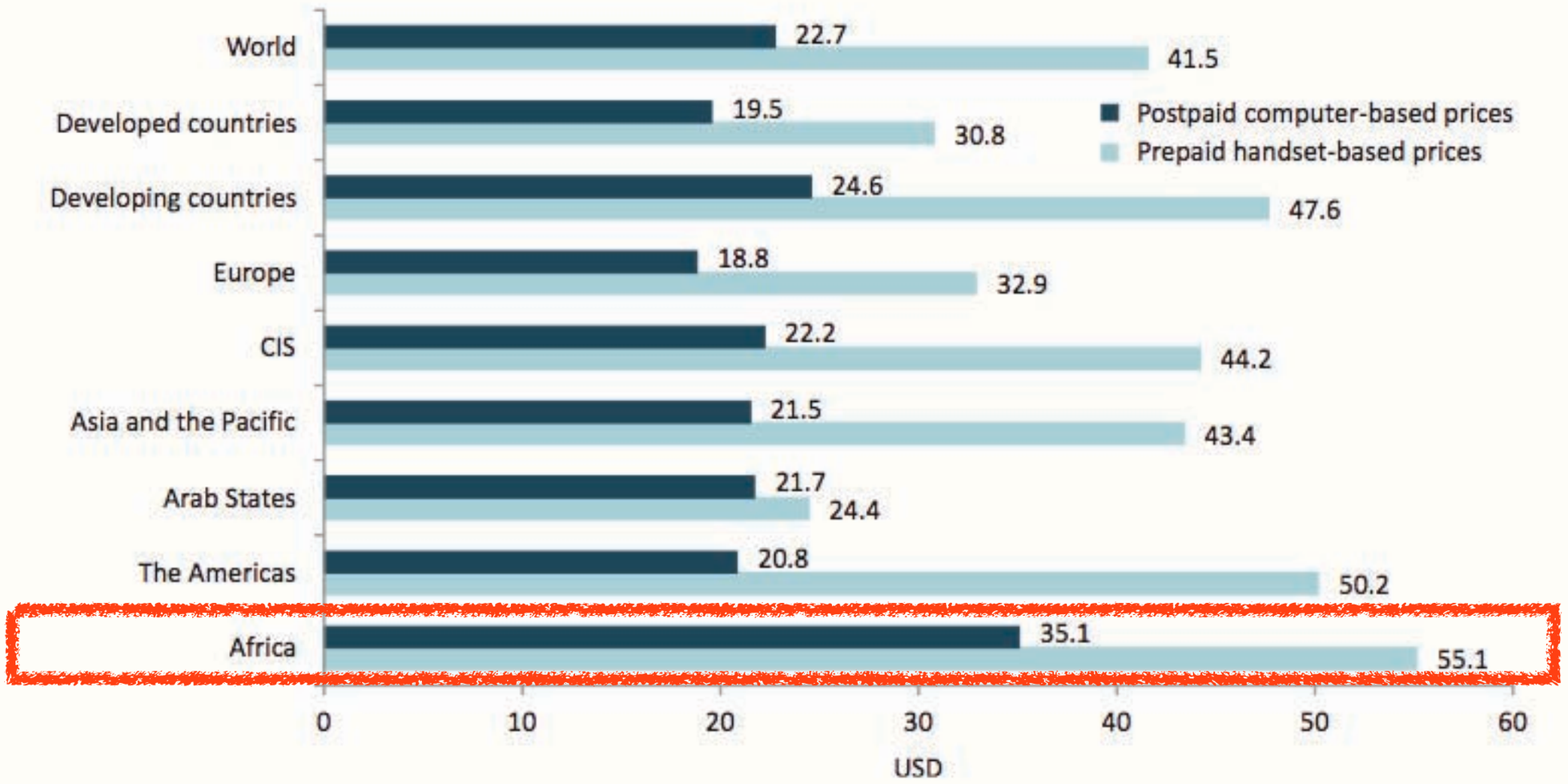
Attitudes toward Mobile Data Pricing and Usage

Field Survey Results from Kenya and Ghana

mWomen Working Group
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Google.org
November 12, 2012

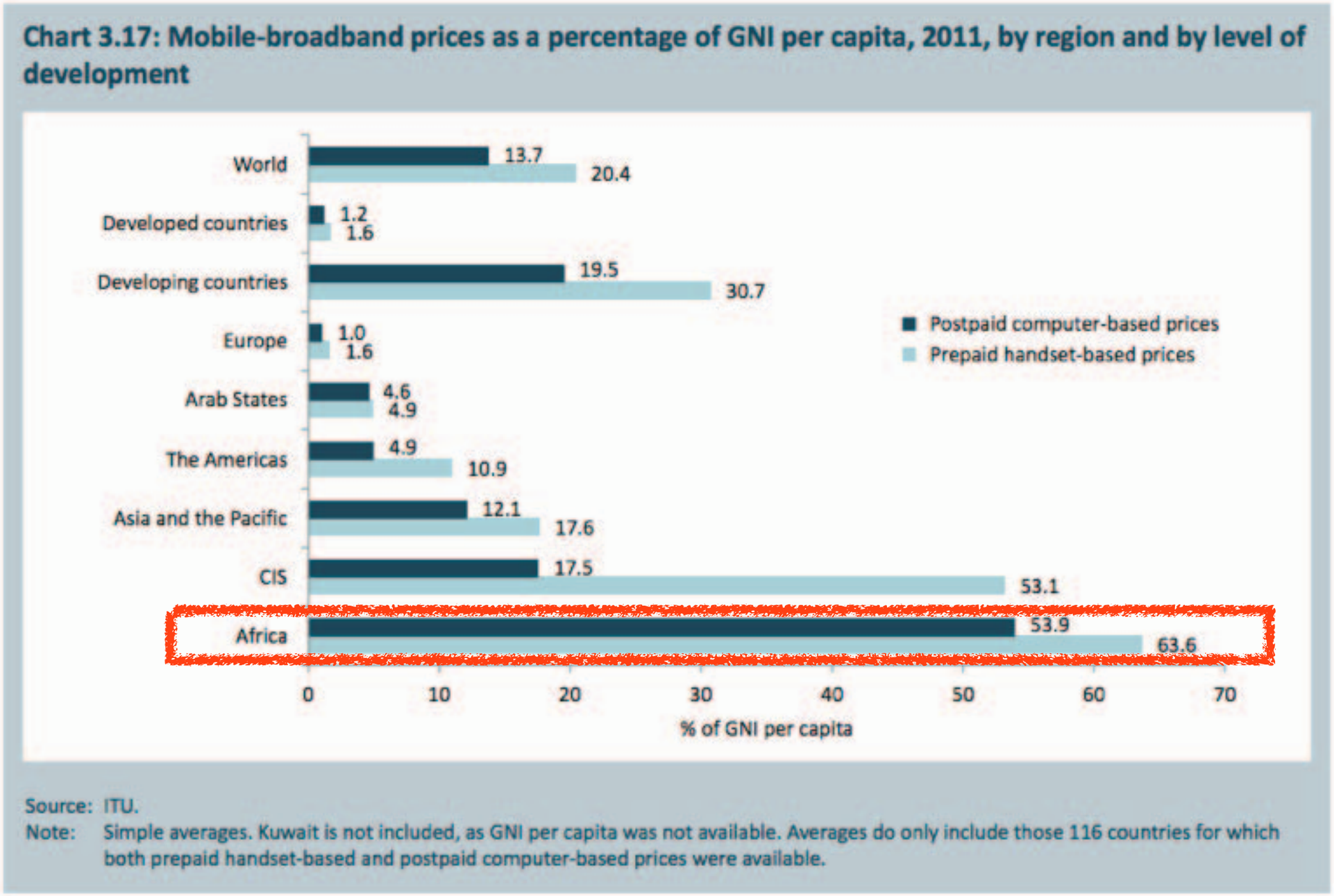
As a Region, Africa Has the Highest Prepaid Mobile Internet Rates in the World

