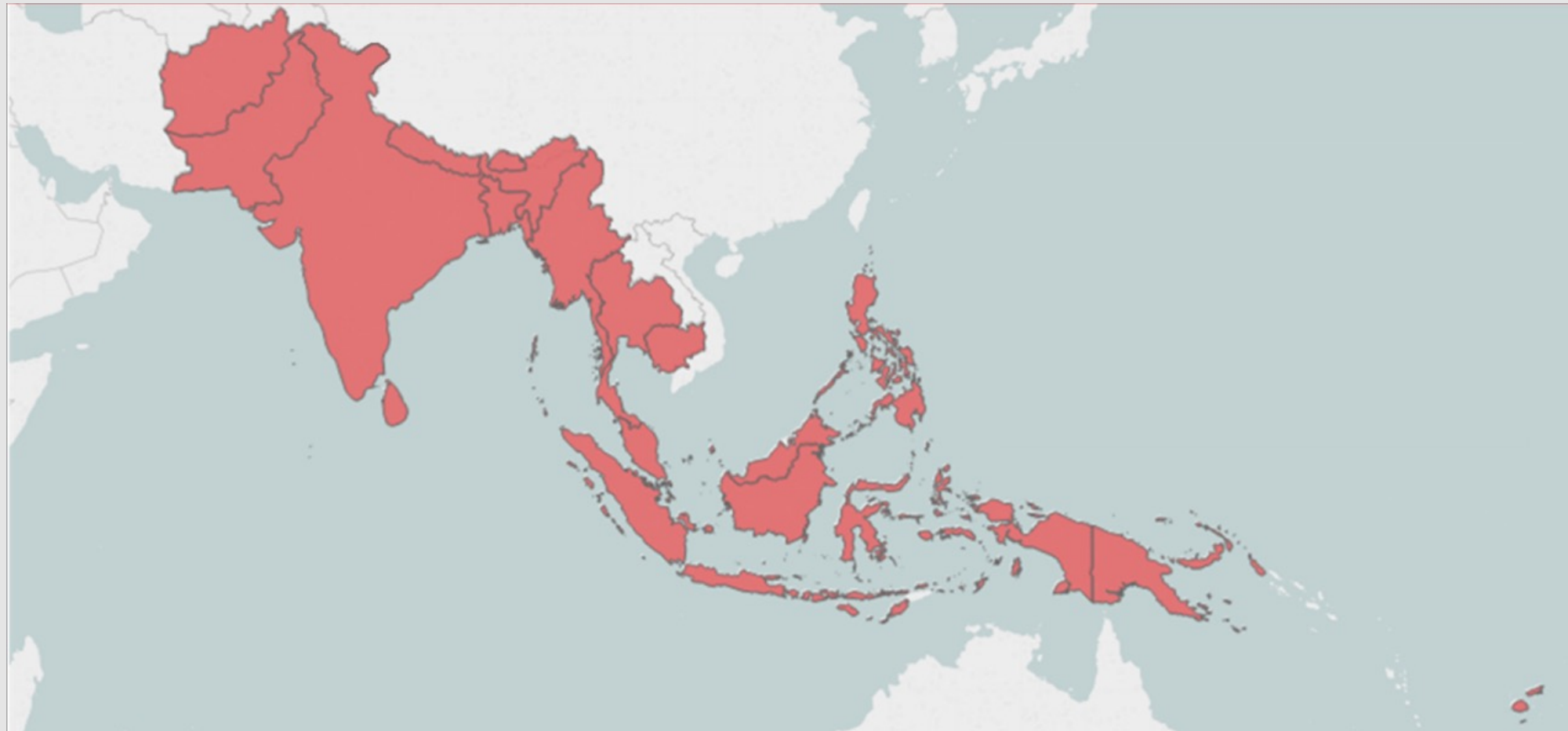


# Digital Sri Lanka during COVID-19 lockdowns

8 December 2021

Research team: Helani Galpaya, Gayani Hurulle, Tharaka Amarasinghe, Ruwanka de Silva, Ayesha Zainudeen, Sujata Gamage, Milindu Tissera

