

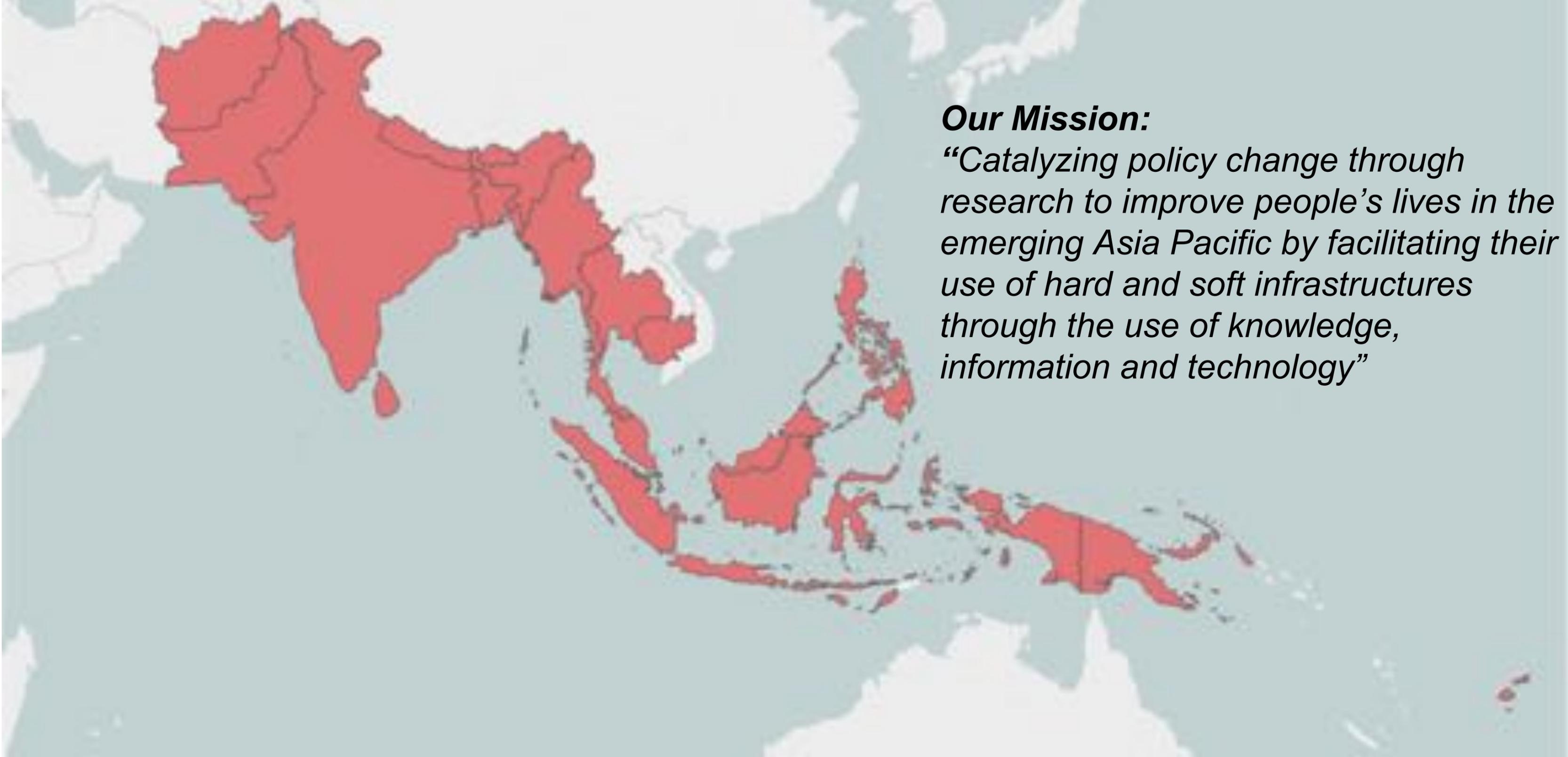


# Information sharing behavior on social media in the Asian Global South

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# LIRNEasia: a pro-poor, pro-market Asia Pacific think tank; focus on infrastructure policy and regulation



## ***Our Mission:***

*“Catalyzing policy change through research to improve people’s lives in the emerging Asia Pacific by facilitating their use of hard and soft infrastructures through the use of knowledge, information and technology”*

To date 23 countries (covering >30% global population);  
38,005 face-to-face interviews



Sample sizes

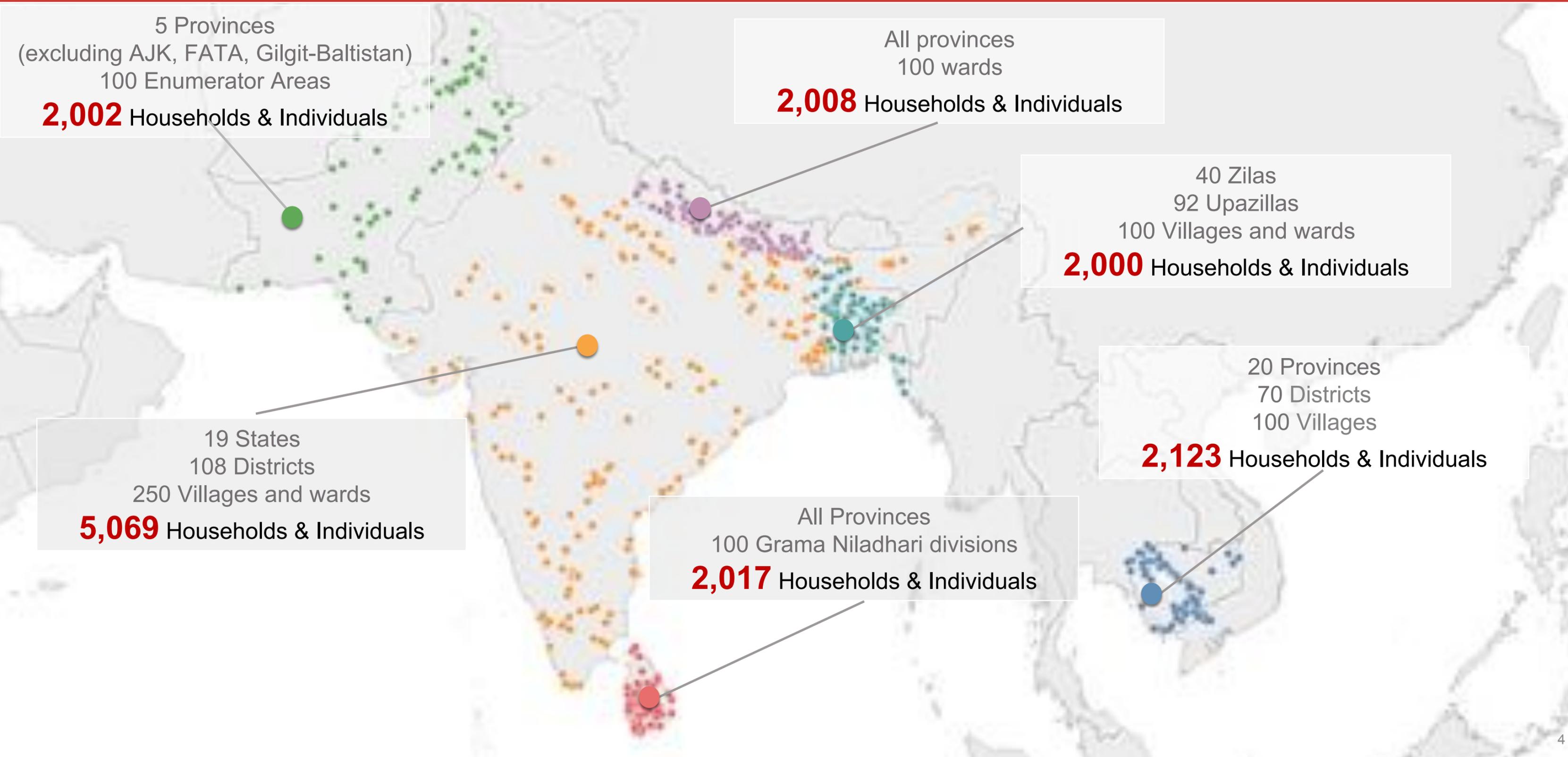


<https://lirneasia.net/after-access>

<https://afteraccess.net>

Note: Pakistan excludes AJK, FATA, Gilgit-Baltistan (~2% of population)

# Asian survey country samples range from ~2,000 to 5,000



- 1 BACKGROUND**
- 2 PERSONAL INFORMATION DISCLOSURE ON SOCIAL MEDIA**
- 3 SHARING OF NEWS AND INFORMATION ON SOCIAL MEDIA**
- 4 VERIFICATION OF NEWS AND INFORMATION SHARED ON SOCIAL MEDIA**
- 5 CONCLUSIONS AND RECOMMENDATIONS**

# 1

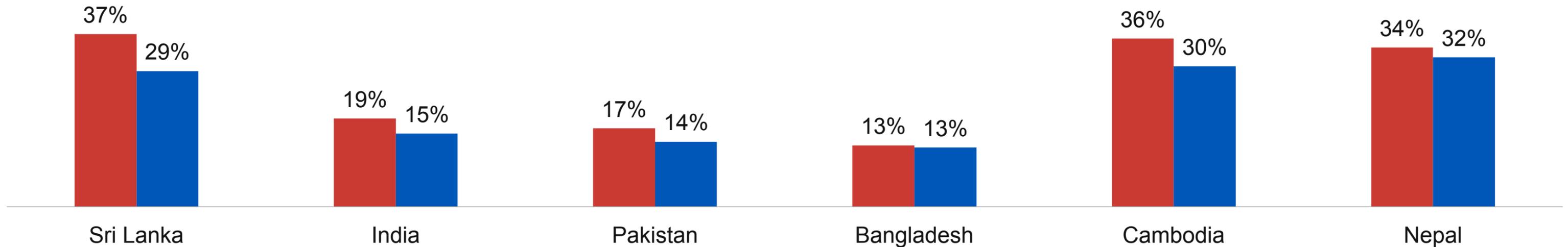
## BACKGROUND

SOCIAL MEDIA USE  
RESEARCH QUESTIONS

# Low social media use; Internet use ≈ Social media use

Internet and social media use (% of population aged 15-65)

■ Internet use ■ Social media use



Q1: Have you ever used the internet (Gmail, Google, Facebook, email)?