Chart 3.18: Mobile-broadband prices in USD, 2011, by region and by level of development



Source: ITU.
Note: Simple averages. Kuwait is not included, as GNI per capita was not available. Averages do only include those 116 countries for which both prepaid handset-based and postpaid computer-based prices were available.

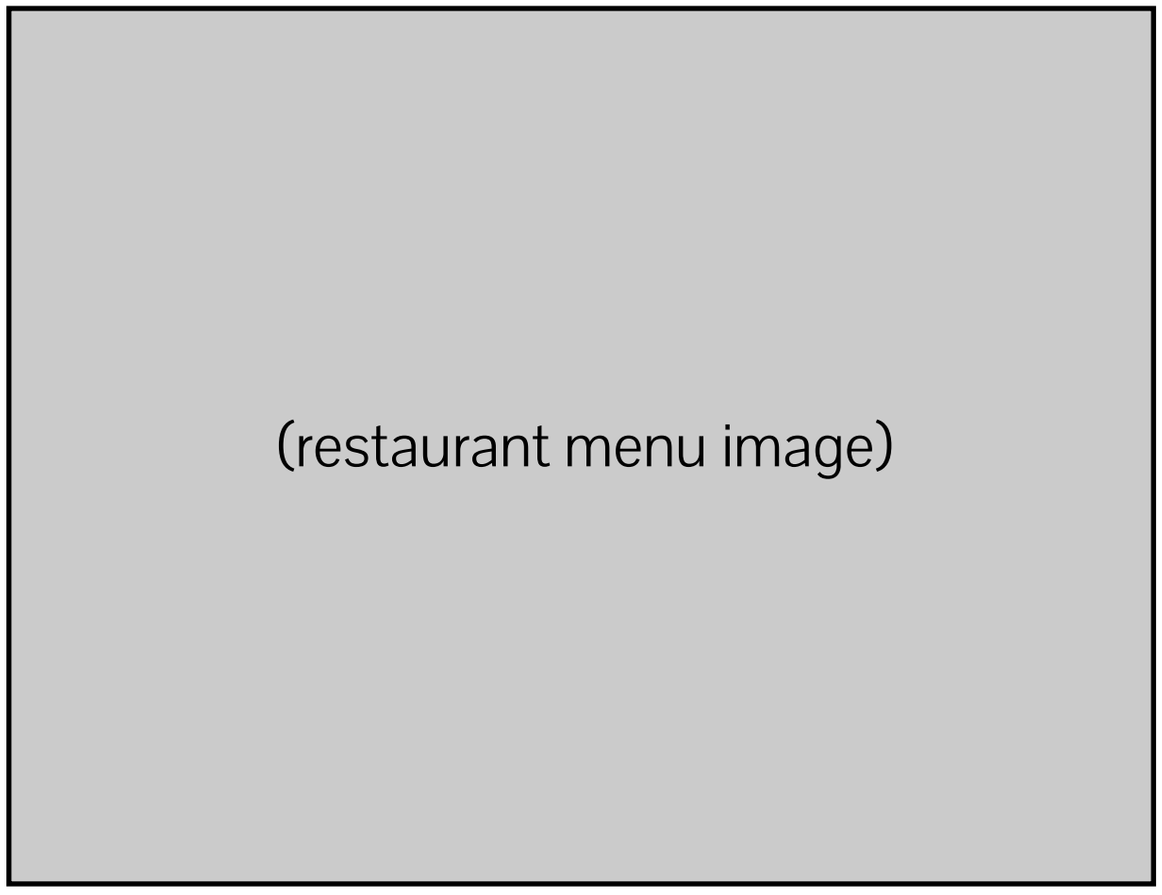
The Gap Is Even More Pronounced When Comparing Prepaid Mobile Internet Prices as a Percentage of Income



Source: ITU.
Note: Simple averages. Kuwait is not included, as GNI per capita was not available. Averages do only include those 116 countries for which both prepaid handset-based and postpaid computer-based prices were available.

- [illegible] cPEP[illegible]
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- mta, ytP[illegible]

