



Exit polling for Korea's election and key factors for improving the accuracy of forecasts

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1. The distinct eras of exit polling in Korea and their defining characteristics

Defining Characteristics of Exit Polls in Korea

The singular goal of exit polling is to predict the winner.

Exit poll data is extremely accurate, is considered highly credible, and holds great social influence.

01 A clear, singular goal



To predict the winner of an election

02 Covers ALL election districts nationwide



1 presidential election, 253 National Assembly elections, and 34 local elections (17 local government elections, 17 superintendent elections)

03 Proves the superiority of exit polls as a method for predicting the results of an election



Having competed with other methods such as telephone surveys in the past, exit polls have been conducted during ALL elections since the 2012 National Assembly elections

04 Used by the 3 major broadcast companies during coverage of elections



A matter of national interest

1. The distinct eras of exit polling in Korea and their defining characteristics

The Distinct Eras of Exit Polling in Korea

Exit polling can be divided into 2 eras: before and after the KEP.
And the era before the KEP can be further divided into 2 distinct eras.



The use of telephone surveys to predict results

- Regulations made it impossible to conduct exit polls and was the reason for a rather unsystematic approach to predictive surveys

Introduction and expansion in the use of exit polls

- The country's first exit polls were conducted in 1999 during parliamentary by-elections
- Bellwether polling station sampling was the most used sampling framework for the designation of polling locations

The era of the KEP (Korea Election Pool)

- The KEP was launched in 2010
- Exit polls were conducted across all election districts
- Employed [longitudinal systematic sampling after stratification] as a sampling framework for the designation of polling locations

1. The distinct eras of exit polling in Korea and their defining characteristics

A Turning Point for Exit Polling in Korea – the KEP



Systematization

Collaboration and division of labor between broadcast companies, research companies, and advisors

Stability

Minimizing unnecessary competition makes it easier to secure funding

Sustainability

Accumulation of experience and continued improvement

For Reference: predictive surveys in foreign countries

USA

- In 1993, ABC, CBS, NBC, CNN, FOX, and the AP launched the VNS (Voter News Service)
- Transitioned to the NES (National Election Pool) in 2004
- There are instances of exit polls being inaccurate. Due to time differences within the country, media companies actively conduct pre-election prediction polls on their own

England

- The BBC, in conjunction with ITV, conducts exit polls
- Because seats in the National Assembly are distributed according to the % of votes received by the party, the Uniform National Swing (UNS) method is used to predict the # of seats according to the % of votes received by each party and changes in party support levels.

France

Spain

Indonesia

- These countries use a quick estimation of voting results to make a prediction. They base their predictions on snap counts of a small sample of votes (closer to monitoring).

2. Results of election-time exit polls in Korea

Results of exit polls in Korea (1)

Not only is the predictive error small, but it continues to decline.

1 Improvement in predicting winners of elections

[Table 1] Error in predicting the winner of **Presidential elections**

Year	2002	2007	2012	2017	2022
# of electoral districts that were exit polled	1	1	1	1	1
Error in predicting the winner (%)	0.2	1.6	1.5	0.3	0.2

[Table 2] Error in predicting the winner of **National Assembly elections**

Year	2000	2004	2008	2012	2016	2020
# of electoral districts that were exit polled	75	115	87	246	253	253
Error in predicting the winner(%)	2.5	2.7	1.9	1.8	1.7	1.4

[Table 3] Error in predicting the winner of **Local elections**

Year	2002	2006	2010	2014	2018	2022
# of electoral districts that were exit polled	6	6	32	34	34	34
Error in predicting the winner (%)	1.9	2.1	1.8	1.4	1.9	1.1

*source:reconstructed from election coverage press releases and results from the National Election Commission's official count

2. Results of election-time exit polls in Korea

Results of exit polls in Korea (1)

Not only are accuracy levels high, but they continue to increase.

2 Improving accuracy levels when predicting winners of elections

[Table 4] Accuracy when predicting the winners of **Presidential elections**

Year	2002	2007	2012	2017	2022
# of electoral districts that were exit polled	1	1	1	1	1
# of exit polls that provided inaccurate predictions	0	0	0	0	0
Hit Rate (%)	100.0	100.0	100.0	100.0	100.0

[Table 5] Accuracy when predicting winners of **National Assembly elections**

Year	2000	2004	2008	2012	2016	2020
# of electoral districts that were exit polled	75	115	87	246	253	253
# of exit polls that provided bad predictions	11	19	12	17	17	14
Hit Rate (%)	85.3	83.5	86.2	93.1	93.3	94.5

[Table 6] Accuracy when predicting winners of **Local elections**

Year	2002	2006	2010	2014	2018	2022
# of electoral districts that were exit polled	6	6	32	34	34	34
# of exit polls that provided bad predictions	0	1	1	1	1	1
Hit Rate (%)	100	83.3	96.9	97.1	97.1	97.1

2. Results of exit polls in Korea

Results of exit polls in Korea (2)

After the establishment of the KEP, a probabilistic sampling method was instituted. And as a result, the credibility of exit polls and public opinion polls increased dramatically.