Q2: Do you use social media like Facebook, WhatsApp, Twitter etc.?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
All respondents	2,017	5,069	2,002	2,020	2,123	2,008

# Social media adoption model

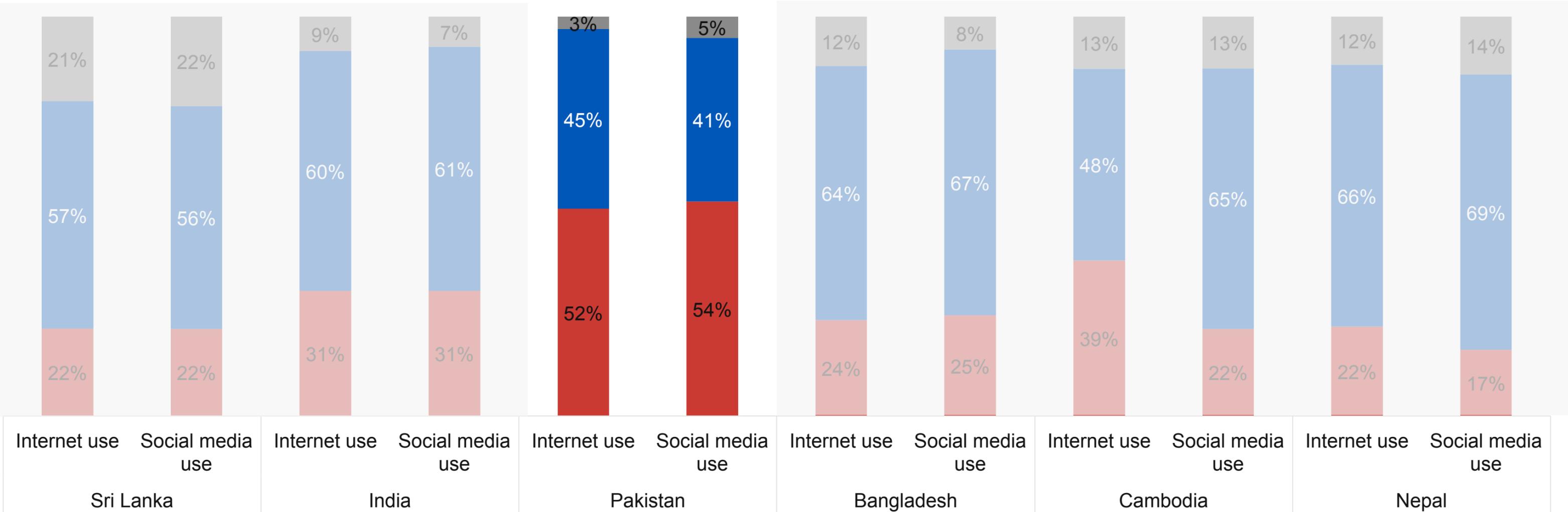
Variable	All Countries
Gender	--
Age	--
Education	++
SEC	∧
Network pressure	++
Migration	++
Length of mobile use	..
Electricity	..
Fixed Line	..
Radio	..
TV	..
Bank Account	++
Urbanity	++
Country	∧∧
# cases used for model	3225
Correct prediction %	81.4
Nagelkerke R-square	.321

+ significant positive relationship at 5% significance level  
 - significant negative relationship at 5% significance level  
 ∧ significant non-linear relationship at 5% significance level  
 ++ significant positive relationship at 1% significance level  
 -- significant negative relationship at 1% significance level  
 ∧∧ significant non-linear relationship at 1% significance level  
 .. no significant relationship

# Many came online recently

**Number of years since first ever internet use and social media use (% of internet and social media users aged 15-65)**

■ Less than a year ■ 1 to 5 years ■ More than 5 years



Q1: How long have you been using the internet?  
Q2: How long have you been using social media?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	763	919	427	266	804	692
Social media users	593	754	369	251	680	648

# Research questions

- What types of personal information do social media users in the survey countries disclose on social media?
- What factors can predict whether or not social media users in the survey countries choose to share news and forwarded messages on social media?
- What factors can predict whether or not social media users in the survey countries who *do* share news and forwarded messages on social media, verify the content before sharing?

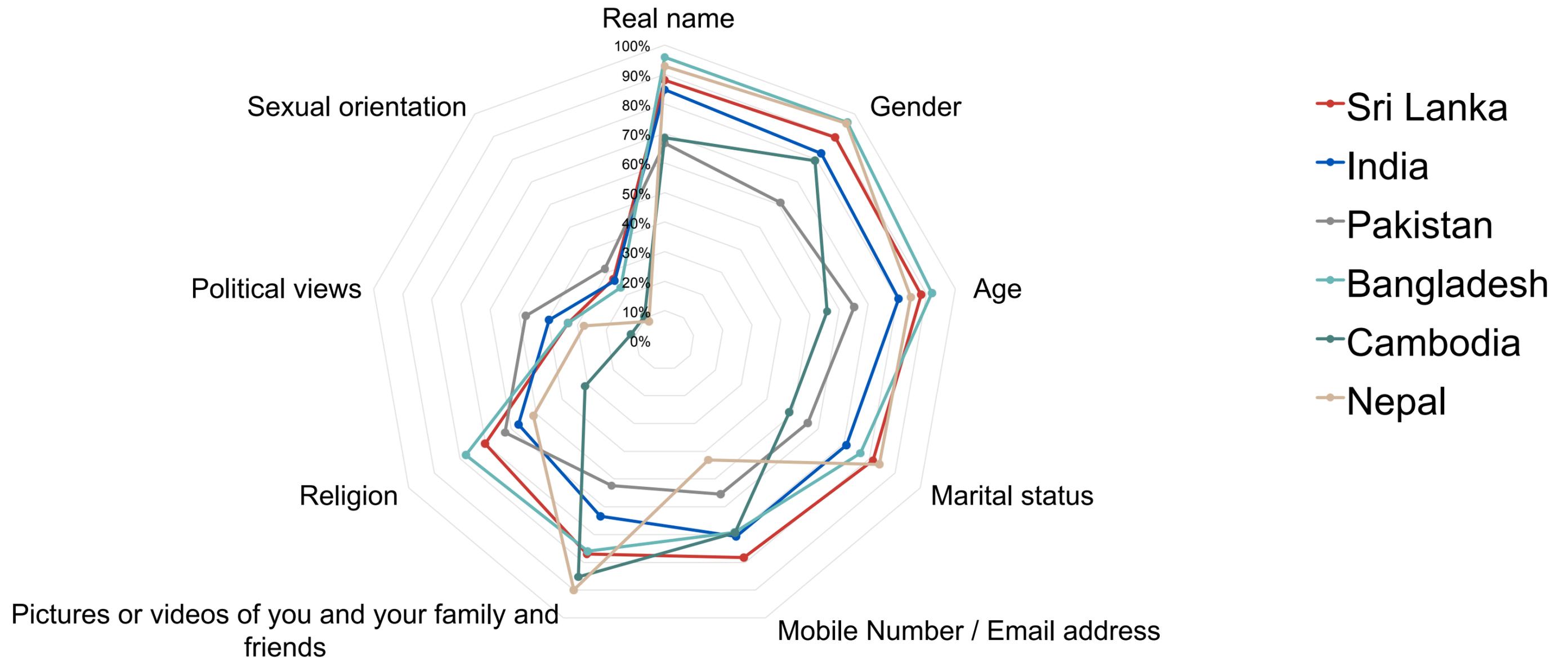
# Why this matters

- People use social media not just to connect socially but to read news, to sell their products, to find information, etc.
- There can be negative experiences for users → real world/offline consequences
  - Disclosing certain types of information on social media may lead to harassment and other digital harms
  - Misinformation and false news are issues on social media

# 2 PERSONAL INFORMATION DISCLOSURE ON SOCIAL MEDIA

# Real name, gender and age most commonly disclosed; Sexual orientation and political views least

Types of information disclosed on social media (% of social media users aged 15-65)



Q: What information do you share on your social media profile?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

# Men disclose more with very few exceptions; Urban dwellers slightly more with some exceptions

## Types of information disclosed on social media (% of social media users aged 15-65)

		Real Name	Gender	Age	Marital status	Mobile Number	Pictures or videos	Religion	Political views	Sexual orientation
Sri Lanka	Male	92%	95%	94%	88%	86%	85%	75%	32%	28%
	Female	82%	82%	80%	72%	67%	66%	63%	35%	26%
India	Male	89%	87%	84%	73%	74%	65%	58%	39%	25%
	Female	74%	72%	72%	66%	62%	60%	55%	40%	29%
Pakistan	Male	75%	66%	71%	61%	64%	53%	68%	54%	37%
	Female	47%	47%	51%	43%	34%	50%	48%	33%	18%
Bangladesh	Male	98%	97%	93%	78%	72%	79%	78%	35%	22%
	Female	88%	92%	87%	71%	59%	64%	77%	28%	28%
Cambodia	Male	67%	80%	58%	48%	74%	86%	34%	14%	10%
	Female	70%	79%	54%	49%	65%	85%	29%	9%	11%
Nepal	Male	96%	99%	89%	85%	51%	94%	55%	38%	11%
	Female	89%	92%	79%	83%	33%	85%	47%	15%	5%

		Real Name	Gender	Age	Marital status	Mobile Number	Pictures or videos	Religion	Political views	Sexual orientation
Sri Lanka	Urban	90%	91%	88%	84%	78%	80%	71%	31%	25%
	Rural	87%	89%	88%	81%	78%	76%	70%	34%	28%
India	Urban	89%	86%	85%	75%	72%	63%	53%	37%	27%
	Rural	80%	78%	75%	67%	69%	64%	61%	43%	25%
Pakistan	Urban	61%	59%	63%	57%	60%	65%	62%	46%	27%
	Rural	71%	63%	67%	55%	52%	42%	62%	49%	35%
Bangladesh	Urban	93%	96%	90%	82%	75%	80%	85%	42%	28%
	Rural	97%	96%	93%	73%	66%	74%	73%	28%	21%
Cambodia	Urban	70%	82%	61%	48%	69%	84%	30%	6%	15%
	Rural	67%	77%	53%	49%	69%	86%	32%	15%	8%
Nepal	Urban	94%	96%	83%	83%	41%	90%	50%	27%	7%
	Rural	90%	96%	88%	86%	49%	90%	53%	30%	10%