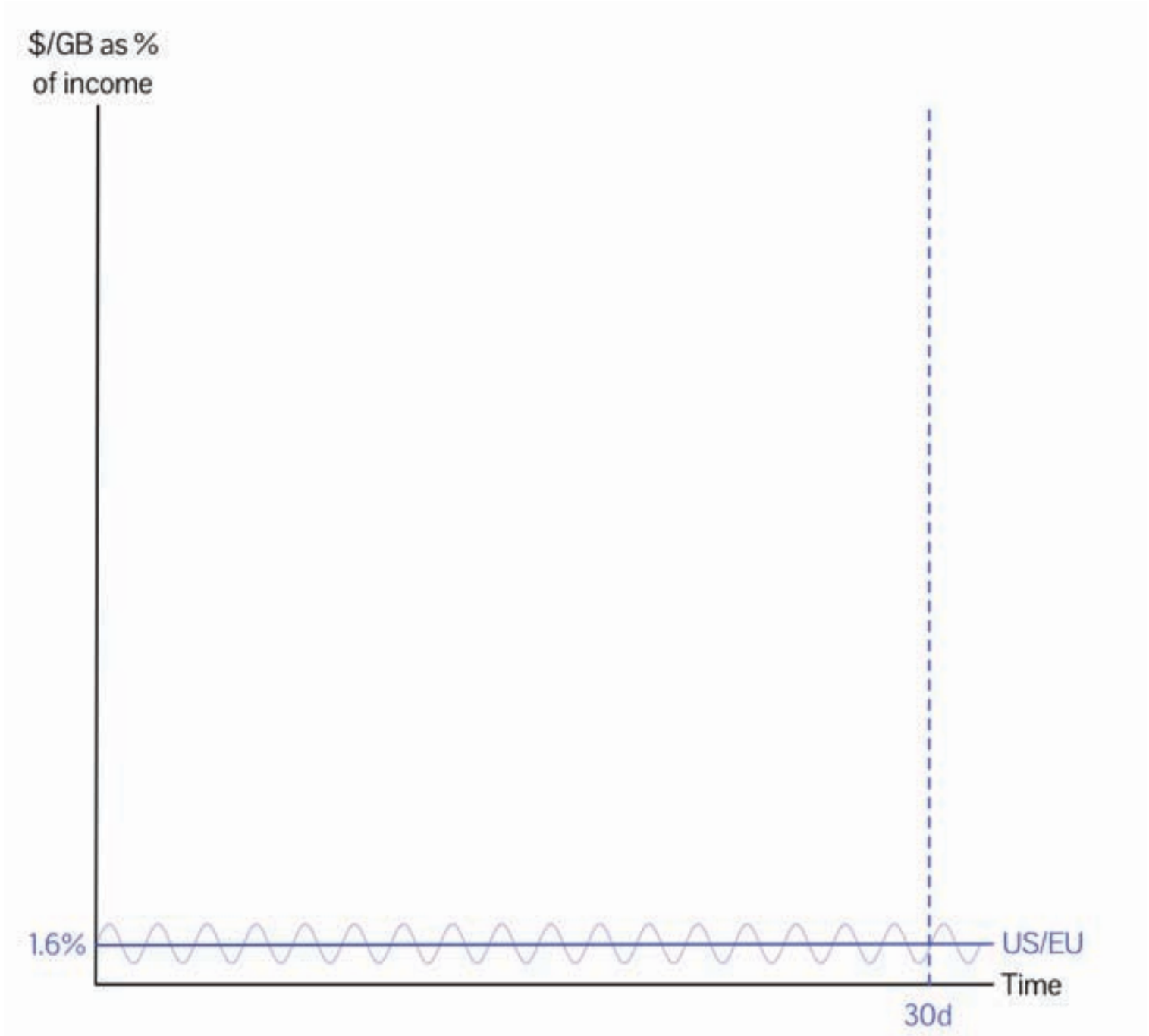
Cost vs. Transparency of Cost



Fear of the unknown

- Word-of-mouth stories of astronomical bills
- Kenya UX study: 6/10 concerned w/ overspending
- Previous studies - no correlation between lower prices, increased usage

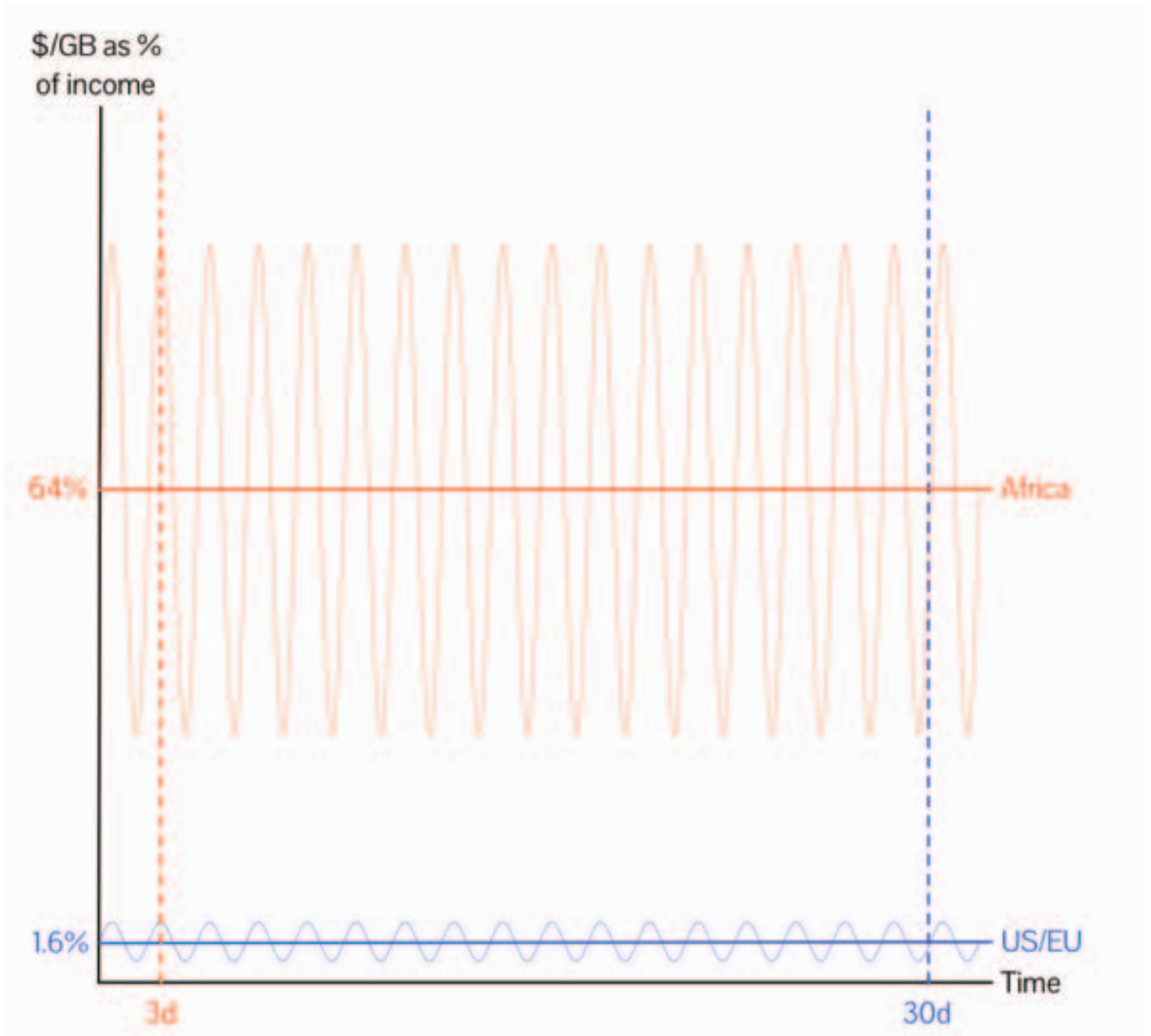
In Developing Countries, Consumer Prepaid Mobile Data Costs – and Variability of Page Costs – Is Small