3 | Improvements in the method of designating exit polling locations

used non-probabilistic sampling methods (such as bellwether polling stations sampling)

we currently use a probabilistic sampling method known as [longitudinal systematic sampling from ordered polling stations after stratification]

4 | Increased credibility of exit polls and election time public opinion polls

there existed a lot of controversy over the accuracy of exit polls and public opinion polls during elections

as the accuracy of exit polls was proven to the public over and over, distrust in pre-election public opinion polls conducted via telephone surveys were dismissed. These polls are now viewed as highly credible.

Before the KEP was established (before 2010)

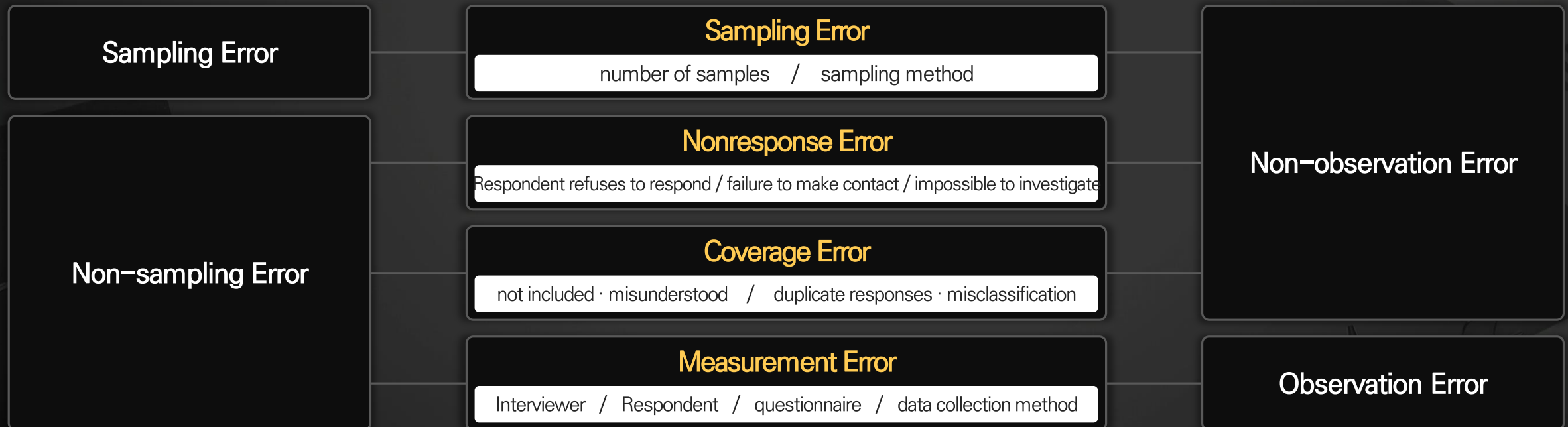
After the KEP was established (2010)

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (1)

TSE (Total Survey Error) refers to the accumulation of all errors that may arise in the design, collection, processing, and analysis of survey data. TSE is the difference between a population parameter and the estimate of that parameter based on the sample survey or census. (Smith, 2011)

[Image 1] The Various Components of Total Survey Error



Reference: Groves (1989), Kim (2014)

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (2)

Total Survey Error (TSE) is gradually decreasing and stabilizing.

[Table 7] Exit Polling Total Survey Error	[Table 7-1] TSE for presidential elections					[Table 7-2] TSE for national assembly elections				
	2002	2007	2012	2017	2022	2004	2008	2012	2016	2020
	6.15	4.97	4.87	3.95	2.88	11.84	8.59	8.39	7.81	7.38

- TSE is the absolute value of polling place extraction error + the absolute value of fieldwork error(Kim & Kwak, 2010)
- Local elections have been excluded from this analysis because the NEC does not count votes at each individual voting location and, therefore, error cannot be calculated

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (2)

Fieldwork error is more than 3 times greater than polling place extraction error.

