

ANTITRUST ISSUES ON BIG DATA



Concerns and Counterarguments 1

1

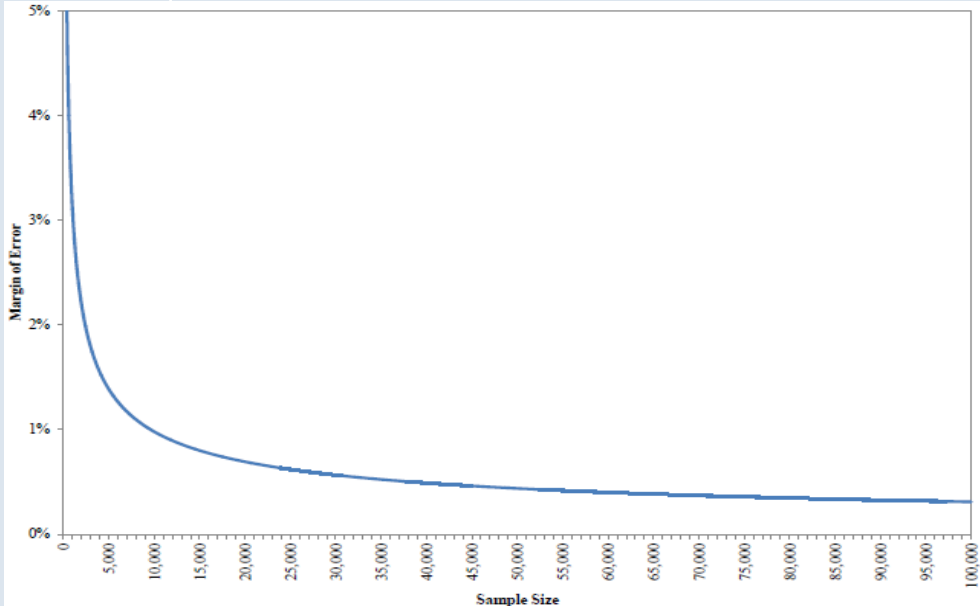
- stylized fact
 - Dominant online platforms have much more amount of accessible Big Data than entrants
- Some concerns on Antitrust
 - Big Data plays a role of entry barrier
 - lessening the degree of competition
 - alleviating the incentive for innovation of entrants as well as dominant platforms
 - may incur a privacy issue

⇒ antitrust law should be applied for the issues on Big Data
- Counterarguments
 - need to understand how online platforms use Big Data
 - need to consider the 2-sided business model for applying the antitrust law (holistic approach)

Concerns and Counterarguments 2

2

| topic | concerns | counterarguments |
|---------------------------|---|---|
| Amount of Data accessible | <ul style="list-style-type: none">• Because of amount gap of data and quality gap, the entrants cannot play a role of competitive constraints to incumbent dominant online platforms → the incentives for innovation or quality improvement of both entrants and incumbents are lowered | <ul style="list-style-type: none">• Data is everywhere and cheap• Data is just one of inputs<ul style="list-style-type: none">- UI and business model more important• Short lifespan of value of Data |



The graph illustrates the relationship between sample size and margin of error. The y-axis represents the Margin of Error, ranging from 0% to 5% in 1% increments. The x-axis represents the Sample Size, ranging from 0 to 100,000 in increments of 5,000. The curve starts at a high margin of error (approximately 5%) for a very small sample size and rapidly decreases, reaching about 1% at a sample size of 10,000. It continues to decline more gradually, reaching approximately 0.5% at a sample size of 100,000.

| Sample Size | Margin of Error (%) |
|-------------|---------------------|
| 0 | 5.0 |
| 5,000 | 1.5 |
| 10,000 | 1.0 |
| 15,000 | 0.8 |
| 20,000 | 0.7 |
| 25,000 | 0.6 |
| 30,000 | 0.55 |
| 40,000 | 0.5 |
| 50,000 | 0.45 |
| 60,000 | 0.42 |
| 70,000 | 0.4 |
| 80,000 | 0.38 |
| 90,000 | 0.36 |
| 100,000 | 0.35 |

Concerns and Counterarguments 3

4

| topic | concerns | counterarguments |
|-------------------------------|--|---|
| The Incentives for Innovation | <ul style="list-style-type: none">• loss of quality theory<ul style="list-style-type: none">- increasing online advertisement degrades quality of search service | <ul style="list-style-type: none">• decreasing online advertisement degrades quality of search-based advertisement service<ul style="list-style-type: none">- give up pursuing profit? |
| Network Effect | <ul style="list-style-type: none">• feedback loop creates winner-take-all<ul style="list-style-type: none">- more users → more data → quality higher → more users- more users and data → more ads → more investments for quality → more users | <ul style="list-style-type: none">• Data is just one of inputs<ul style="list-style-type: none">- UI and business model more important• advertiser chooses platforms with more users, but users not choose platforms with lots of ads → the intensity of feedback loop weakens |
| Privacy | <ul style="list-style-type: none">• dominant online platforms have no incentives for privacy protection | <ul style="list-style-type: none">• privacy protection is one of the non-price competition factors<ul style="list-style-type: none">- can compete for transparent privacy protection policy |

Concerns and Counterarguments 4

6

| topic | concerns | counterarguments |
|-------|---|---|
| Cases | <ul style="list-style-type: none">• Google/DoubleClick<ul style="list-style-type: none">- (Jones Harbour, 2007) privacy protection issue should be examined under antitrust law• Bazaarvoice/PowerReview<ul style="list-style-type: none">- (DoJ and trial court, 2014) no evidence for efficiency enhancement | <ul style="list-style-type: none">• MS/Yahoo!<ul style="list-style-type: none">- (DoJ, 2010) more data can improve quality of search service → can be a competitive constraint to Google• Publicis/Omnicom<ul style="list-style-type: none">- (EC, 2014) competition for big data analysis service may occur |