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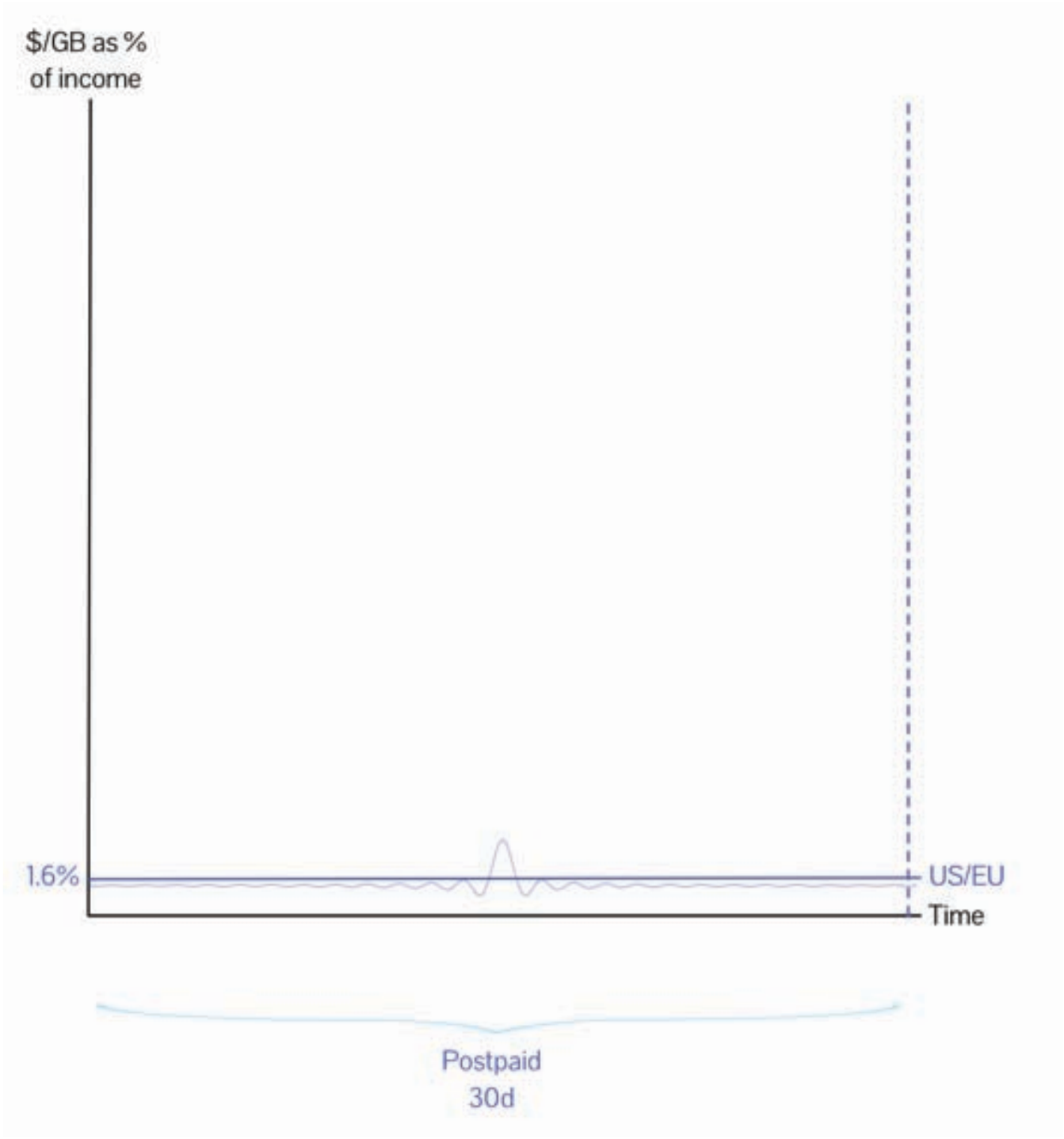
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However, in Africa, Cost and Variability Are Large

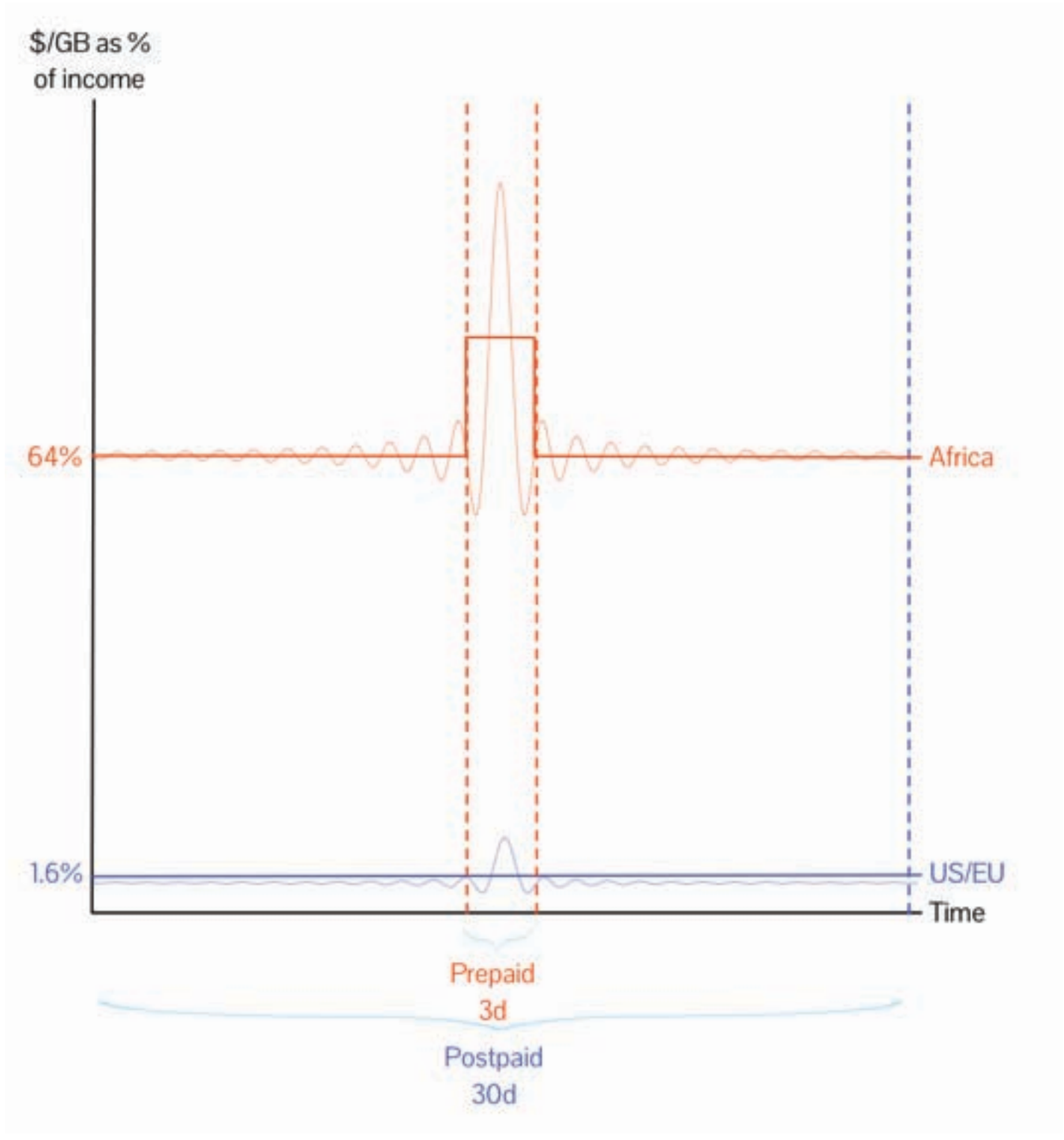


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This Also Applies to Uneven/Unexpected Blips



Which Become Significant Events When Costs Are High



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Open Questions

Research questions

- What are the key factors inhibiting mobile Internet adoption?
- How much of a factor is transparency of pricing, true cost?
- How do factors, usage patterns vary for women vs. men?