# Educated people disclosed more information; Higher income earners disclosed more

## Types of information disclosed on social media (% of social media users aged 15-65)

		Real Name	Gender	Age	Marital status	Mobile Number	Pictures or videos	Religion	Political views	Sexual orientation
Sri Lanka	Primary or none	77%	83%	79%	71%	67%	67%	50%	33%	28%
	Secondary or higher	89%	90%	89%	82%	79%	78%	72%	33%	27%
India	Primary or none	67%	65%	64%	60%	60%	54%	55%	38%	21%
	Secondary or higher	89%	87%	85%	74%	73%	66%	57%	40%	28%
Pakistan	Primary or none	70%	60%	67%	55%	55%	46%	66%	48%	35%
	Secondary or higher	59%	64%	61%	59%	57%	66%	55%	48%	24%
Bangladesh	Primary or none	94%	91%	90%	68%	63%	63%	73%	20%	18%
	Secondary or higher	97%	98%	93%	79%	72%	80%	79%	37%	25%
Cambodia	Primary or none	64%	75%	48%	43%	68%	81%	28%	6%	12%
	Secondary or higher	73%	83%	63%	54%	71%	89%	34%	16%	9%
Nepal	Primary or none	91%	92%	66%	72%	37%	87%	34%	11%	0%
	Secondary or higher	93%	97%	88%	86%	44%	91%	55%	31%	10%

		Real Name	Gender	Age	Marital status	Mobile Number	Pictures or videos	Religion	Political views	Sexual orientation
Sri Lanka	Above average income	90%	93%	90%	84%	82%	79%	71%	38%	31%
	Below average income	87%	87%	88%	76%	70%	73%	68%	31%	23%
	Zero income	82%	83%	83%	79%	73%	73%	65%	20%	16%
India	Above average income	87%	87%	84%	80%	71%	69%	59%	39%	26%
	Below average income	87%	84%	81%	72%	72%	64%	62%	46%	28%
	Zero income	83%	70%	62%	43%	46%	25%	33%	29%	12%
Pakistan	Above average income	74%	63%	71%	59%	61%	47%	66%	51%	40%
	Below average income	60%	70%	65%	59%	53%	51%	73%	47%	17%
	Zero income	45%	36%	38%	40%	35%	79%	31%	33%	15%
Bangladesh	Above average income	96%	97%	92%	77%	70%	81%	80%	34%	20%
	Below average income	99%	99%	95%	76%	80%	76%	79%	35%	21%
	Zero income	91%	86%	70%	55%	23%	56%	86%	42%	54%
Cambodia	Above average income	72%	77%	58%	55%	72%	87%	35%	13%	14%
	Below average income	66%	81%	54%	44%	68%	84%	28%	11%	8%
Nepal	Above average income	99%	98%	94%	91%	57%	93%	69%	51%	13%
	Below average income	96%	98%	86%	87%	47%	94%	59%	39%	13%

# Younger social media users disclosed more

Types of information disclosed on social media (% of social media users aged 15-65)

		Real Name	Gender	Age	Marital status	Mobile Number	Pictures or videos	Religion	Political views	Sexual orientation
Sri Lanka	15 - 25	87%	92%	91%	80%	82%	77%	75%	31%	27%
	26 - 35	90%	87%	88%	83%	74%	76%	70%	31%	23%
	36 - 45	87%	92%	86%	82%	81%	78%	70%	41%	34%
	46 - 55	88%	84%	81%	77%	77%	72%	53%	31%	22%
	56 - 65	89%	89%	93%	85%	68%	87%	65%	32%	30%
India	15 - 25	85%	82%	81%	70%	73%	58%	56%	41%	27%
	26 - 35	88%	85%	83%	76%	67%	66%	53%	35%	25%
	36 - 45	82%	85%	73%	70%	68%	78%	65%	39%	25%
	46 - 55	82%	75%	81%	74%	74%	69%	69%	44%	33%
	56 - 65	76%	64%	69%	53%	54%	70%	38%	39%	26%
Pakistan	15 - 25	59%	51%	60%	44%	54%	51%	55%	43%	36%
	26 - 35	77%	67%	75%	68%	68%	59%	72%	48%	33%
	36 - 45	63%	72%	53%	80%	46%	42%	81%	76%	14%
	46 - 55	92%	93%	92%	74%	44%	33%	56%	23%	5%
	56 - 65	76%	76%	76%	61%	52%	76%	61%	61%	49%
Bangladesh	15 - 25	99%	98%	93%	70%	67%	73%	78%	35%	27%
	26 - 35	93%	94%	93%	80%	76%	79%	76%	27%	17%
	36 - 45	93%	95%	88%	94%	71%	78%	74%	39%	27%
	46 - 55	97%	100%	91%	82%	49%	85%	100%	52%	23%
	56 - 65	100%	100%	49%	13%	36%	25%	64%	13%	13%
Cambodia	15 - 25	64%	81%	53%	44%	69%	84%	29%	10%	9%
	26 - 35	70%	78%	57%	49%	67%	90%	34%	15%	12%
	36 - 45	70%	74%	59%	56%	80%	84%	36%	12%	17%
	46 - 55	85%	75%	60%	64%	69%	73%	34%	9%	11%
	56 - 65	81%	96%	74%	52%	64%	86%	18%	1%	1%
Nepal	15 - 25	89%	96%	81%	80%	42%	89%	45%	20%	6%
	26 - 35	94%	96%	88%	85%	40%	92%	53%	29%	9%
	36 - 45	96%	95%	85%	93%	48%	85%	62%	35%	13%
	46 - 55	100%	100%	93%	87%	63%	95%	63%	51%	7%
	56 - 65	100%	100%	71%	71%	79%	100%	50%	79%	29%

# Who disclosed more?

Men  
Urban  
Educated  
Richer  
Younger

# 3

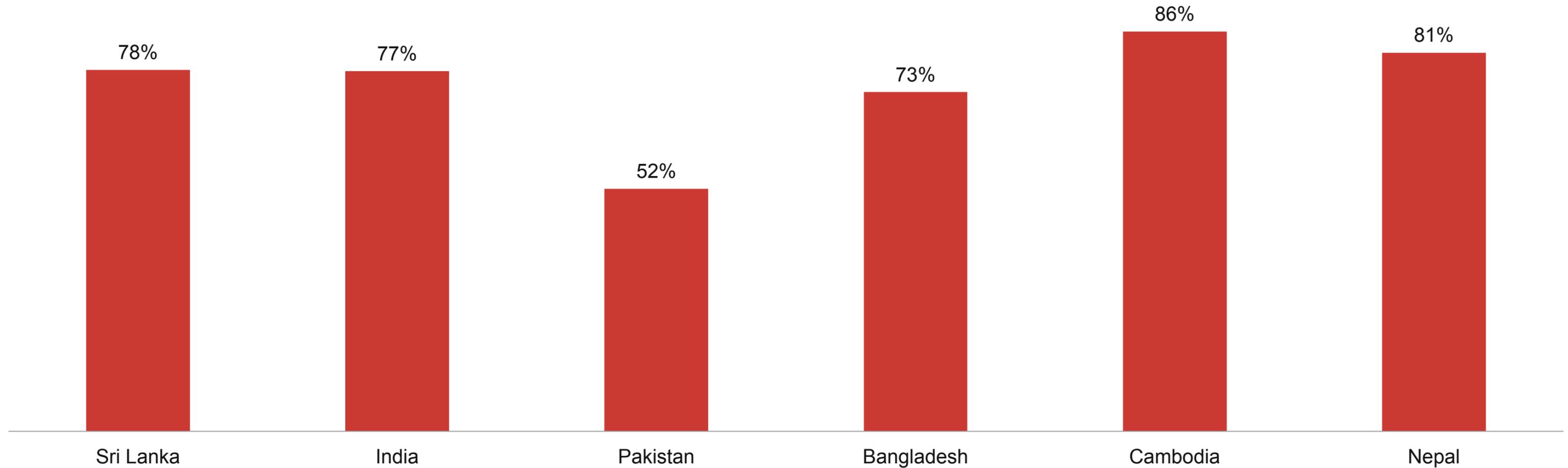
## SHARING OF NEWS AND INFORMATION ON SOCIAL MEDIA

NEWS ON SOCIAL MEDIA  
SHARING MODEL

# 52-86% of social media users read news on social media; Low news sharing in Pakistan and Bangladesh, but high in other countries

## Social media users that read news and shared news on social media (% of social media users aged 15-65)

■ Read news on social media



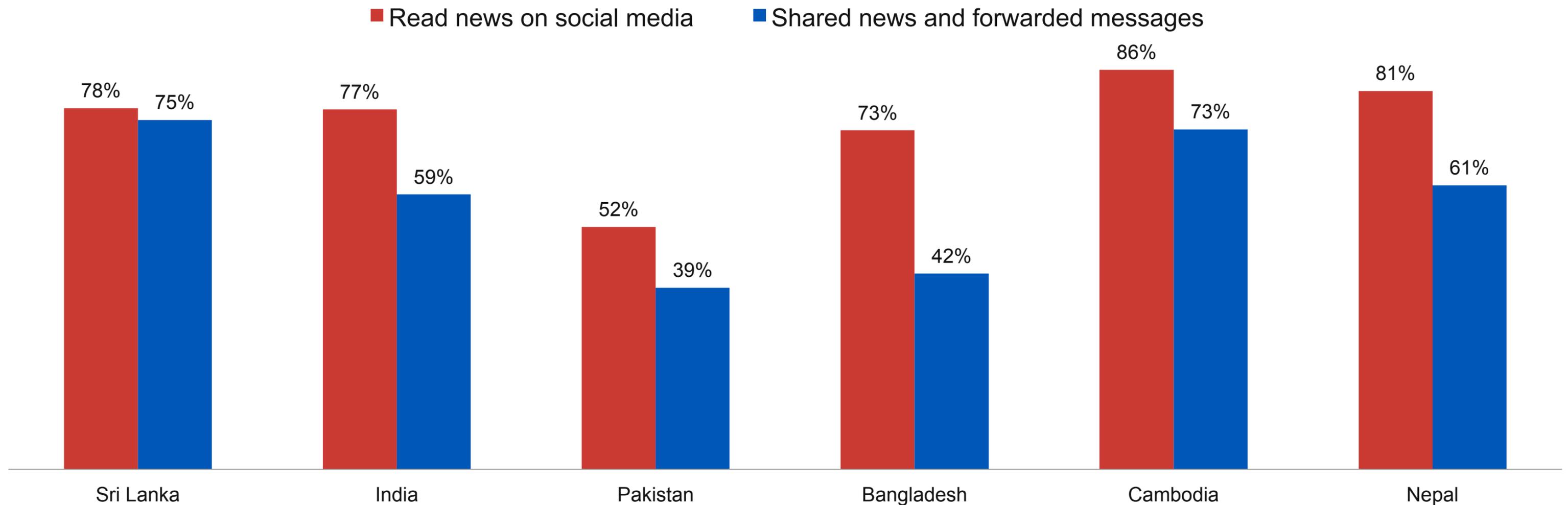
Q1: What do you use Social media for? Reading news

