
- (Industry Coverage) Begin with the manufacturing industry with future plans for expansions
 - * Select samples based on the statistical population from the Mining and Manufacturing Industry Survey of Statistics Korea (approx. 70,000)
 - * Determine the sample size based on further consultations with concerned departments in Statistics Korea
 - * Plan to expand the coverage after pilots

Survey Design

- (Survey Frequency) Quinquennial frequency
 - * In alignment with the Economic Census (quinquennial)
- (Survey Mode) Internet survey (directly administered and implemented by Statistics Korea)
 - * An internet survey can serve the MOPS items better than a face-to-face interview
- (Questionnaire Design) Referencing the MOPS questionnaire in US and other countries and KDI's pilot survey
 - * Planning to include questions on the progress in adopting the 4th industrial technology and the areas thereof
- ◆ Developing in cooperation with Research Institute and Universities

Timeline

- Test survey in 2020
 - A trial whereby questionnaire revision, etc. will be done
 - The scale and coverage of the survey are yet to be determined (close to several hundred establishments)
- Pilot survey in 2021
 - Survey targets and sample size will be similar to an official survey
 - * Publish the survey results in the form of white paper, etc.
- Official survey in 2026
 - The launch of the quinquennially administered official statistical survey
 - * Official release of the survey results

Thank you

Traffic Sources Overview



- Direct Traffic
3,097.00 (40.49%)
- Search Engines
2,910.00 (38.04%)
- Referring Sites
1,642.00 (21.47%)

Visitors Overview

2,958

Content Overview