Social media as a market monitoring tool for digital financial services

Rafe Mazer

Project Director, Consumer Protection

Innovations for Poverty Action – April 2020

https://www.poverty-action.org/program-area/financial-inclusion/consumer-protection-initiative

Social media monitoring for consumer protection

Machine-learning converts millions of social media posts from unstructured text data to structured numerical data

Initial seeds for category of **Fees & Charges** in Kenya:

- fees
- charges
- overcharged
- refund
- deduction

17:28 - Jan 08, 2020

@[ ] Please return my funds to my account. Yesterday i had a balance today it negative. Please what happened. Please refund my money.

18:59 - Jul 30, 2020

@[ ] Having Nyeri1 return my money should be as simple as it was for them to craft the false statement.
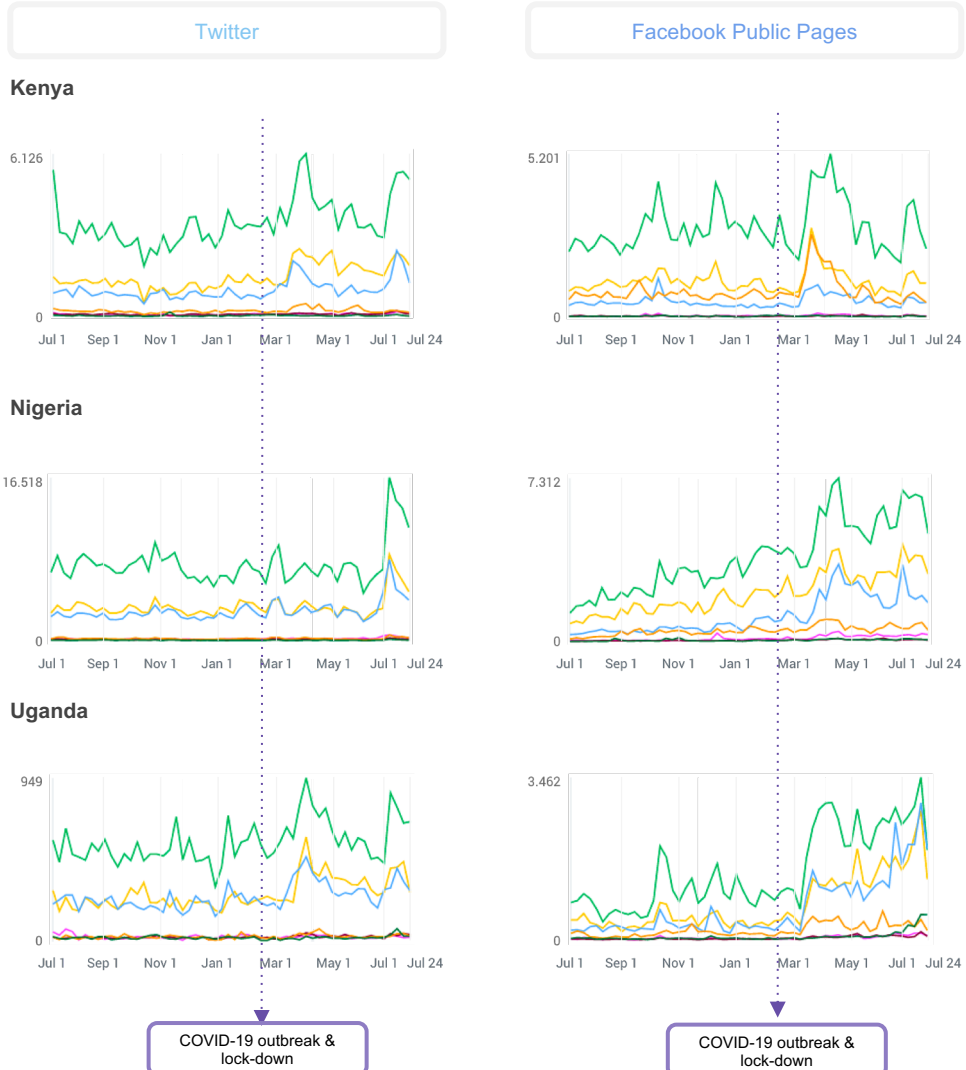
14:30 - Jul 30, 2020

@[ ] @[ ] This bank if you don't follow up hiyo pesa itaogelea

Step 1
User defined dictionary of keywords

Step 2
Computing topic probabilities from keywords & context

Step 3
Newly learned words help determine topics for items with no keywords

https://www.poverty-action.org/publication/social-media-usage-digital-finance-consumers-analysis-consumer-complaints