Q2: When you share news that is on your newsfeed or forward messages that you receive, do you:

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

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Q1: What do you use Social media for? Reading news

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Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

# Binary logistic regression used to model binary outcomes: sharing news on social media = 1 (yes) or 0 (no).

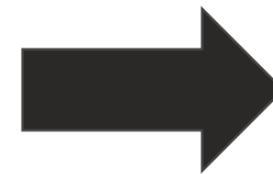
## Choosing dependent and Independent variable

### Outcome / dependent variable

- Sharing news on social media
  - 1 = has shared news on social media
  - 0 = has not shared news on social media

### Explanatory / independent variable

- Gender (1 = Female, 0 = Male)



## Calculating probabilities

$$\text{Probability (Y)} = \frac{1}{1 + e^{-(\beta_0 + \sum_{i=1}^n \beta_i x_i)}}$$

- Y = Sharing news on social media (0=shared, 1=not shared)
- (1 through n) = The explanatory variables ( $x_i$ ) are the factors influencing sharing news on social media.
- The explanatory variables ( $x_i$ ) includes both continuous (quantitative) and discrete (categorical or qualitative) variables. (van Biljon & Kotzé, 2008)

Example variable coding for categorical variable

SEC	A	1	0	0	0	0
	B	0	1	0	0	0
	C	0	0	1	0	0
	D	0	0	0	1	0
	E (reference category)	0	0	0	0	0

# The response variable (sharing news and information on social media) was predicted using multiple independent variables

## Dependent variable

Sharing news on social media



1 = Shared news on social media  
0 = Did not share news on social media

## Independent variables

Type	Variable
Demographic	Gender
	Age
	Education
	Marital Status
Economic	Employment
	SEC
Social	Network pressure
	Social activities with friends
	Social activities with public groups
Facilitating conditions	Urbanity
	Country
	Personal ownership of desktop or laptop
Social media use	Time since first begun using social media
	Number of 'friends'/ contacts on Social media
	Information shared on social media
	Use of social media
	Amount of social media friends met in person
	Accepting friend requests

Type*	Variable	Remarks
Demographic	Gender	Binary variable 0=Male, 1=Female
	Age	Scale variable Age record in number of years
	Education	Scale variable Number of years of schooling of the respondent
	Marital Status	Categorical variable 3 levels (1. Married, 2. Single, 3. Other) Reference category: Married
Economic	Employment	Binary variable 0=Not employed, 1=Employed
	SEC	Categorical variable with 5 levels (A, B, C, D, E). Socio economic classification of respondent's household Reference category: E (lowest)
Social	Network pressure	Scale variable with values ranging from 1 to 5. Number of respondents' closest five contacts that use social media
	Social activities with friends	Scale variable Number of hours per week spend socializing face to face with friends (excl. household members)
	Social activities with public groups	Scale variable Number of hours per week spend socializing face to face with interest groups (religious, political, sport)
Facilitating conditions	Urbanity	Binary variable 0=Rural, 1=Urban
	Country*	Categorical variable with 6 levels representing 6 countries in all country models in the order of GNI per capita Reference category: Sri Lanka
	Personal ownership of desktop or laptop	Binary variable 0=does not own a desktop or a laptop, 1=owns a desktop or a laptop
Social media use	Length of using social media	Categorical variable with 3 levels (1. Less than a year, 2. 1-5 years, 3. More than 5 years) Reference category: 1. Less than a year
	Number of 'friends'/ contacts on Social media	Categorical variable with 3 levels (0. Below 100, 1.101-500, 2. More than 500, 3. Don't know, 4. Do not use these) Reference category: 10. Not using it every day
	Information shared on social media	9 Binary variables for; 1. Real name, 2. Gender, 3. Age, 4. Marital status, 5. Mobile Number / Email address, 6. Pictures or videos you and your family and friends, 7. Religion, 8. Political view, 9. Sexual orientation Whether the respondent discloses the information on their profile 0=No, 1=Yes
	Use of social media	8 Binary variables for the use of social media; 1. Reading news, 2.To play games , 3. To make professional and business contacts, 4. To market your products/ services, 5. To follow government Social media pages ( to look for jobs or updates on policies), 6. To stay in contact with friends and family and to make new friends, 7. To follow local politicians, 8. To get opinions / share your experience, Whether the respondent use social media for each activity 0=No, 1=Yes
	Level of comfort to discuss different topics on social media	6 Categorical variables on the topics discussed on social media; 1. Gossip between friends, 2. Professional / work related information, 3. Religious matters, 4. Political matters, 5. Financial information (e.g. info on things you buy, where you buy from, etc.), 6. Health and sexual matters. Levels of the categorical variables (0. Not at all comfortable, 1. Yes, but only in a closed group, 2. Yes, publicly, 3. I don't do this anyway) Reference category: 0. Not at all comfortable
	Amount of social media friends met in person	Categorical variable with 5 levels (1. All of them, 2. Most of them, 3. About half of them, 4. A few of them, 5. None of them) Number of social media friends that met in person by the respondent Reference category: 1, All of them
	Accepting friend requests	Categorical variable with 3 levels (1. Only known contacts, 2. Based on some conditions, 3. Accept all requests. The way that the respondent accepts the friend request on social media Reference category: 1, Only known contacts

# Results: Sharing model

## Demographic (all except education), economic and social variables did not significantly contribute to the model

Type	Variable	Categories	Relationship	Odds ratio
Demographic	Education		+	1.035
Social	Social activities with interest groups		-	0.977
Facilitating condition	Personal ownership of desktop or laptop		+	1.338
	Urbanity		+	1.268
Social media use	Time since first begun using social media	Less than a year (reference category)		
		1-5 years	++	1.378
		More than 5 years	++	1.731
	Number of friends contacts on social media	Below 100 (reference category)		
		101-500	+	1.29
		More than 500	++	1.528
		Don't know	--	0.552
	Information disclosed on social media	Gender	+	1.55
		Sexual orientation	-	0.73
	Use of social media	Reading news	++	1.431
		To market your products/services	--	0.425
		To follow government social media pages	++	1.539
		To stay in contact with friends and family and to make new friends	+	1.478
		To get opinions / share your experience	++	1.725
	Gossip between friends	Not at all comfortable (reference category)		
		Yes, but only in a closed group	++	1.81
		Yes, publicly	++	2.802
		I don't do this	++	1.686
	Level of comfort to discuss health and sexual matters on social media	Not at all comfortable (reference category)		
		Yes, but only in a closed group	+	1.469
Yes, publicly		++	2.178	
I don't do this		...	1.341	
Amount of social media friends met in person	All of them (reference category)			
	Most of them	++	1.652	
	About half of them	++	2.207	
	A few of them	++	1.784	
	None of them	...	1.4	
Facilitating condition	Country	Sri Lanka (reference category)		
		India	--	0.399
		Pakistan	--	0.426
		Bangladesh	--	0.168
		Cambodia	...	1.179
		Nepal	--	0.354
Constant			--	0.145

### Insignificant variables

Type	Variable
Demographic	Gender
	Age
	Marital Status
Economic	Employment
	SEC
Social	Network pressure
	Social activities with friends

Criteria	Color & Sign
A reference level	
Significant positive relationship at 5% significance level	+
Significant negative relationship at 5% significance level	-
Significant positive relationship at 1% significance level	++
Significant negative relationship at 1% significance level	--
Insignificant relationship	...

Nagelkerke R Square value = 0.33  
75% of cases correctly classified by the model

# Who shared more?

Type	Variable	Categories	Relationship	Odds ratio	
Demographic	Education		+	1.035	
Social			+	1.035	
Facilitating condition	Personal ownership of desktop or laptop		+	1.338	
	Urbanity		+	1.268	
Social media use	Time since first begun using social media	Less than a year (reference category)			
		1-5 years	++	1.378	
		More than 5 years	++	1.731	
	Number of friends contacts on social media	Below 100 (reference category)			
		101-500	+	1.29	
		More than 500	++	1.528	
	Information disclosed on social media	Gender		+	1.55
				+	1.55
	Use of social media	Reading news		++	1.431
				++	1.431
			To follow government social media pages	++	1.539
			To stay in contact with friends and family and to make new friends	+	1.478
	Gossip between friends	Level of comfort to discuss health and sexual matters on social media	To get opinions / share your experience	++	1.725
			Not at all comfortable (reference category)		
			Yes, but only in a closed group	++	1.81
Yes, publicly			++	2.802	
Amount of social media friends met in person	Level of comfort to discuss health and sexual matters on social media	I don't do this	++	1.686	
		Not at all comfortable (reference category)			
		Yes, but only in a closed group	+	1.469	
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Facilitating condition	Country	All of them (reference category)			
		Most of them	++	1.652	
		About half of them	++	2.207	
		A few of them	++	1.784	
		None of them	...	1.4	
		Sri Lanka (reference category)			
			...		
		Cambodia	...	1.179	

More **educated** users

**Urban** and people who **own desktops or laptops**

Those who used social media for **over one year**

Users with **more friends**

People who **disclosed their gender**

People who used social media to; **read news, to follow government social media pages, to stay in contact with friends and family and to make new friends and to get opinions**

People who used social media to **gossip between friends and to discuss health and sexual matters**

People who have **more unknown friends**

# Who shared less?

Type	Variable	Categories	Relationship	Odds ratio	
Demographic					
Social	Social activities with interest groups		-	0.977	
Facilitating condition					
Social media use	Length of using social media	Less than a year (reference category)			
		1-2 years	+	1.29	
		More than 2 years	+	1.29	
	Number of friends contacts on social media	Below 100 (reference category)			
		101-200	+	1.28	
		More than 200	+	1.28	
	Information disclosed on social media	Don't know		--	0.552
		Sexual orientation		-	0.73
	Use of social media	Nothing at all		+	1.28
		To market your products/services		--	0.425
		To follow government social media pages		+	1.28
		To stay in contact with friends and family and to make new friends		+	1.278
		To get updates on news and awareness		+	1.28
	Closest between friends	Not at all comfortable (reference category)			
Yes, but only in a closed group			+	1.28	
Yes, publicly			+	1.28	
Don't do this			+	1.28	
Health and sexual matters	Not at all comfortable (reference category)				
	Yes, but only in a closed group		+	1.28	
	Yes, publicly		+	1.28	
Amount of social media friends met in person	I don't do this		--	1.28	
	All of them (reference category)				
	Most of them		+	1.28	
	Some half of them		+	1.28	
	A few of them		+	1.28	
Facilitating condition	Country	Sri Lanka (reference category)			
		India	--	0.399	
		Pakistan	--	0.426	
		Bangladesh	--	0.168	
		Cambodia	...	1.179	
		Nepal	--	0.354	
Constant			--	0.145	