[Table 8] Polling place extraction error	[Table 8-1] Polling place extraction error for presidential elections					[Table 8-2] Polling place extraction error for National Assembly elections				
	2002	2007	2012	2017	2022	2004	2008	2012	2016	2020
Polling place extraction error (1 st 2 nd place error sum, %p)	0.9	0.18	0.07	0.08	0.06	1.82	2.18	1.77	1.58	1.43

- Polling place extraction error is the sum of the difference between actual results from the entire voting population and actual results for each polling stations sampled

[Table 9] Fieldwork error	[Table 9-1] Fieldwork error for presidential elections					[Table 9-2] Fieldwork error for National Assembly elections				
	2002	2007	2012	2017	2022	2004	2008	2012	2016	2020
Fieldwork error (1 st 2 nd place error sum, %p)	5.25	4.79	4.80	3.87	2.82	10.02	6.41	6.62	6.23	5.95

- Fieldwork error is the sum of the difference between actual results and the predicted results for each electoral districts

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (3)

The key reason that error at the polling place extraction level is low and continue to diminish is the implementation of improved polling place extraction methods.

Representative electoral district extraction method: bellwether polling station sampling



Deployed a probabilistic sampling method known as multi-stage stratified cluster sampling(probability proportionate to size)



Ultimately settled on a longitudinal systematic sampling from ordered polling stations

- After sorting polling places according to results from previous elections, a target number of polling places are systematically extracted
- The target number of polling places is determined by running simulations and minimizing error to the furthest extent possible within a given budget.

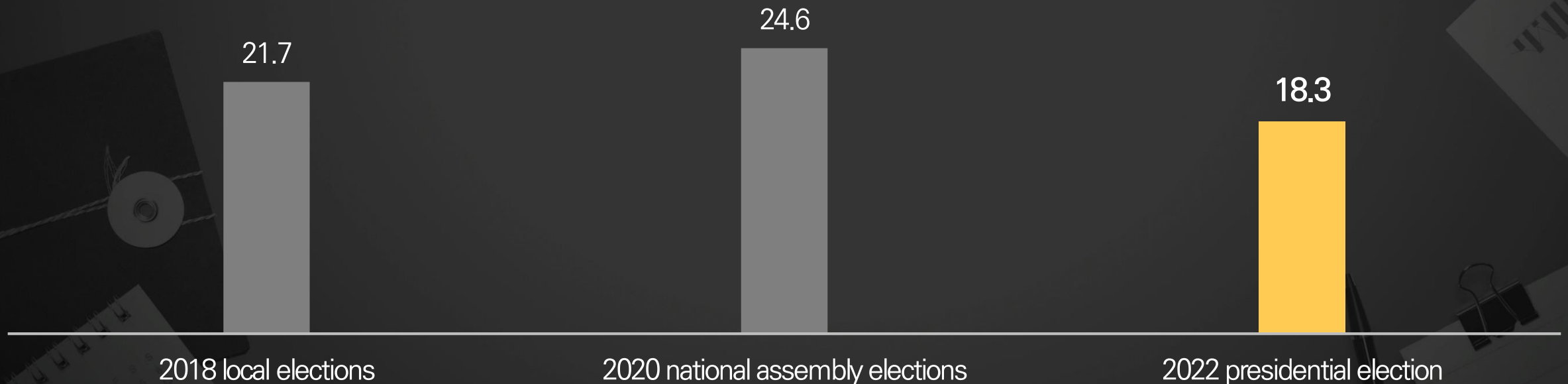
3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (4)

Non-responsiveness is a topic that must be continuously addressed

[Chart 1] Exit Poll Non-response Rates

(unit: %)



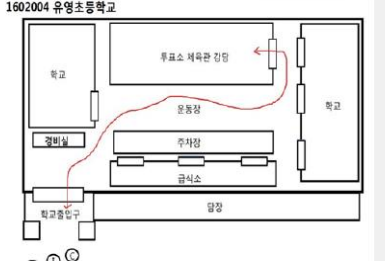

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (5-1)

All polling locations are surveyed in advance to ensure that we are familiar with the logistical details of each location. Substitute locations are found for those that are deemed unsuitable for conducting an exit poll.