Approach

- Initial survey: Kenya
- In-depth survey: Ghana
- Mobile experiment

Kenya Design

- Non-representative, small, initial exploratory study into attitudes toward mobile Internet pricing and usage
- Designed by Google, implemented by iHub Research

Date	Feb. 10-12, 2012
Participants	82 (19 non-users, 6 rural)
Location	Nairobi: Shopping mall, university campus, grocery store
Income	KES 10,000-100,000
Occupation	1/3 students, 1/5 self-employed

Kenya High-Level Findings

1. Few participants share phones; however, multiple phone use is significant.
2. Service cost is a material factor; however, it does not appear to be the largest barrier for mobile Internet adoption for our participants.
3. Understanding of mobile Internet cost may be inversely correlated with usage.
4. However, improved information about mobile data costs may increase usage.

1. Phone Sharing

Few of the study participants share phones; however, multiple phone use is significant.

- Only 3 of the study's middle-class, largely urban participants shared their phone with another person.*
- However, 25% owned and actively used more than one phone.

KE: Similar Phone Sharing Rates by Gender
GH: Slightly Less Phone Sharing by Women

KENYA					
Do you share your phone(s) with anyone else * Gender Cross tabulation					
	Gender				Total
	Male		Female		
	Count	Percent	Count	Percent	Count
Yes	1	3%	1	3%	2
No	33	97%	28	975	61
Total	34	100%	29	100%	63

GHANA					
11.a Do you share your phone(s) with anyone else? * Gender Cross tabulation					
	Gender				
	male		female		Total
	Count	Percent	Count	Percent	Count
yes	31	9%	11	5%	42
no	321	91%	232	95%	553
Total	352	100%	243	100%	595

2. Service Cost As a Barrier to Adoption

Service cost is a material factor; however, it does not appear to be the largest barrier for mobile Internet adoption for our participants.

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Table 1: Reasons for not using mobile data

Reason given	Number of times reason was mentioned
Lack Internet-enabled phone	8
Preference for laptop	4
Expensive	2
Other	4

3. Understanding of Cost and Usage

Understanding of mobile Internet cost may be inversely correlated with usage.

- , CRxEL, EfC:Ncx wEL, yCfxxL fc, y, UPftxECctR a, fN, , E lx Ef, Ef Ct1, PEL lx Cf CR, Ef U,JCC:s xE, b xE P. , yPd, xE s xatU, Ef, yE, f
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Table 2: Ideal price per MB for users and non-users vs the market rate

	Non users	Users	Average Market rate[1]
How much are you willing to pay for mobile data per MB (Price in KES)	1.2	0.7	0.9

4. Improved Information and Usage

However, improved information about mobile data costs may increase usage.

- When researchers asked users whether knowing how much money they spend on mobile Internet would influence usage:
  - 1/2 said that they would use mobile Internet more if they knew their rate,
  - 13% said they would use it less, and
  - 32% said their usage levels would remain the same.

Ghana Design

- Follow-on, larger study to further explore mobile Internet adoption barriers
- Designed by Google, implemented by iHub Research

Date	June 3-17, 2012
Participants	798 (194 non-users)
Location	Accra, Sunyani
Income	GHc 300-2,000
Occupation	TBF

(field image)

Ghana High-Level Findings

- Mobile data users spend more money to make calls and send SMS messages than to use mobile Internet.
- Users use pay-as-you-go even though they believe that bundles are cheaper.
- Users and non-users do not have an accurate understanding of mobile Internet costs and many believe they are billed by time.
- Fewer users monitor mobile Internet spend, compared to voice/SMS balances.
- Improved transparency into mobile Internet spending might convert non-users.
- Users and non-users would be motivated to use mobile Internet at lower prices.
- Speed and cost are major challenges for mobile Internet users.
- However, amongst non-users, technical complexity/illiteracy, demand/awareness, and device costs overshadow service costs as issues impeding mobile Internet adoption.

1. Spending on Calls/SMS vs. Data

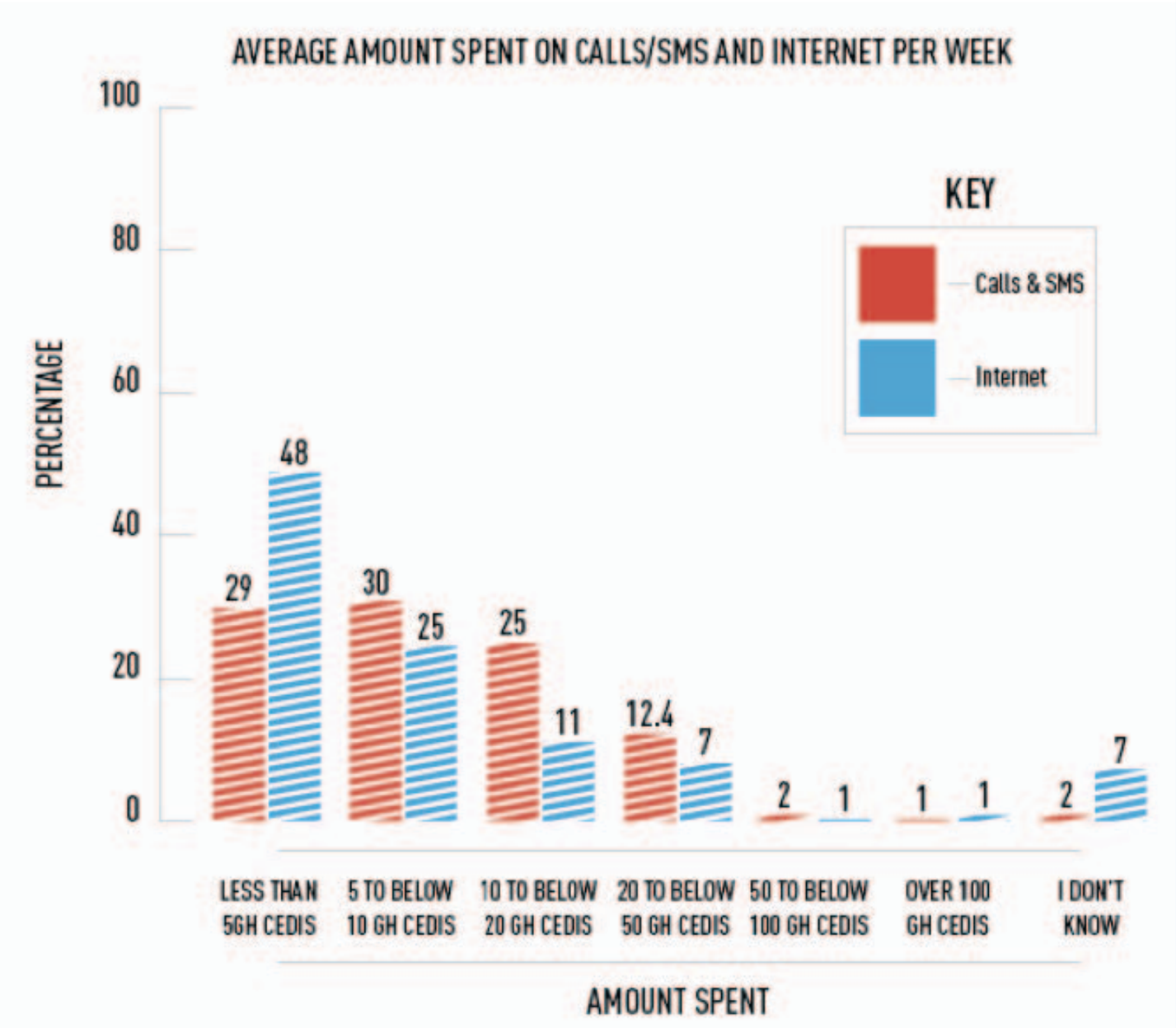
Mobile data users spend more money to make calls and send SMS messages than to use mobile Internet.