Categorizing social media content helps monitor industry trends

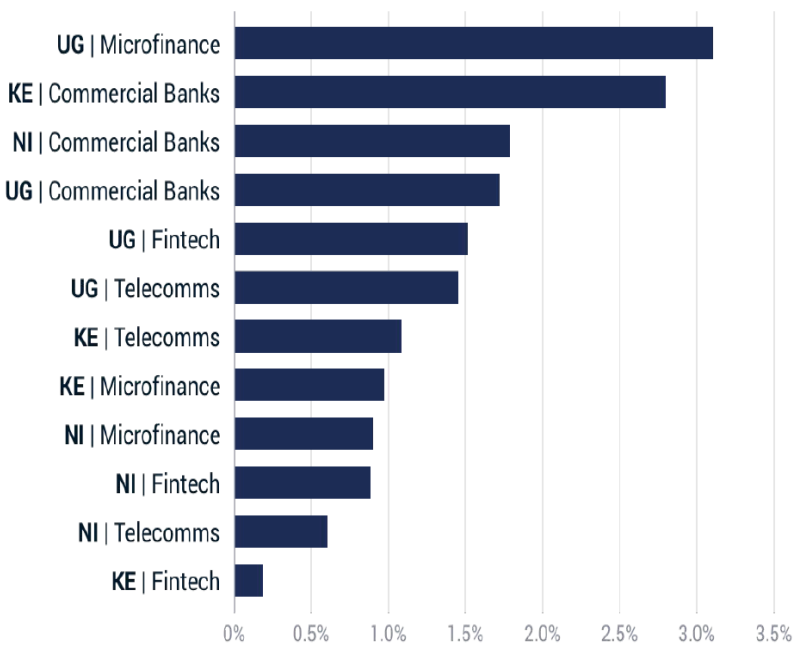Legend: ● Operational Failures ● Customer Care ● Fees & Charges ● Fraud ● Data Privacy ● Lending ● Advertising

Twitter

Kenya
- Commercial Banks: 22% / 63% / 9% / 5%
- Fintech: 15% / 24% / 7% / 52%
- Microfinance: 20% / 49% / 10% / 20%
- Telecoms: 26% / 51% / 19%

Nigeria
- Commercial Banks: 23% / 50% / 23%
- Fintech: 25% / 53% / 18%
- Microfinance: 62% / 24% / 12%
- Telecoms: 21% / 57% / 14%

Uganda
- Commercial Banks: 21% / 64% / 10%
- Fintech: 19% / 48% / 29%
- Microfinance**: 35% / 28% / 19% / 18%
- Telecoms: 25% / 37% / 30%

Facebook Public Pages

Kenya
- Commercial Banks: 21% / 55% / 9% / 15%
- Fintech: 22% / 49% / 5% / 24%
- Microfinance: 13% / 68% / 5% / 15%
- Telecoms: 26% / 44% / 24%

Nigeria
- Commercial Banks: 29% / 48% / 15% / 6%
- Fintech: 23% / 52% / 13% / 10%
- Microfinance: 24% / 48% / 6% / 21%
- Telecoms: 31% / 40% / 23%

Uganda
- Commercial Banks: 24% / 58% / 9% / 9%
- Fintech: 24% / 34% / 31% / 5%
- Microfinance**: 18% / 57% / 7% / 18%
- Telecoms: 25% / 33% / 33%

Twitter

Kenya (0 – 6.126, Jul 1 – Jul 24)

Nigeria (0 – 16.518, Jul 1 – Jul 24)

Uganda (0 – 949, Jul 1 – Jul 24)

COVID-19 outbreak & lock-down

Facebook Public Pages

Kenya (0 – 5.201, Jul 1 – Jul 24)

Nigeria (0 – 7.312, Jul 1 – Jul 24)

Uganda (0 – 3.462, Jul 1 – Jul 24)

COVID-19 outbreak & lock-down

https://www.poverty-action.org/publication/social-media-usage-digital-finance-consumers-analysis-consumer-complaints
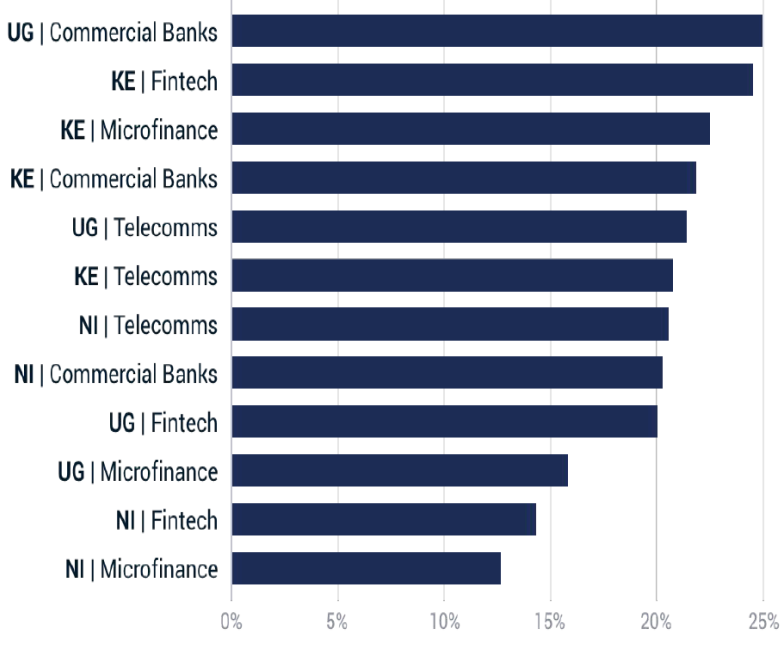
Response rates to consumers vary considerably across Twitter, Facebook and Google Play Store