An example of a pre-inspection of a polling station


구분	내용
시도명	경남
구시군	통영시
투표구역	북신동제3투
관할구역	북신동 7동~12동,15동,16동
별칭명	유영초등학교(1층, 체육관)
주소	경상남도 통영시 중앙로 225 (북신동)
선거인수	
상태	1
투표소전화번호2	055-645-2155
출구수	1
카운터수	1
조원수	4
선거전날집결지	숙소앞
이동수단	카카오택시 및 콜택시 055-644-8585
예상소요시간	10분
투표소찾는방법	유영초등학교 검색 골목 언덕방향
투표소특이사항	체육관 별관 하나를 투표소 쓸예정이며 당일, 체육관 제외,모든문은 휴관 미개방 학교 정문하나만 출구예정. 정문 바로앞에서 카운터하면 불편.
숙소명	통영거북선호텔
숙소전화번호	055-646-0710
숙소주소	미수동 957-3
숙소의대략적인위치	거북선 모양의호텔 앞에 통영대교 및 바다가 보임
예약일	6/12
예약계좌번호	현장 카드결제
예약객실수	6개 트윈룸
총비용	540000
선금	540000
잔금	
공동숙박가능투표소	미수동제4투
콜택시번호	055-644-8585
아침식사방법	숙소에서 제공 및 근처 편의점 이용
정식식사용식점명	한솔도시락
식당전화번호	055-646-6377
음식점의대략적인위치	초등학교나와 왼쪽직진후 사거리에서 한번더직진후 좌회전, 약도 참조
귀가방법	초등학교 나와 좌측직진 시내거리에도 먹을거리가 있음.
기타요청사항	개별귀가 버스이용

12:00
📶 🔋

2022 Presidential election prep team member: Lee Dah Hyun

Hey. I've submitted a request to find an alternate location for polling location XX-X. Can you review that request now? We visited this location and found that there are 3 entrances scheduled to be opened - and one of them leads to a parking lot that can accommodate roughly 50 cars. In addition, there is a gate located on the east end of the parking lot that may also be opened. It's going to be difficult for us to cover such a large area. Please review my request.



OK. I've been able to review your request to replace polling location XX-X. We'll substitute polling location YY-Y for location XX-X. Please conduct a survey of the new location, YY-Y.

2022 Presidential election prep team member: Lee Jee Yoon

Ok.. Thank you very much!!

An example of team members discussing whether a certain polling location needs to be replaced (via KakaoTalk)

3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (5-2)

We have developed a comprehensive training program for our interviewers. This reduces fieldwork error. We are also fully prepared to handle special situations such as the COVID-19 pandemic.

Staff Members stationed at each polling location



Interviewers Training Material

Masks are worn during the entire time an exit poll is being conducted



The lady that is walking out right now. She has long hair and is wearing glasses. She has a handbag slung off her left shoulder...

- In constant communication with counter personnel to ensure that the proper respondents are targeted



Hello. We are conducting an exit poll. Did you just leave the voting booth?

- If the respondent is NOT an actual voter, the pollster simply says "thank you" and walks away (does NOT poll this individual)
- Instead of polling the next person (the 6th individual), the pollster returns to their standby position



We are conducting exit polls on behalf of the 3 major broadcast companies – KBS, MBC, and SBS. Can you spare a moment? It will take less than 1 minute of your time.

- We urge each individual to participate in the exit poll
- We emphasize that it is a very simple survey that only takes 1 minute to complete.