People who engaged in the **social activities with public groups**

People who were **not aware about the amount of friends they have on social media** – less educated about social media

People who **used social media to market their products or services**

Indian, Pakistani, Bangladeshi and Nepali social media users shared less compared to Sri Lankan social media users

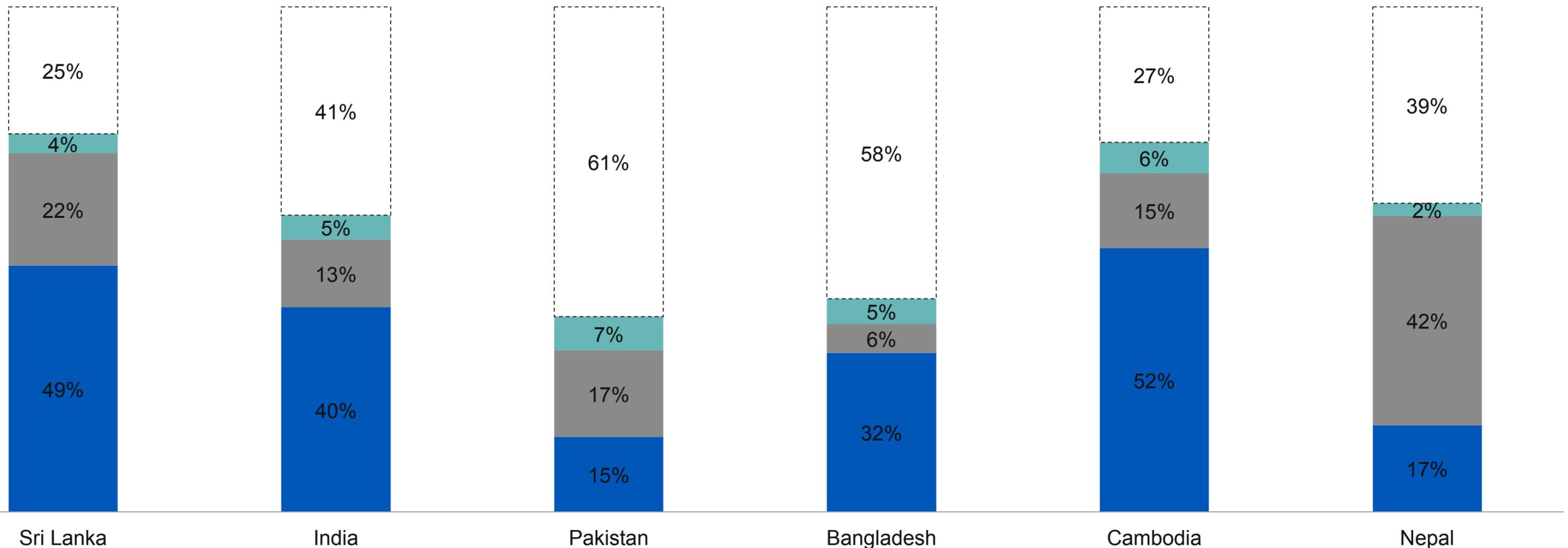
# 4 VERIFICATION OF NEWS AND INFORMATION SHARED ON SOCIAL MEDIA

VERIFICATION OF CONTENT BEFORE SHARING ON SOCIAL MEDIA  
VERIFYING MODEL  
TRUST IN NEWS READ ON SOCIAL AND TRADITIONAL MEDIA

# In most countries, less than half of social media users verify what they share on social media

## Verification of content before sharing on social media (% of social media users aged 15-65 who shared news on social media)

- I always verify its truthfulness before sharing
- I share it if it is from a trusted friend or source
- I share it without checking
- Don't share news or forwarded messages



Q: When you share news that is on your newsfeed or forward messages that you receive, do you:

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media who share news on social media users	593	754	369	251	680	648

Similar to the sharing model; The response variable (verifying the truthfulness of the news before sharing on social media) was predicted using multiple independent variables.

## Dependent variable

Verifying the news before sharing on social media

1 = Verified the news before sharing on social media  
0 = Did not verify the news before sharing on social media

## Independent variables

Type*	Variable
Demographic	Gender
	Age
	Education
	Marital Status
Economic	Employment
	SEC
Social	Network pressure
	Social activities with friends
	Social activities with public groups
Facilitating conditions	Urbanity
	Country
	Personal ownership of desktop or laptop
Social media use	Time since first begun using social media
	Number of 'friends'/ contacts on Social media
	Information shared on social media
	Use of social media
	Level of comfort to discuss health and sexual matters on social media
	Amount of social media friends met in person
	Accepting friend requests
	Trust in the news read on social media*

# Results: Verifying model

No demographic, economic, social, facilitating condition (except country) variables significantly contributed to the model

Type	Variable	Categories	Relationship	Odds ratio
Social media use	Information shared on social media	Real name	-	0.67
		Marital status	-	0.68
	Use of social media	To play games	+	1.32
		To market your products/services	++	1.57
	Amount of social media friends met in person	All of them (reference category)		
		Most of them	-	0.89
		About half of them	-	0.78
		A few of them	-	0.58
		None of them	-	0.6
	Trust in the news read on social media		--	0.86
Facilitating condition	Country	Sri Lanka (reference category)		
		India	...	0
		Pakistan	+	1.54
		Bangladesh	-	0.57
		Cambodia	++	1.18
		Nepal	++	2.29
Constant			--	0.33

## Insignificant variables

Type	Variable
Demographic	Gender
	Age
	Education
	Marital Status
Economic	Employment
	SEC
Social	Network pressure
	Social activities with friends
	Social activities with public groups
Facilitating conditions	Urbanity
	Personal ownership of desktop or laptop
Social media use	Time since first begun using social media
	Number of 'friends'/ contacts on Social media
	Information shared on social media
	Use of social media
	Level of comfort to discuss health and sexual matters on social media
	Accepting friend requests
Criteria	Color & Sign
A reference level	
Significant positive relationship at 5% significance level	+
Significant negative relationship at 5% significance level	-
Significant positive relationship at 1% significance level	++
Significant negative relationship at 1% significance level	--
Insignificant relationship	...

Nagelkerke R Square value = 0.24

70% of cases correctly classified by the model

# Who verified more?

Type	Variable	Categories	Relationship	Odds ratio	
Social media use	Information shared on social media	Real name	-	1.07	
		Profile status	-	1.08	
	Use of social media	To play games	+	1.32	
		To market your products/services	++	1.57	
	Amount of social media friends met in person	All of them (reference category)			
		Most of them	-	1.08	
		About half of them	-	1.78	
		A few of them	-	1.08	
		None of them	-	1.6	
	Trust in the news read on social media		-	1.06	
Facilitating condition	Country	Sri Lanka (reference category)			
		India	...	0	
		Pakistan	+	1.54	
		Thailand	-	1.07	
		Cambodia	++	1.18	
		Nepal	++	2.29	
Control		-	1.08		

People who use social media **to play games** and **to market their product or services**

Pakistani, Cambodian and Nepali social media users compared to Sri Lankan social media users

# Who verified less?

Type	Variable	Categories	Relationship	Odds ratio
Social media use	Information shared on social media	Real name	-	0.67
		Marital status	-	0.68
	Use of social media	Facebook	-	1.00
		Twitter	-	1.00
	Amount of social media friends met in person	All of them (reference category)		
		Most of them	-	0.89
		About half of them	-	0.78
		A few of them	-	0.58
		None of them	-	0.6
	Trust in the news read on social media		--	0.86
Facilitating condition	Country	Sri Lanka (reference category)		
		India	...	0
		Bangladesh	-	0.57
		Maldives	--	1.00
		Other	--	1.00
		Constant		--

People who disclose their **real name** and **marital status**

People who have more **unknown friends**

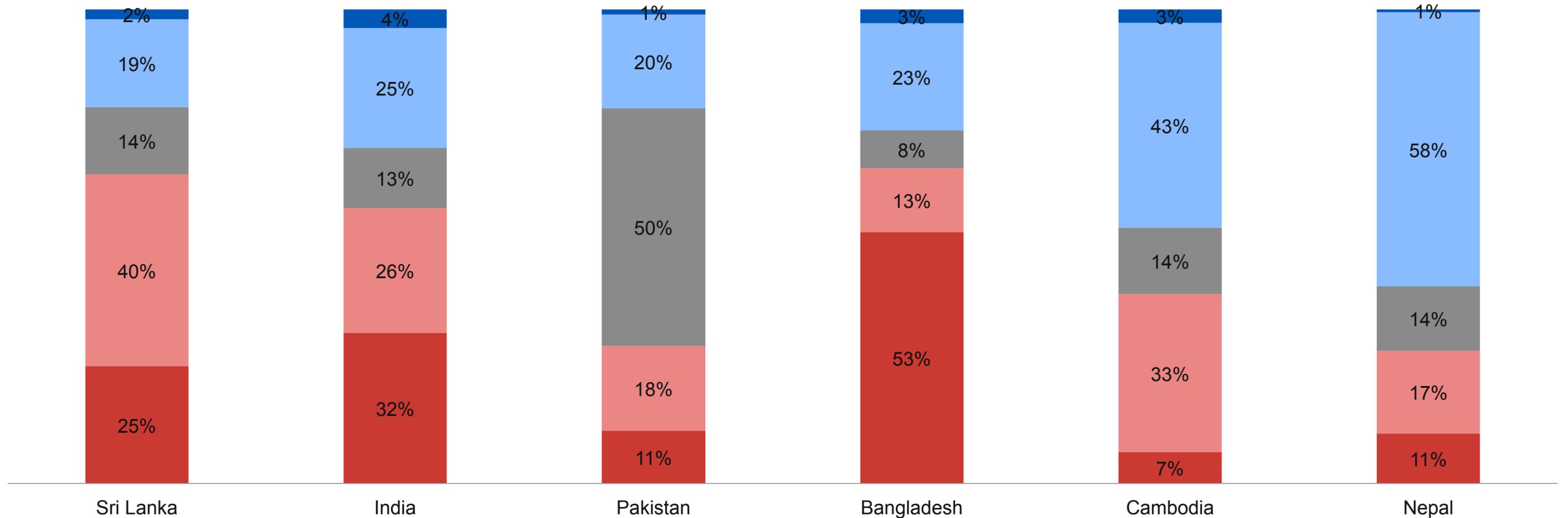
People who **trust the news read on social media**