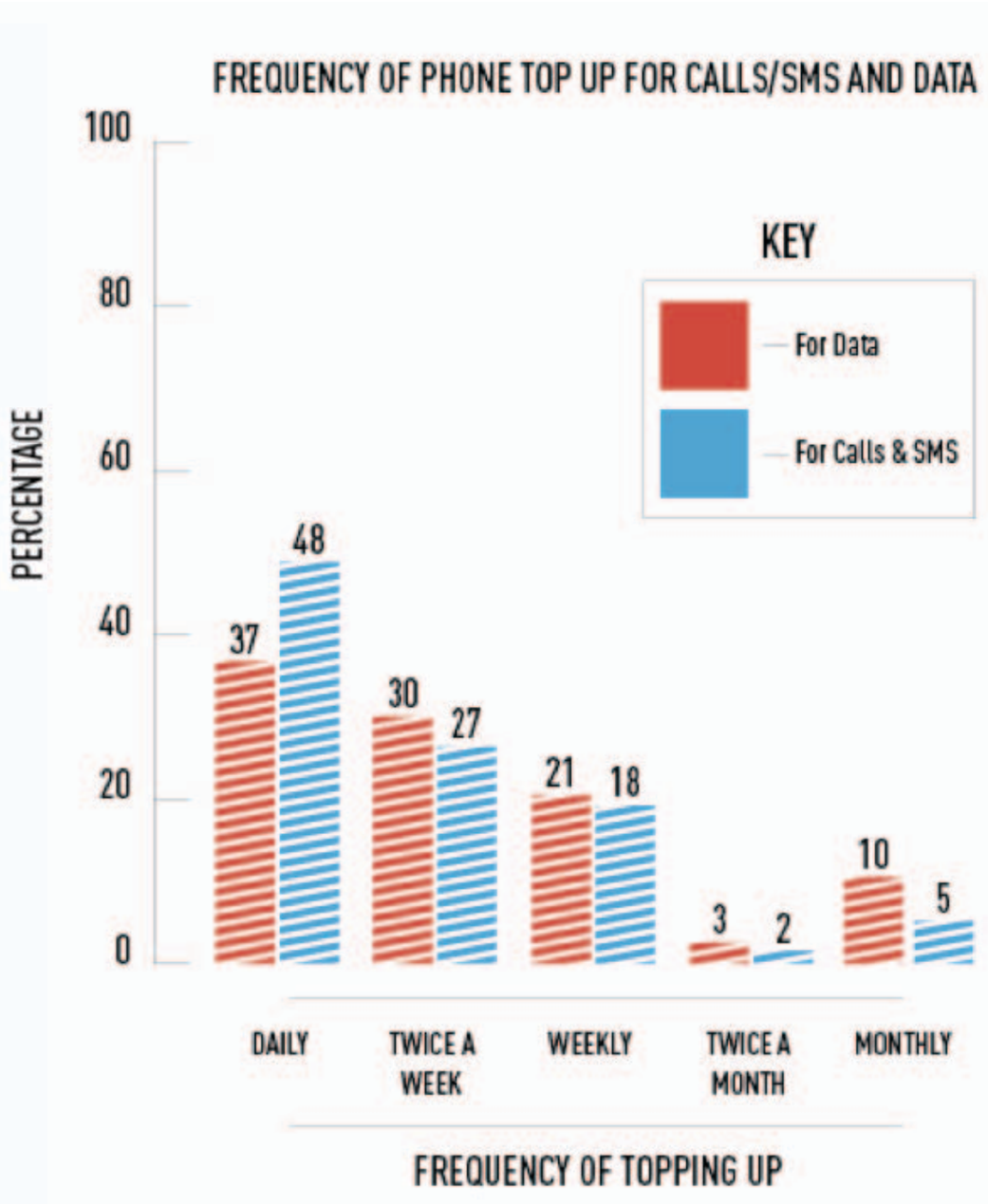
- Greater spend on calls/SMS by weighted average:

	Weighted average
Calls/SMS	GHc 13.57
Internet	GHc 8.93

  - 48% of mobile Internet users spend less than GHc 5 (USD 2.50) per week on mobile data, while 28% spend less than GHc 5 on voice calls per week.
- Phones were topped up more frequently for calls/SMS than mobile Internet.
  - ~1/2 of users top up their mobile accounts daily in order to make calls and send SMS messages, vs. 37% of users who top up daily in order to use mobile Internet.

1. Spending on Calls/SMS vs. Data (cont'd)





GH: Similar Phone Credit Usage across Gender

GHANA					
Average money spent on phone credit per week * Gender Cross tabulation					
	Gender				
	male		Female		Total
	Count	Percent	Count	Percent	Count
less than 5 Gh cedis	97	28%	72	30%	169
5 to below 10 Gh cedis	99	29%	80	33%	179
10 to below 20 Gh cedis	92	27%	53	22%	145
20 to below 50 Gh cedis	45	13%	26	11%	71
50 to 100 Gh cedis	7	2%	3	1%	10
over 100 Gh cedis	2	1%	1	0%	3
I don't know	3	1%	6	2%	9
Total	345	100%	241	100%	586

GH: Slight Leaning of Women toward Communication vs. Men toward Entertainment

GHANA			
What services do you use the most on your phone?			
		Gender	
		male	female
making calls	% within Gender	96%	94%
SMS	% within Gender	67%	83%
browser	% within Gender	87%	87%
apps	% within Gender	23%	26%
e mail	% within Gender	29%	38%
games	% within Gender	45%	35%
music	% within Gender	63%	58%
camera alarms	% within Gender	16%	17%
calendar	% within Gender	8%	7%
other	% within Gender	7%	1%
Percentages and totals are based on respondents.			
a. Group			

2. PAYG vs. Bundles

Users use pay-as-you-go (PAYG) even though they believe bundles are cheaper.