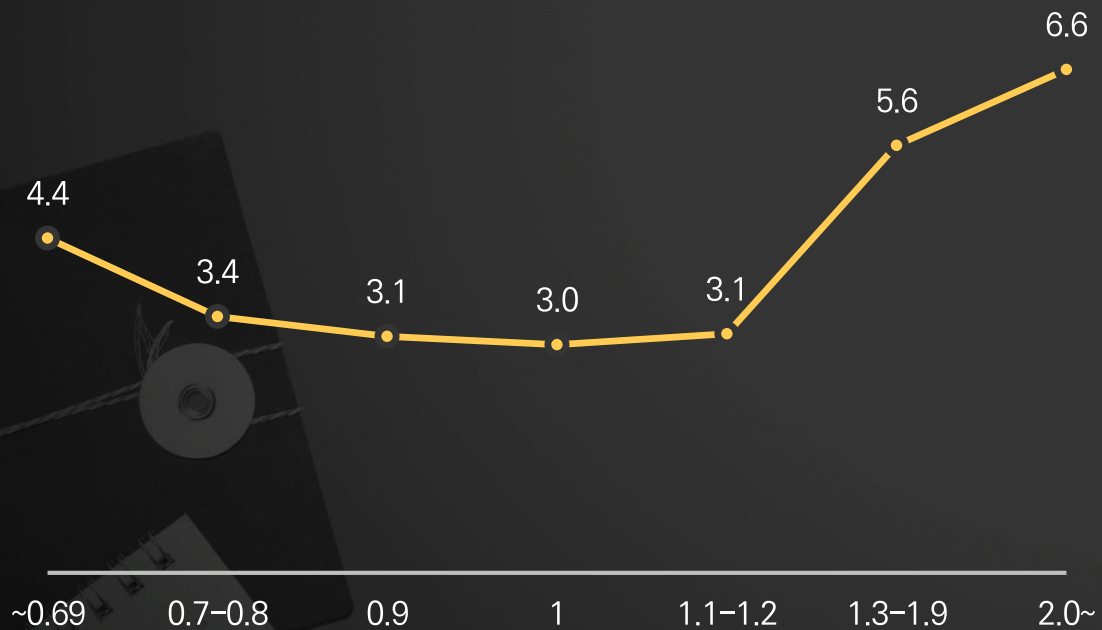


3. A review of the accuracy of exit polls conducted in Korea

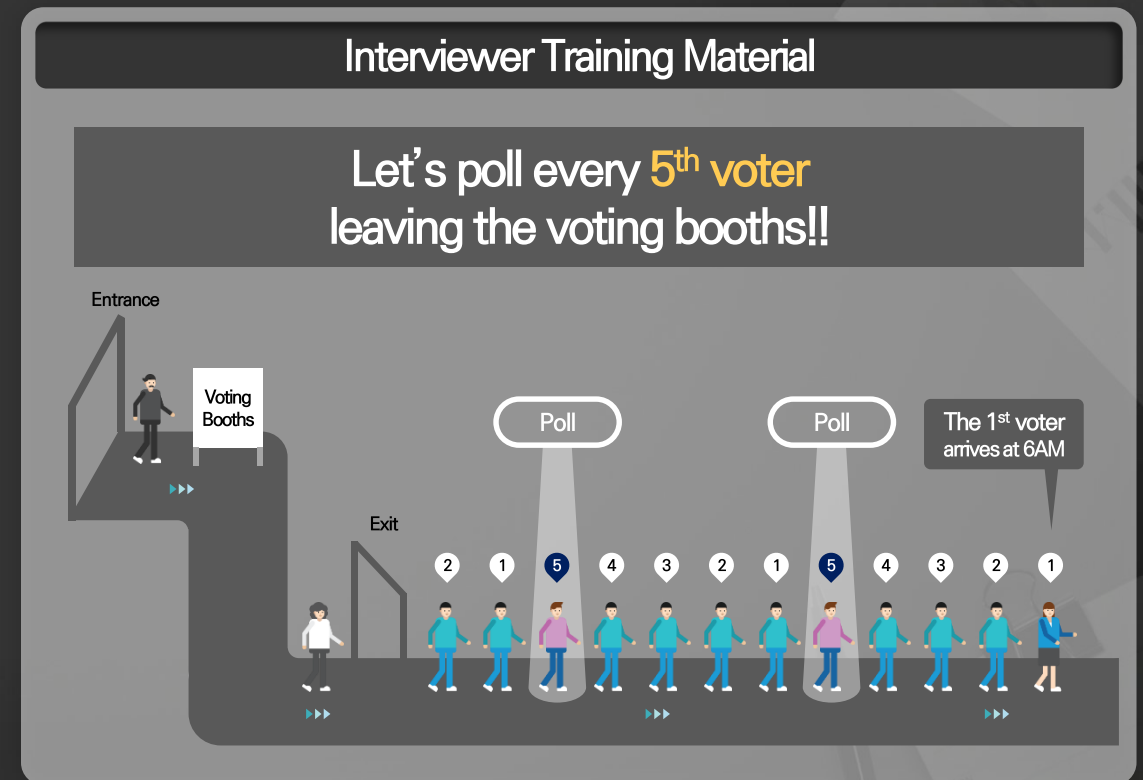
A Review of Total Survey Error (5-3)

We observe that the closer we abide by the K interval, the smaller fieldwork error is. As such, we train all interviewers to respect and stick as close to the k interval as possible.

[Chart 2] K Interval Compliance and Fieldwork Error



2012 National Assembly Election exit polls



3. A review of the accuracy of exit polls conducted in Korea

A Review of Total Survey Error (5-4)

On-site field interviewers are NOT able to see the actual responses provided by exit poll respondents.