Bangladeshi social media users compared to Sri Lankan social media users

# Many don't trust the news they read on social media; Nepal is an exception

**Degree of trust in news read on social media (% of social media users aged 15-65)**

■ Strongly do not trust  
 ■ Do not trust  
 ■ Don't know  
 ■ Trust  
 ■ Strongly trust



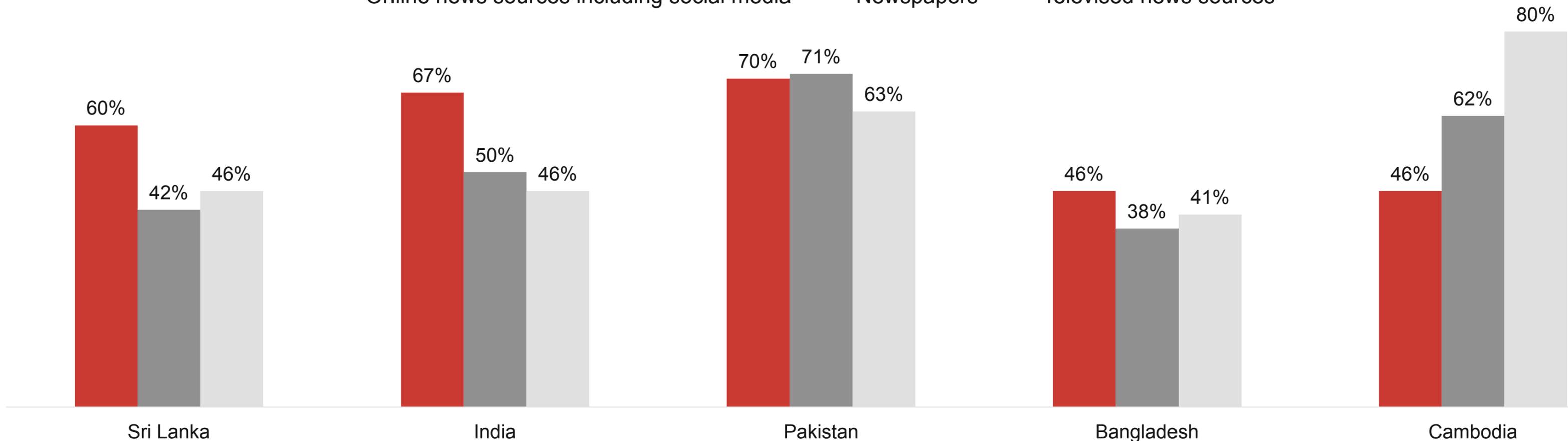
Q: Can you/do you trust the news you read on Social Media (Facebook etc.)?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

# People trust traditional news sources less than online news outlets; Cambodia is an exception

Trust on the news read on different sources (% of those aged 15-65 who used the relevant media)

■ Online news sources including social media ■ Newspapers ■ Televised news sources



Q: Do you feel that the news and information you read on certain media outlets may not be true?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia
Those who used relevant news sources	2,012	4,002	2,002	1,779	1,611

# 5 CONCLUSIONS AND RECOMMENDATIONS

# Conclusions and recommendations

Finding	Implication
People disclosed more personal information on social media	There may be a lack of awareness of the consequences. If so, address it so that users can make informed choices about what they choose to disclose on social media
Certain types of people are less likely to disclose personal information. Not everyone shares the same. Example: women, rural, poor and less educated disclose less	Helps to understand biases and under-representation in large datasets taken from social media platforms
Sharing news on social media is more dependent on behavior on social media rather than individual characteristics	These factors should be taken into account when digital/online media literacy are designed
Many don't trust the news they read on social media or on traditional media	Needs to be addressed with respect to social media and media in general
Country variable is significant in both models	Further research is needed to understand the individual country contexts and what implications these may have on information sharing behaviors in each country

# AFTER ACCESS

@lirneasia @afteraccess



# What we do: digital ++

- **“Old fashioned telecom sector stuff”**: Evidence based inputs into ICT Sector reforms
  - E.g. India Universal Service Policy, Myanmar Telecom Law, Bangladesh telecom license renewal, Indonesia in-country back-haul pricing, S and S East Asia Broadband quality measurement, assessments of the telecom regulatory environments .....etc.
- **Digital rights: what works in our context?**
  - How do we ensure a equitable, human rights-enabling, safe Internet for users in the region?
  - E.g.: how do users in Myanmar deal with online harassment, privacy and security issues?
- **ICTs for development, ICTs in non-ICT sectors**
  - Agriculture: does more market price/other information through mobiles help agriculture markets work better and give farmers farmers better livelihoods?
  - Disaster Risk Reduction: models for ICT-based early warning systems for natural disasters in Maldives, Sri Lanka
- **Other infrastructure: Roads, electricity, health, etc. Often using big data analytics**
  - Historical, pseudonymized CDRs from multiple telcos
  - Where will disease spread? Where are traffic congestions spots? Where do people live? Which are commercial areas of a city (vs residential areas)? Proxies for credit ratings for individuals.

# AfterAccess: Nationally representative surveys of ICT access and use by households & individuals aged 15-65 across Global South

- Rigorous sampling method, comparable across countries
- Predominantly common questionnaire with local customization
  - Structured, closed-ended responses administered face-to-face using mobile devices
  - User-based (rather than subscription-based) data allowing for disaggregation by urban-rural, gender, SEC, age, etc.
- 3 partners conducting the research: LIRNEasia (in Asia), Research ICT Africa (RIA, in Africa), DIRSI (in Latin America)
- Funded by IDRC (Canada), SIDA (Sweden), the Ford Foundation

<https://lirneasia.net/after-access>

<https://afteraccess.net>

# Sample sizes adequate to represent population at desired levels of disaggregation

## Sample size calculation

- Desired level of accuracy set to a confidence level of 95% and an absolute precision (relative margin of error) of 5%. The population proportion  $p$  was set conservatively to 0.5 which yields the largest sample size (Lwanga & Lemeshow, 1991). The minimum sample size per tabulation group determined by (Rea & Parker, 1997):

$$n = \left( \frac{Z_a \sqrt{p(1-p)}}{C_p} \right)^2 = \left( \frac{1.96 \sqrt{0.5(1-0.5)}}{0.05} \right)^2 = 384$$

$Z$  = Z value (e.g. 1.96 for 95% confidence level)  
 $p$  = percentage picking a choice  
 $C$  = confidence interval, expressed as decimal (e.g., .05 =  $\pm 5$ )

## Weighting

- Two weights constructed: for households and individuals, based on inverse selection probabilities  $\rightarrow$  data can be extrapolated to national level.

$$\text{Household weight: } HH_w = DW \frac{1}{P_{HH} * P_{EA}}$$

$$\text{Household Selection Probability: } P_{HH} = \frac{n}{HH_{EA}}$$

$$\text{Individual weight: } IND_w = DW \frac{1}{P_{HH} * P_{EA} * P_I}$$

Default value of 1.5 was used as the design effect. Actual sample size was increased beyond minimum requirement to compensate for clustering effects allow for urban/rural disaggregation of data, as well as gender-based disaggregation.



India

250 Villages and Wards covering  
19 States  
108 Districts

Fieldwork time period : October 5 – November 30 (2017)



Pakistan

100 Enumerator Areas of the 2017 National census  
5 Provinces excluding FATA  
28 Divisions

Fieldwork time period : October 21 – December 26 (2017)



Bangladesh

100 Villages and Wards  
40 Zilas  
92 Upazillas

Fieldwork time period : October 8 – December 1 (2017)



Cambodia

100 Villages covering  
20 Provinces  
70 Districts

Fieldwork time period : September 23 – October 12 (2017)



Nepal

100 wards covering  
All Provinces  
48 Districts

Fieldwork time period : April 23 – June 18 (2018)



Sri Lanka

100 GN divisions covering  
All Provinces

Fieldwork time period : December 3 – January 21 (2018-2019)

Sri Lanka

Split the sample frame into  
urban and rural PSUs



Random selection of required  
number of PSUs urban (40)  
and rural (60) using PPS



PSUs with > 250 households  
segmented, and 1 segment  
randomly selected for listing

### Stage 1:

Stratified random  
sampling of the  
primary sample  
units (PSUs) with  
probability  
proportionate to  
size (PPS) sampling

Obtaining PSU information (boundaries, households, etc.) from key informants (Kis)



KI Interview in India



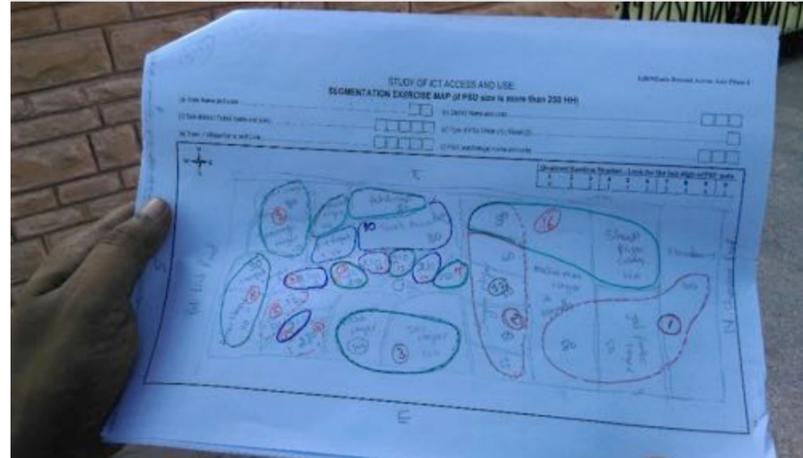
KI Interview in Cambodia

- Mapping of randomly selected village with the help of the key informants
- Segmentation villages where the number of households exceeding 250