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Table 3: Internet Data Bundle Use versus Pay-As-You-Go

	Count	Percent (%)
Data bundle	112	20
Pay-As-You-Go	403	71
Both used	47	8
Other	4	1

Table 4: Which is cheaper option? Data bundles or Pay-As-You-Go

	Count	Percent (%)
Data bundles	295	49
Pay-As-You-Go	239	40
Neither	20	3
Unsure	35	6
Missing	15	3
Total	604	100

KE: Women Have Higher Dedicated Bundle Usage
GH: Women w/ Similar PAYG vs. Bundle Usage vs. Men

Kenya					
Do you use data bundles or you pay per minute * Gender Cross tabulation					
	Gender				Total
	Male		Female		
Data bundle	15	44%	18	62%	33
Pay per minute	12	35%	8	28%	20
I use both	7	21%	2	7%	9
I don't know	0	0%	1	3%	1
Total	34	100%	29	100%	63

GHANA					
1e (i). Do you use data bundles to surf on this phone or do you pay as you go? * Gender Cross tabulation					
	Gender				
	male		female		Total
data bundle	70	21%	42	18%	112
pay as you go	236	70%	163	71%	399
i use both	29	9%	17	7%	46
other	1	0%	2	1%	3
i don't know	3	1%	6	3%	9
Total	339	100%	230	100%	569

3. Understanding of Costs

Users and non-users do not have an accurate understanding of mobile Internet costs and many believe they are billed by time.

- Website cost and size were not well estimated by mobile Internet users.
    - Only 19% of users were able to correctly order 4 mobile activities by cost.
- Many users also believe they are billed by time as opposed to volume.

4. Monitoring Spend

Fewer users monitor mobile Internet spend, compared to voice/SMS balances.

- 3/4 of users keep track of their voice/SMS balances, vs. 38% who keep track of their mobile Internet balance.
- 37% of users have accidentally spent more money than they intended on mobile Internet.*

Men Spend More Money on Data, Visit More Expensive Web Pages

- (KE) On average, among those who understood data sizes, men and women spent a similar amount of time online on mobile Internet each day (1.8 hours), yet men spent almost 2x as much money on mobile data than women.
    - Both genders spent a considerable length of their time on social media sites, email and work/school sites.
    - The most significant difference, however, was with sports websites. Male participants listed Soccer.net, Supersport and BBC Sports as one of their top three most accessed sites, while no female respondents listed any sports site among their top three.
    - CNN and BBC were also favorites among the men (heavier sites with video and live streaming).

5. Transparency and Non-Users

Improved transparency into mobile Internet spending might convert non-users.

- Of the non-users who are already keeping track of their voice/SMS balances, 28% responded that better knowledge of mobile Internet spending could convert them to becoming mobile Internet users.
- Among users, 42% stated that they would increase their mobile Internet usage if they could monitor their mobile Internet expenses more easily.

5. Transparency and Non-Users (cont'd)

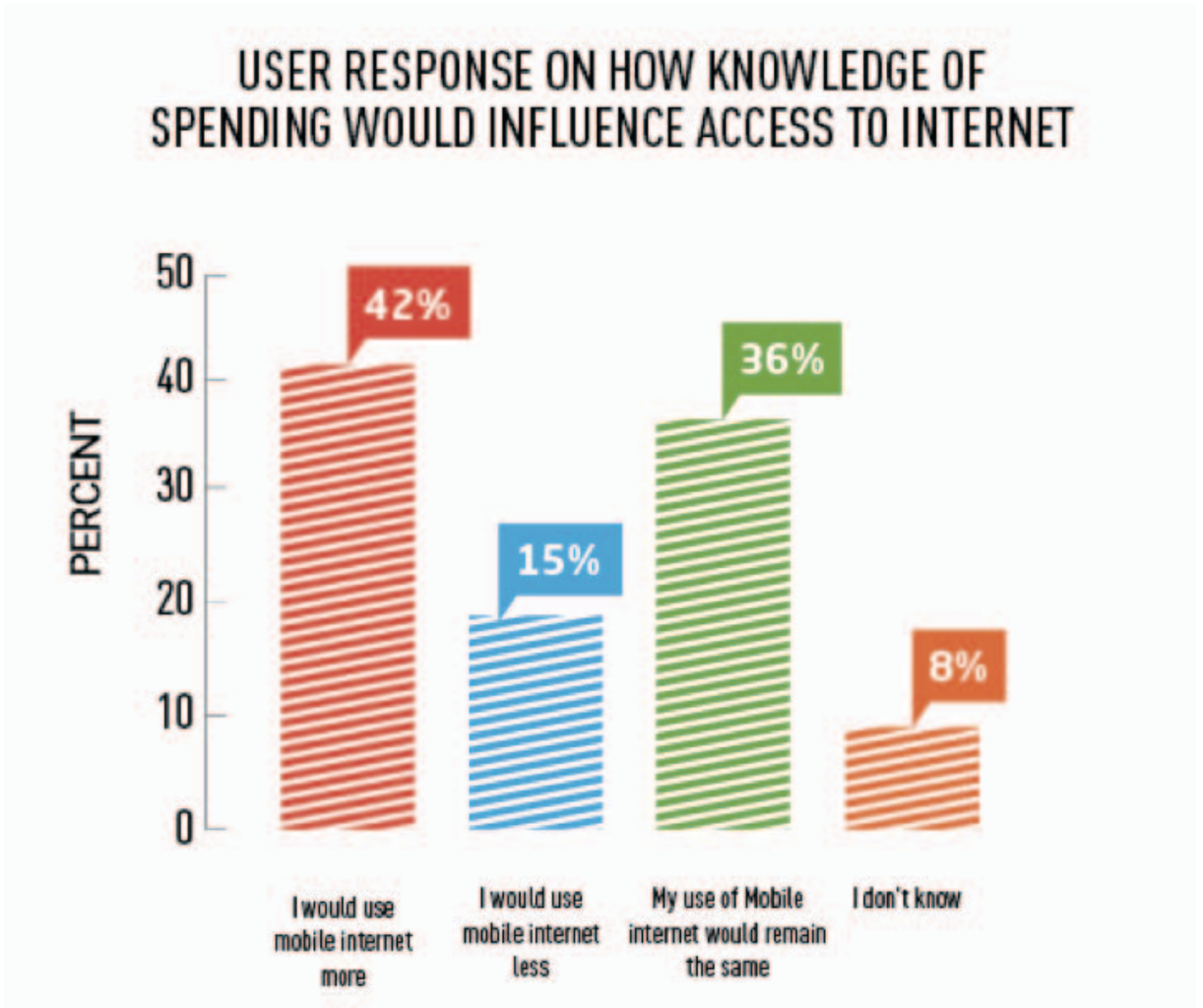


Table 5: Non- Users – "If you had something that could help you manage the money you spend as you used the Internet on your phone, would this influence your use of mobile Internet?"