Response rate proxy on Twitter, Facebook and Google Play
Number of responses of banks / Total of tweets, by type of bank and country
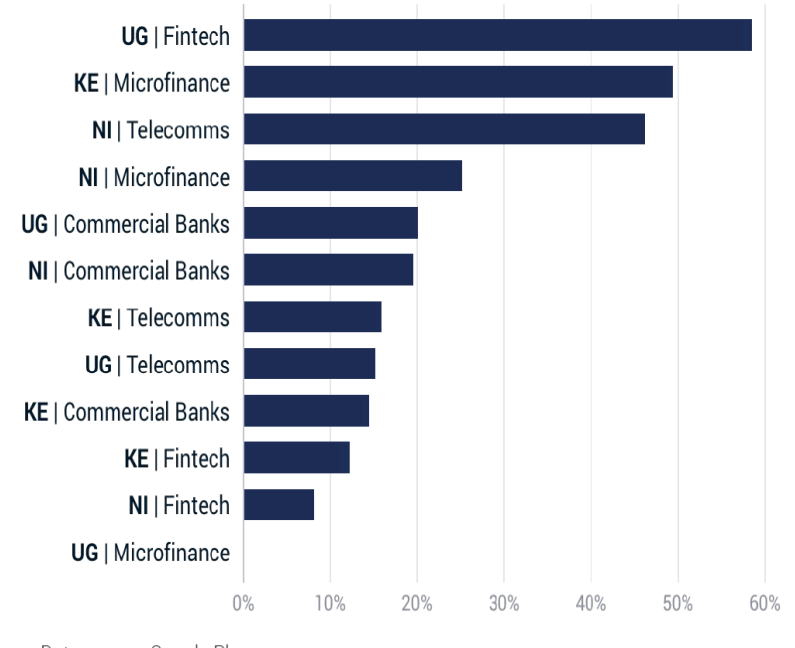

Data source: Twitter

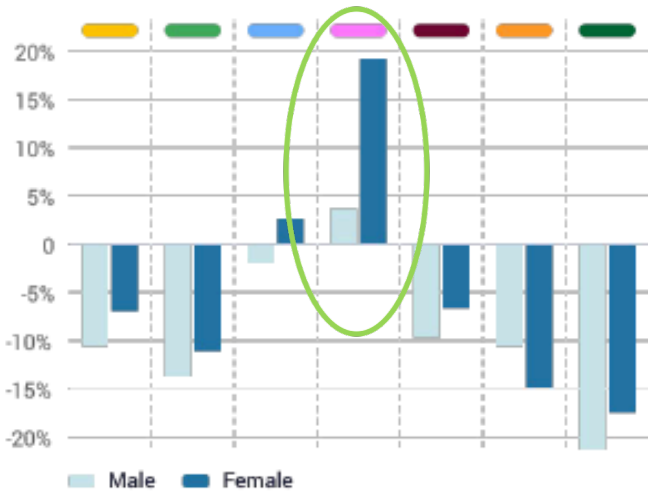Data source: Facebook

Data source: Google Play

Twitter

Facebook

Google Play Store

Consumer demographics and time series analysis can expand insights from social media data
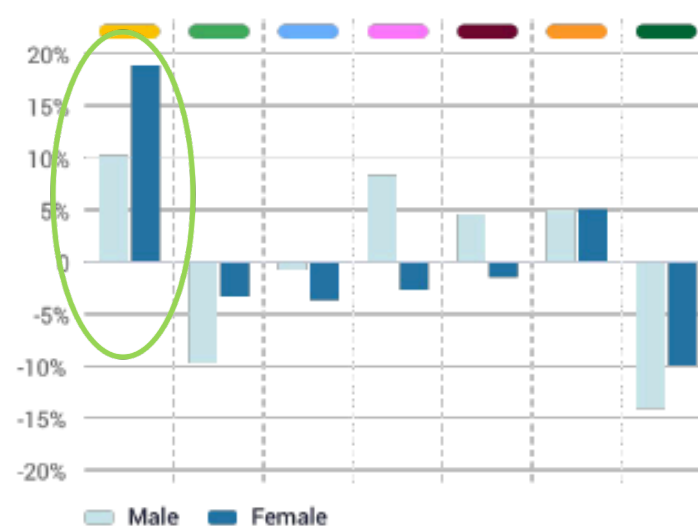
Gender-identified Twitter accounts

Nigeria: Rise in fraud-related issues by female accounts

Uganda: Operational failures increased during pandemic

Twitter and Facebook Public Pages types of issues legend:

● Operational Failures ● Customer Care ● Fees & Charges ● Fraud ● Data Privacy ● Lending ● Advertising

https://www.poverty-action.org/publication/social-media-usage-digital-finance-consumers-analysis-consumer-complaints

Thank you