## Stage 2:

Mapping and listing of selected PSUs

Mapping & segmentation



Segmentation Map - India



Segmentation Map - Sri Lanka

Listing of households



Listing - Nepal



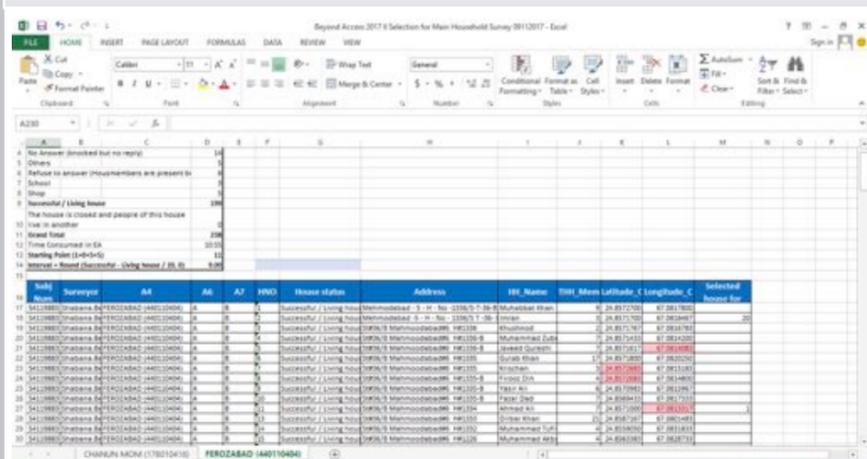
Listing - Pakistan

- List of structures of the entire segment identifying the eligible households

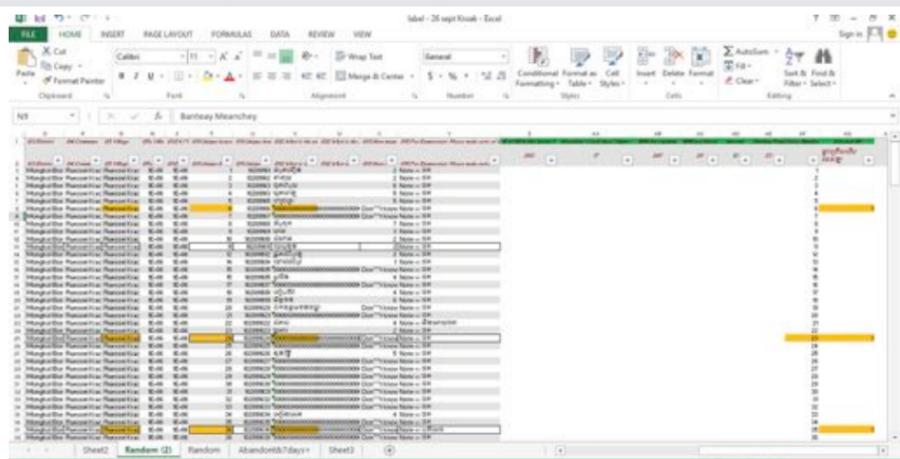
### Stage 3:

Random selection of listed households

Random selection of households conducted systematic random sampling using the household lists collected during the listing



Random HH selection in PK



Random HH selection in KH

- Random selection of 20-25 households for the main survey

### Stage 4:

Household interview (with household representative) and individual interview (with randomly selected individual after listing eligible members in household roster)

Interviews conducted on mobile devices



- Listing all the household members in the household roster
- Randomly selecting one member from age 15-65 from the list

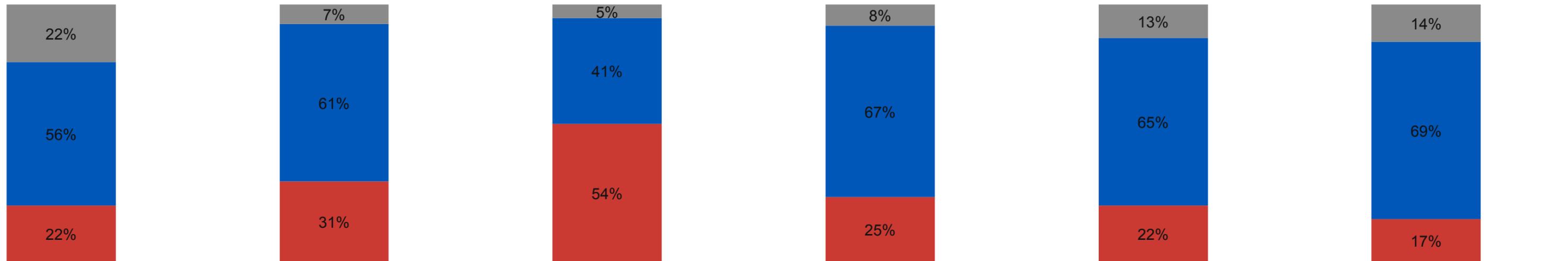
# Many came online recently

Country	Number of years since first ever internet use (% of aged 15-65 internet users)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15+
Sri Lanka	22%	21%	17%	8%	11%	5%	2%	3%	1%	5%	0%	1%	1%	0%	1%	1%
India	31%	27%	15%	8%	10%	2%	2%	1%	1%	1%	0%	0%	0%	0%	1%	0%
Pakistan	52%	32%	5%	5%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%
Bangladesh	24%	22%	19%	10%	12%	5%	4%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Cambodia	39%	18%	16%	7%	8%	4%	3%	2%	1%	2%	0%	0%	0%	0%	0%	1%
Nepal	22%	25%	16%	12%	13%	4%	3%	3%	1%	1%	0%	0%	0%	0%	0%	0%



Number of years since social media use (% of social media users aged 15-65)

■ Less than a year ■ 1 to 5 years ■ More than 5 years



Sri Lanka

India

Pakistan

Bangladesh

Cambodia

Nepal

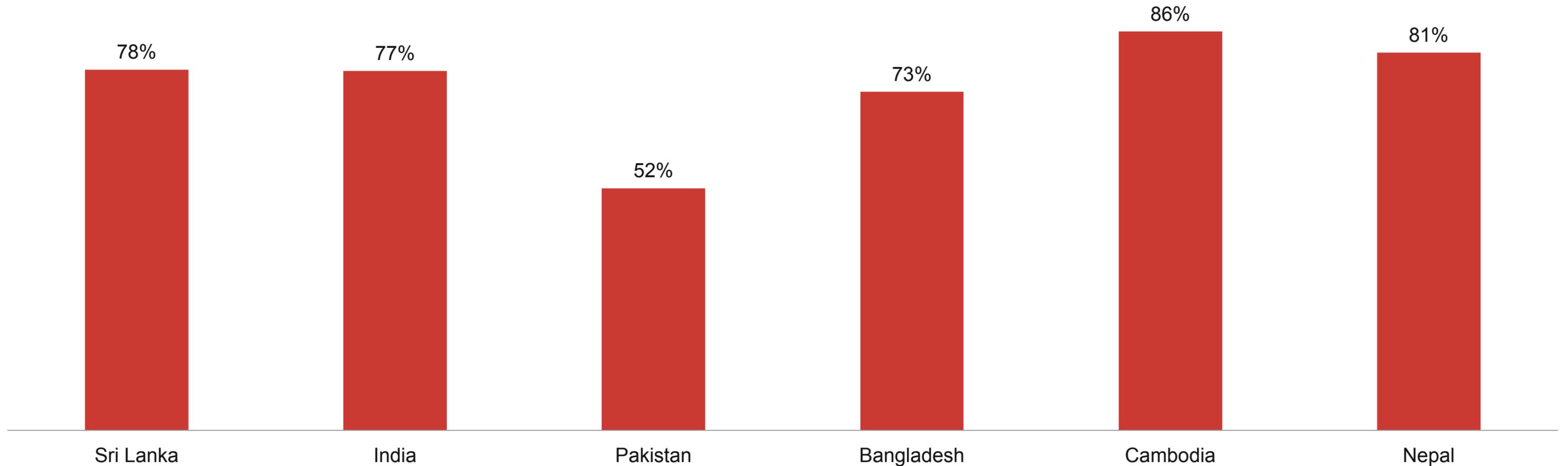
Q1: For how many years have you been using the internet? (1 also for less than a year)

Q2: For how long have you been using social media?

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Internet users	763	919	427	266	804	692
Social media users	593	754	369	251	680	648

# 52-86% of social media users read news on social media

Social media users that read news and on social media (% of age 15-65 social media users)

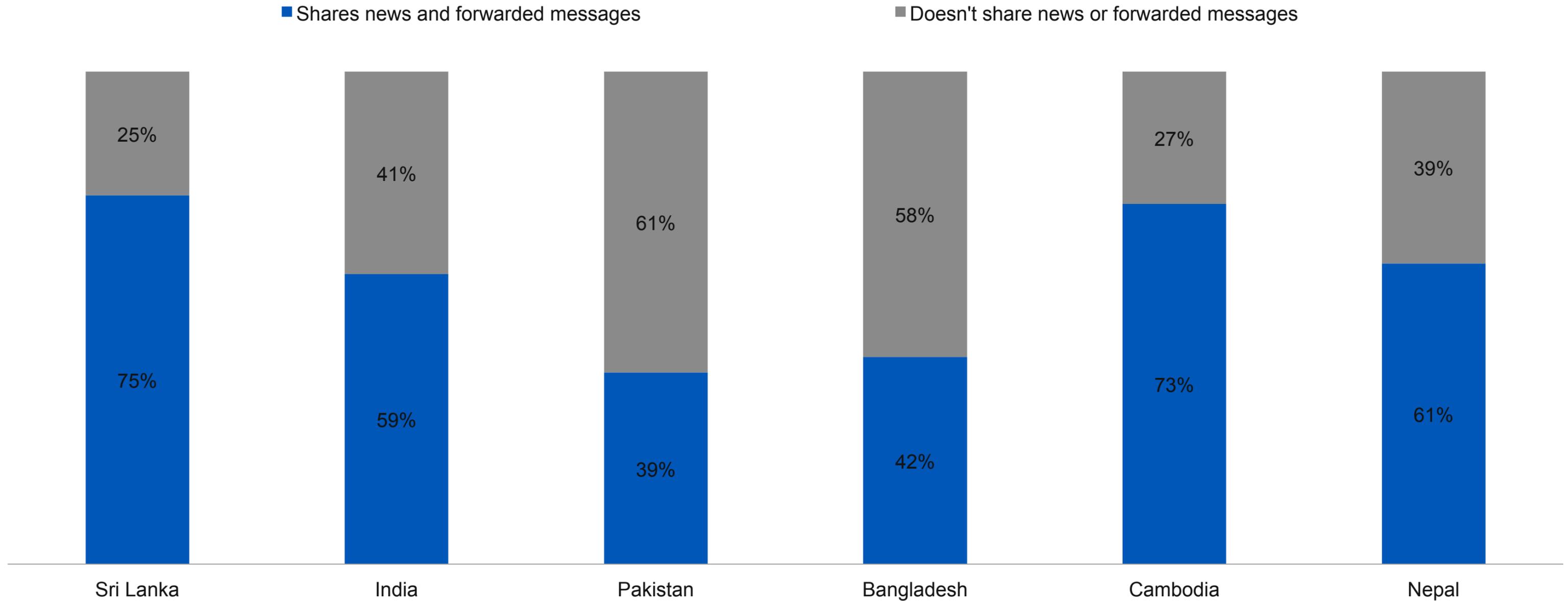


Q: What do you use Social media for? Reading news

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

# Low news sharing in Pakistan and Bangladesh; But high in other countries

Social media users that share news and forwarded messages on social media (% of age 15-65 social media users)



Q: When you share news that is on your newsfeed or forward messages that you receive, do you:

Base	Sri Lanka	India	Pakistan	Bangladesh	Cambodia	Nepal
Social media users	593	754	369	251	680	648

# Binary logistic regression used to model binary outcomes: experiencing sharing news on social media= 1 (yes) or 0 (no).