	Count	Percent (%)
Yes	49	28
No	122	71
Total	171	99

6. Lower Prices

Users and non-users would be motivated to use mobile Internet at lower prices.

- Many users are comfortable with current mobile Internet rates (prices); however, 64% stated that they would use mobile Internet more if rates were lower.

7. Speed

Speed and cost are major challenges for mobile Internet users.

- i ECwyRytCtEdlUbCR, , LPELlx CflN, y, fc, fxRfNxlx s RUPtEfCwC, yCcPLPaxwfs xatU, Ef, yE, f

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WHAT ARE THE MAJOR PROBLEMS
YOU FACE IN USING MOBILE INTERNET?

Major Problem faced	Count	Percent(%)
The speeds are too slow	320	54
It is too expensive	104	18
I don't know how much I am using	92	16
I don't know	45	8
I don't find the content interesting enough	29	5
GRAND TOTAL	590	100.0%

8. Other Issues Overshadow Cost for Non-Users

Reason	% Citing
Lack of knowledge on how to use the Internet	24%
Lack of knowledge on how to use a data-enabled handset	14%
Difficulty configuring phone	6%
Lack of time	15%
Uninterested in a data-enabled handset	14%
Uninterested in mobile Internet	12%
Cost	6%

1. Technical complexity /illiteracy significant

2. Lack of demand/awareness

3. Handset costs

- 46% of respondents did not have a data-enabled handset
- 72% of these respondents cited the cost of the handset as the primary reason why

Women Bypass High Phone Costs via Gifting

3. Where did you get the phone/tablet you use most often from * Gender Cross tabulation					
Source	Gender				
	male		female		Total
	Count	Percent	Count	Percent	Count
it was a gift	99	28%	142	58%	241
it was provided at work	2	1%	3	1%	5
i bought at an open market	65	19%	15	6%	80
i bought at a store	175	50%	83	34%	258
i borrowed it from my friend/family	10	3%	1	0%	11
Total	351	100%	244	100%	595

KE, GH: Women Access More from Home, Men More from Cafes or Phone Only (KE)

KENYA			
What else do you frequently use to access the internet* Gender			
		Gender	
		Male	Female
Computer/laptop at home	% within gender	50%	66%
Computers at work	% within gender	24%	38%
Computers at school	% within gender	24%	24%
Cyber cafe	% within gender	245	17%
Public areas with free wi-fi	% within gender	15%	3%
Personal laptop with internet modem	% within gender	29%	34%
I only use my phone	% within gender	44%	10%
Percentages and totals are based on respondents.			
a. Group			

GHANA			
What else do you frequently use to access the internet* Gender			
		Gender	
		male	female
Computer/laptop at home	% within Gender	70%	78%
Computer/laptop at work.	% within Gender	28%	25%
Computer/laptop at a school/university.	% within Gender	19%	24%
Computer/laptop at an Internet cafe.	% within Gender	47%	30%
Tablet at work.	% within Gender	4%	3%
Tablet at work	% within Gender	3%	3%
Tablet at school/university	% within Gender	1%	2%
Percentages and totals are based on respondents.			
a. Dichotomy group tabulated at value 1.			

Implications

Operators and OEMs	Online Service Providers & App Developers	Others, e.g., Nonprofits
• Devices: Financing (e.g. MF), creative gifting • ↑NPS, users by ↓ recharge friction (mechanism, expiration window, price) • Note re: price sensitivity analyses (non-user → user)	• Target marketing by service, e.g., comms vs. entertainment	• Location- and time-sensitive outreach for services for women • Device access
• ↑ Mobile data research • Transparency and simplicity of mobile Internet costs (in partnership) • Technical education (Internet, data-enabled devices) • Awareness/demand		

Appendix

KE, GH: Slightly Fewer Women at the High End of Phone Spending

KENYA					
Average money spent on phone credit per week * Gender Cross tabulation					
	Gender				Total
	Male		Female		
	Count	Percent	Count	Percent	Count
Kshs. 1-20	1	3%	0	0%	1
Kshs. 21-50	0	0%	1	3%	1
Kshs. 51-100	3	9%	6	21%	9
Kshs. 101-500	10	29%	13	45%	23
Kshs. 501-1000	11	32%	5	17%	16
Over Kshs. 1000	9	26%	4	14%	13
Total	34	100%	29	100%	63

Spending on Telephone * Gender Cross tabulation					
Spending on Telephone	Gender				Total
	male		female		
	Count	Percent	Count	Percent	Count
Less than GHC 50	192	55%	131	55%	323
Between GHC 50-100	102	29%	82	35%	184
Between GHC 101-500	57	16%	24	10%	81
Total	351	100%	238	100%	589

GH: Similar Data Credit Usage across Genders

GHANA					
8b. On average, how much money do you spend on credit per week on mobile Internet? * Gender Cross tabulation					
	Gender				
	male		female		Total
	Count	Percent	Count	Percent	Count
less than 5 Gh cedis	87	51%	48	44%	135
5 to below 10 Gh cedis	34	20%	35	32%	69
10 to below 20 Gh cedis	20	12%	11	10%	31
20 to below 50 Gh cedis	13	8%	7	6%	20
50 to 100 Gh cedis	1	1%	1	1%	2
over 100 Gh cedis	2	1%	2	2%	4
I don't know	14	8%	5	5%	19
Total	171	100%	109	100%	280

GH: Similar Multi-SIM Feature Availability

1b(i). How many SIM cards can the phone take? * Gender Cross tabulation					
No. of simcards phone can take	Gender				
	male		female		Total
	Count	Percent	Count	Percent	Count
one sim	273	78%	192	79%	466
two sim	69	20%	50	21%	119
three sim	6	2%	0	0%	6
four sim	2	1%	0	0%	2
Total	350	100%	242	100%	593

KE: Differences in When Phones are Used

KENYA					
When do you access internet on your phone most? * Gender Cross tabulation					
	Gender				Total
	Male		Female		
	Count	Percent	Count	Percent	Count
Morning hours	1	3%	2	7%	3
Over lunch hour or tea break	3	9%	0	0%	3
Evening, after work/school	16	47%	13	45%	29
I use it throughout the day	14	41%	13	45%	27
other	0	0%	1	3%	1
Total	34	100%	29	100%	63