The approach and attitude of interviewers when engaging exit poll participants



3. A review of the accuracy of exit polls conducted in Korea

An Operational Review

We now have fundamentally sound operating, data collection, and result analysis systems in place. These systems help to maintain the integrity and continuity of exit polling in Korea.

01



Operating system

KEP

02



Data collection system

Create standard operating procedures for the entire data collection process

Create a systematic method for data aggregation and data transmission

03



Result analysis system

Estimate voting results from election day voters

Estimate voting results from non-responsive voters

Combine these results with estimates of voting results from early voters

3. A review of the accuracy of exit polls conducted in Korea

An institutional review

The easing of regulations and laws had an undeniably positive effect on improving the accuracy of exit polls. However, these changes are still insufficient. More needs to change.

01 Easing of bans on public opinion polls



Prior to 1992, public opinion polling was prohibited
Since 2005, the results of public opinion polls are prohibited from being published during the 6 days leading up to Election Day

02 Easing of distance restrictions for exit polls



In 1995, exit polls were to remain at least 500 meters away from a voting location
In 2012, this distance was further decreased to 50 meters

03 The use of a “virtual number” phone number extraction framework



Through the use of telephone surveys, the accuracy of early voter predictions was greatly improved

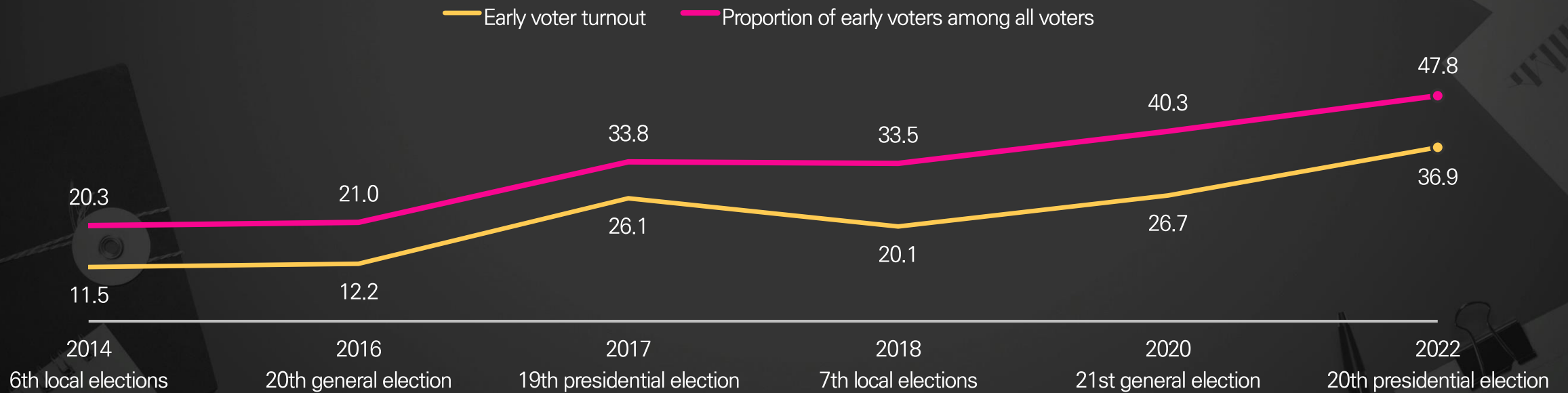
4. Considerations when conducting exit polls in Korea

Tasks when conducting exit polls in Korea (1)

The number of voters voting early is increasing.
As a result, the proportion of early voters among all voters is increasing.

[Chart 3] Early voter turnout and Proportion of early voters among all voters

(unit: %)



Data source) National Election Commission

4. Tasks when conducting exit polls in Korea

Tasks when conducting exit polls in Korea (2)

Exit polls must be conducted in such a way that reflects the reality of the current situation

- 01 | **The exit poll budget is not sufficient.**
 - Certain conditions make it difficult to conduct exit polls in ALL electoral districts

- 02 | **There is less and less time to check the actual voting results.**
 - fundamental obstacles that bring into question the very reason for conducting exit polls

- 03 | **We need to know why the voters voted.**

- 04 | **The detail results of exit polls must be shared with all members of society.**

5. Conclusion

Conclusion

Key Takeaways from Exit Polling

We have uncovered various methods/ processes to minimize Total Survey Error

The exit polling system has become increasingly stable and systematic – from an operational viewpoint

Future Challenges

There is a need to revise various systems that are obstacles to improving the accuracy of exit polls

We must face and deal with certain roadblocks that are challenging our ability to continuously conduct exit polls in the country

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THANK YOU

감사합니다