- A binary logistic regression is a way of modeling the probability of an event when the event is a binary outcome, so sharing news on social media= 1 (yes) or 0 (no).
- Framework and ideas of logistic regression similar to linear regression, Still have a systematic and probabilistic part to any model.
- **Coefficients in logistic regression is difficult to interpret directly hence, Odds Ratios are calculated from it.**
  - The 'Odds' is directly related to (but not the same as) the probability of something happening.
  - Odds = probability of sharing news on social media / probability of not sharing news on social media  $\rightarrow \text{logit}(p) = \log(p/(1-p))$

# Conclusions and recommendations

- Further research is needed to identify if there is a lack of awareness on the implications of disclosing personal information on social media across the wider population in these countries. If so address this awareness problem, so that users can make informed choices about what they choose to disclose on social media
- The data highlights the categories of people that are less likely to disclose personal information, for instance the rural, the less educated, lower income earners, women, etc. This type of information can shed light on the types of biases and under-representation of certain categories of people in large datasets arising from taken from social media platforms, when used for social analysis.
- Sharing news on social media is more depend on the social media users social media using behavior (rather than individual characteristics). As such when digital/online media literacy are designed, these factors should be taken into account.
- Many don't trust the news they read on social media and it is the case for the traditional media as well. This signals that there are deeper challenges to address in the media industry as a whole.
- In both sets of models the country variables indicated that there are specific country-factors at play. This can include the impacts of differing political environments, legal frameworks, socio-cultural factors relating to perceptions of privacy and other rights, etc. Further research is needed to understand the individual country contexts, and what implications these may have on information sharing behaviors in each country

# Sharing model full statistical outputs

Type	Variable	Categories	B	S.E.	Wald	df	Sig.	Exp(B)
Demographic	Gender	...	...	...	...	...	...	...
	Age	...	...	...	...	...	...	...
	Education	...	0.035	0.014	6.495	1	0.011*	1.035
	Marital status	Married (reference category) Single Other	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...
Economic	Employment	E (reference category) A B C D	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...
	SEC	...	...	...	...	...	...	...
	Network pressure	...	...	...	...	...	...	...
	Social activities with friends Social activities with public groups	...	-0.023	0.009	6.526	1	0.011*	0.977
Facilitating factors	Personal ownership of desktop or laptop	...	0.291	0.143	4.139	1	0.042*	1.338
	Urbanity	...	0.238	0.103	5.37	1	0.02*	1.268
Social media use	Length of using social media	Less than a year (reference category)	0	0	10.598	2	0.000**	0
		1-5 years	0.32	0.117	7.441	1	0.007**	1.378
		More than 5 years	0.549	0.187	8.598	1	0.003**	1.731
		Below 100 (reference category)	...	...	...	...	...	...
	Number of friend's contacts on Social media	101-500	0.255	0.124	4.196	1	0.041*	1.29
		More than 500	0.424	0.151	7.872	1	0.005**	1.528
		Don't know	-0.594	0.165	12.952	1	0.000**	0.552
		Real name	...	...	...	...	...	...
	Information shared on social media	Gender	0.438	0.177	6.115	1	0.013*	1.55
		Age	...	...	...	...	...	...
		Marital status	...	...	...	...	...	...
		Mobile number/ Email address	...	...	...	...	...	...
		Religion	...	...	...	...	...	...
		Political views	...	...	...	...	...	...
		Sexual orientation	-0.314	0.148	4.52	1	0.034*	0.73
		Reading news	0.358	0.119	9.108	1	0.002**	1.431
	Use of social media	To play games	...	...	...	...	...	...
		To make professional and business contacts	...	...	...	...	...	...
		To market your products/services	-0.856	0.159	29.007	1	0.000**	0.425
		To follow government Social media pages	0.431	0.129	11.207	1	0.001**	1.539
		To stay in contact with friends and family and to make new friends	0.391	0.184	4.494	1	0.034*	1.478
		To follow local politicians	...	...	...	...	...	...
		To get opinions / share your experience	0.545	0.113	23.242	1	0.000**	1.725
		Not at all comfortable (reference category)	...	...	...	...	...	...
	Gossip between friends	Yes, but only in a closed group	0.593	0.162	13.392	1	0.000**	1.81
		Yes, publicly	1.03	0.187	30.345	1	0.000**	2.802
		I don't do this	0.522	0.2	6.799	1	0.009**	1.686
	Professional / work related information	Not at all comfortable (reference category)	...	...	...	...	...	...
		Yes, but only in a closed group	...	...	...	...	...	...
		Yes, publicly	...	...	...	...	...	...
	Religious matters	Not at all comfortable (reference category)	...	...	...	...	...	...
		Yes, but only in a closed group	...	...	...	...	...	...
		Yes, publicly	...	...	...	...	...	...
	Political matters	Not at all comfortable (reference category)	...	...	...	...	...	...
		Yes, but only in a closed group	...	...	...	...	...	...
		Yes, publicly	...	...	...	...	...	...
	Financial information (eg. info on things you buy, where you buy from, etc)	Not at all comfortable (reference category)	...	...	...	...	...	...
		Yes, but only in a closed group	...	...	...	...	...	...
		Yes, publicly	...	...	...	...	...	...
	Health and sexual matters.	I don't do this	...	...	...	...	...	...
		Not at all comfortable (reference category)	...	...	...	...	...	...
		Yes, but only in a closed group	0.384	0.178	11.959	3	0.000**	...
		Yes, publicly	0.778	0.231	4.643	1	0.031*	1.469
	Amount of social media friends met in person	Yes, publicly	0.778	0.231	11.333	1	0.000**	2.178
		I don't do this	...	...	...	...	...	...
		All of them (reference category)	...	...	...	...	...	...
		Most of them	0.502	0.186	17.208	4	0.000**	...
	Accepting friend requests	About half of them	0.792	0.206	7.286	1	0.007**	1.652
A few of them		0.579	0.18	14.808	1	0.000**	2.207	
None of them		0.337	0.205	10.319	1	0.001**	1.784	
Only known contacts (reference category)		...	...	...	...	...	...	
Facilitating factors	Based on some conditions	...	...	...	...	...	...	
	Accept all requests	...	...	...	...	...	...	
	Sri Lanka (reference category)	...	...	...	...	...	...	
	India	-0.919	0.178	88.691	5	0.000**	...	
	Pakistan	-0.854	0.212	26.678	1	0.000**	0.399	
	Bangladesh	-1.783	0.224	16.168	1	0.000**	0.426	
	Cambodia	0.165	0.225	63.44	1	0.000**	0.168	
Nepal	-1.039	0.183	0.536	1	0.467	1.179		
Constant			-1.928	0.384	32.332	1	0.000**	0.354
					25.158	1	0.000**	0.145

\*\* Significant relationship at 5% significance level  
\* Significant relationship at 1% significance level  
... No significant relationship

# Verification model full statistical outputs

Type	Variable	Categories	B	S.E.	Wald	df	Sig.	Exp(B)			
Demographic	Gender		...	...	...	...	...	...			
	Age		...	...	...	...	...	...			
	Education		...	...	...	...	...	...			
	Marital status	Married (reference category) Single Other	...	...	...	...	...	...			
Economic	Employment		...	...	...	...	...	...			
	SEC	E (reference category) A B C D	...	...	...	...	...	...			
		Network pressure		...	...	...	...	...			
		Social activities with friends		...	...	...	...	...			
Social activities with public groups			...	...	...	...	...				
Facilitating factors	Personal ownership of desktop or laptop		...	...	...	...	...				
	Urbanity		...	...	...	...	...				
Social media use	Length of using social media	Less than a year (reference category) 1-5 years More than 5 years	...	...	...	...	...	...			
		Number of friend's contacts on Social media	Below 100 (reference category) 101-500 More than 500 Don't know	...	...	...	...	...			
			Information shared on social media	Real name Gender Age Marital status Mobile number/ Email address Religion Political views Sexual orientation	-0.398 ... ... -0.385 ... ... ... ... ...	0.194 ... ... 0.162 ... ... ... ... ...	4.235 ... ... 5.623 ... ... ... ... ...	1 ... ... 1 ... ... ... ... ...	0.04* ... ... 0.018* ... ... ... ... ...	0.671 ... ... 0.68 ... ... ... ... ...	
	Use of social media			Reading news To play games To make professional and business contacts To market your products/services To follow government Social media pages To stay in contact with friends and family and to make new friends To follow local politicians To get opinions / share your experience	... 0.274 ... 0.451 ... ... ... ... ...	... 0.123 ... 0.174 ... ... ... ... ...	... 4.978 ... 6.706 ... ... ... ... ...	... 1 ... 1 ... ... ... ... ...	... 0.026* ... 000** ... ... ... ... ...	... 1.316 ... 1.569 ... ... ... ... ...	
				Gossip between friends	Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
		Professional / work related information			Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
					Religious matters	Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
				Political matters		Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
		Financial information (eg. info on things you buy, where you buy from, etc)				Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
			Health and sexual matters.		Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...	... ... ... ...
	Amount of social media friends met in person			All of them (reference category) Most of them About half of them A few of them None of them	... ... ... -0.538 0.337	... ... ... 0.246 0.205	... ... ... 4.797 2.691	... ... ... 1 1	... ... ... 0.029* ...	... ... ... 0.584 1.4	
		Accepting friend requests		Only known contacts (reference category) Based on some conditions Accept all requests	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	
			Trust on the news read on social media	Not at all comfortable (reference category) Yes, but only in a closed group Yes, publicly I don't do this	-0.147 ... ... ...	0.051 ... ... ...	8.293 ... ... ...	1 ... ... ...	000** ... ... ...	0.863 ... ... ...	
				Facilitating factors	Country	Sri Lanka (reference category) India Pakistan Bangladesh Cambodia Nepal	0 0.429 -0.56 0.165 0.827	0 0.199 0.263 0.225 0.25	95.588 4.656 4.54 0.536 10.955	5 1 1 1 1	000** 000** 0.031* 0.033* 000**
	Constant	-1.095				0.213	26.53	1	000**	0.335	

\*\* Significant relationship at 5% significance level  
 \* Significant relationship at 1% significance level  
 ... No significant relationship