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

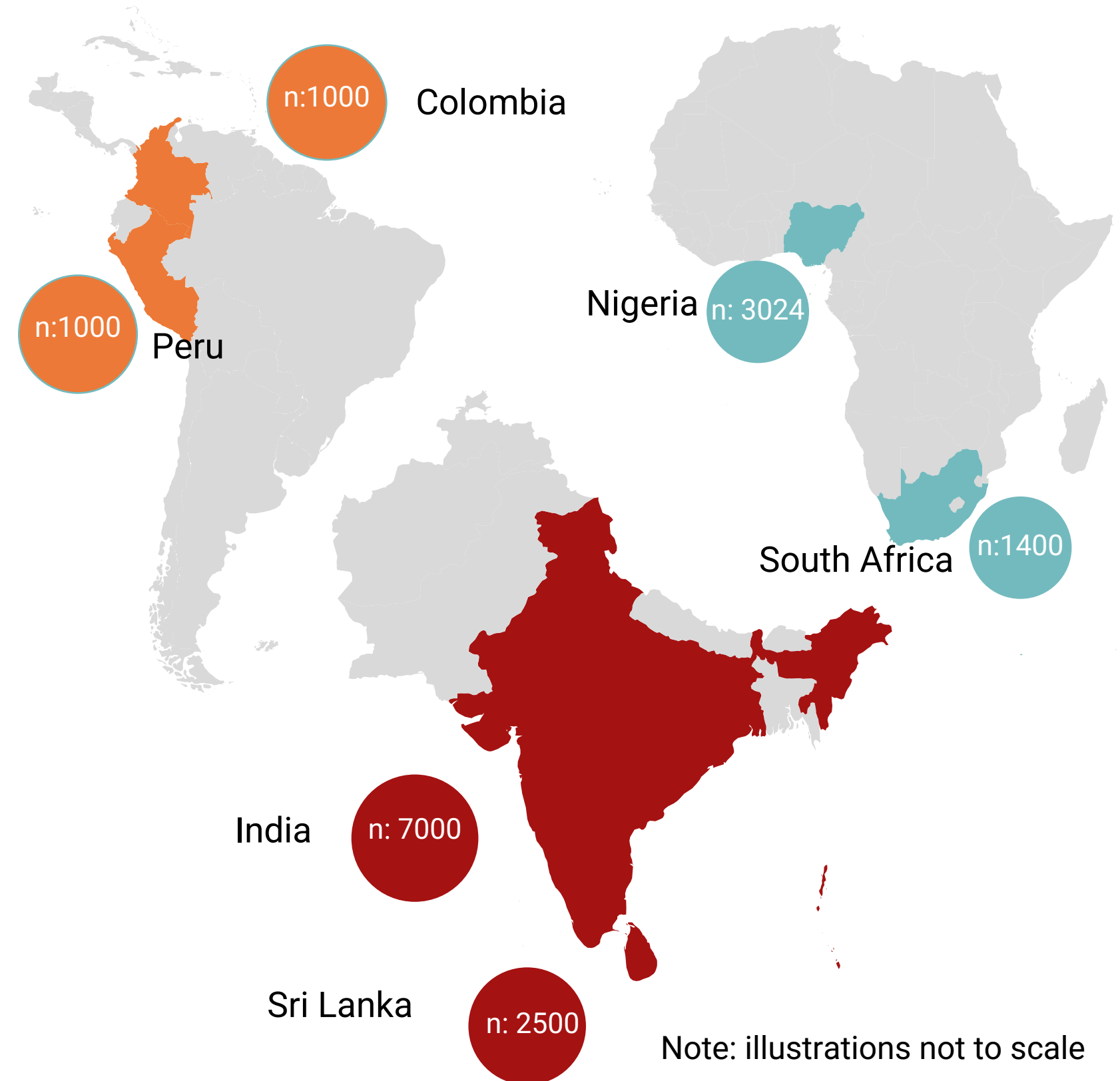


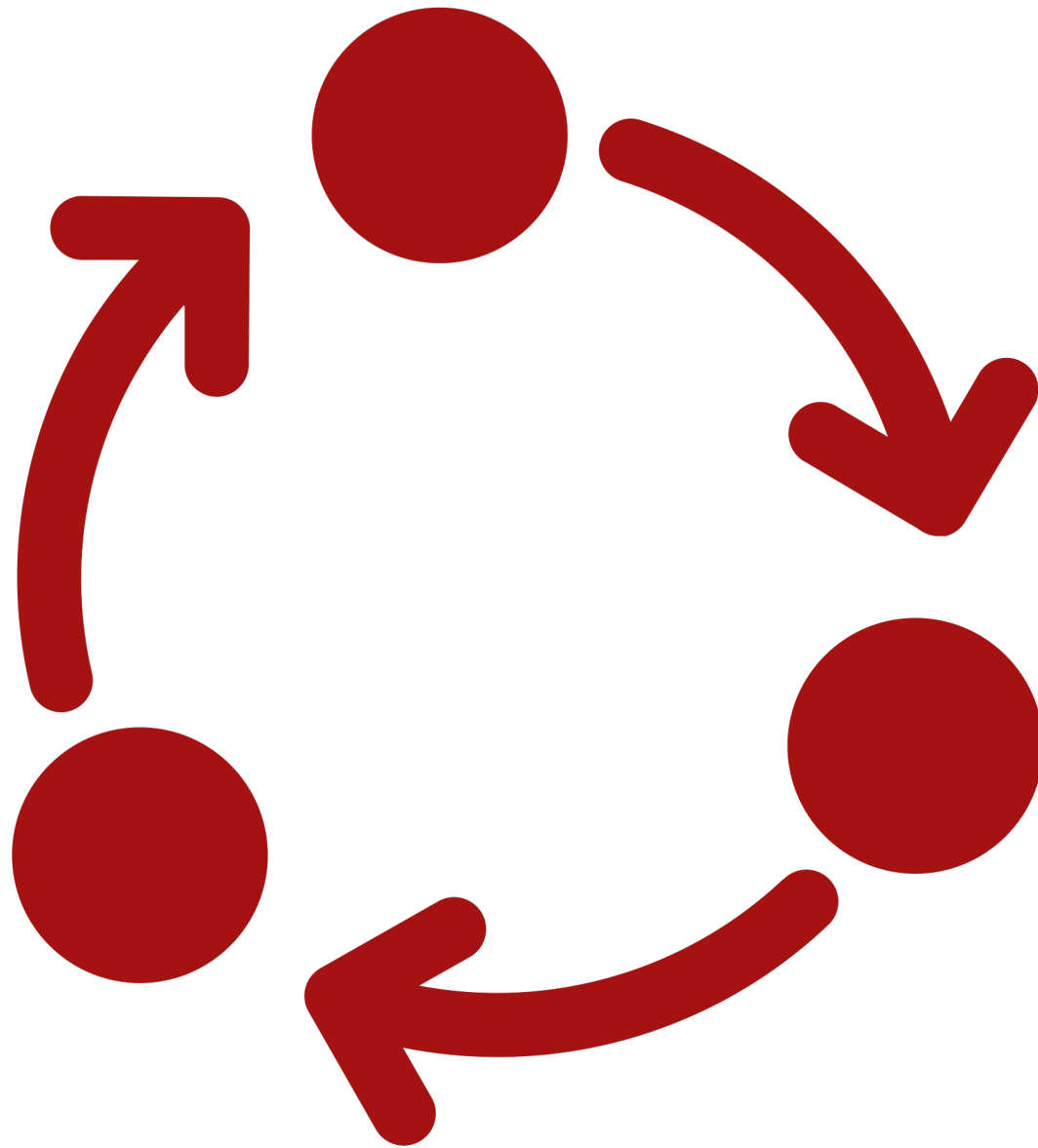
## **Our Mission:**

“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”

# About the study

- **Assesses the socio-economic impacts of COVID-19 by analyzing access to last mile delivery of services (including education, food, work and government services), with a focus on digital technologies**
- **Funded by IDRC, through a joint grant given to 3 regional think tanks:**
  - LIRNEasia, Research ICT Africa and Instituto de Estudios Peruanos
- **Research in Sri Lanka and India conducted by LIRNEasia**
- **Fieldwork in Sri Lanka conducted by Survey Research Lanka (selected through a competitive bidding process)**



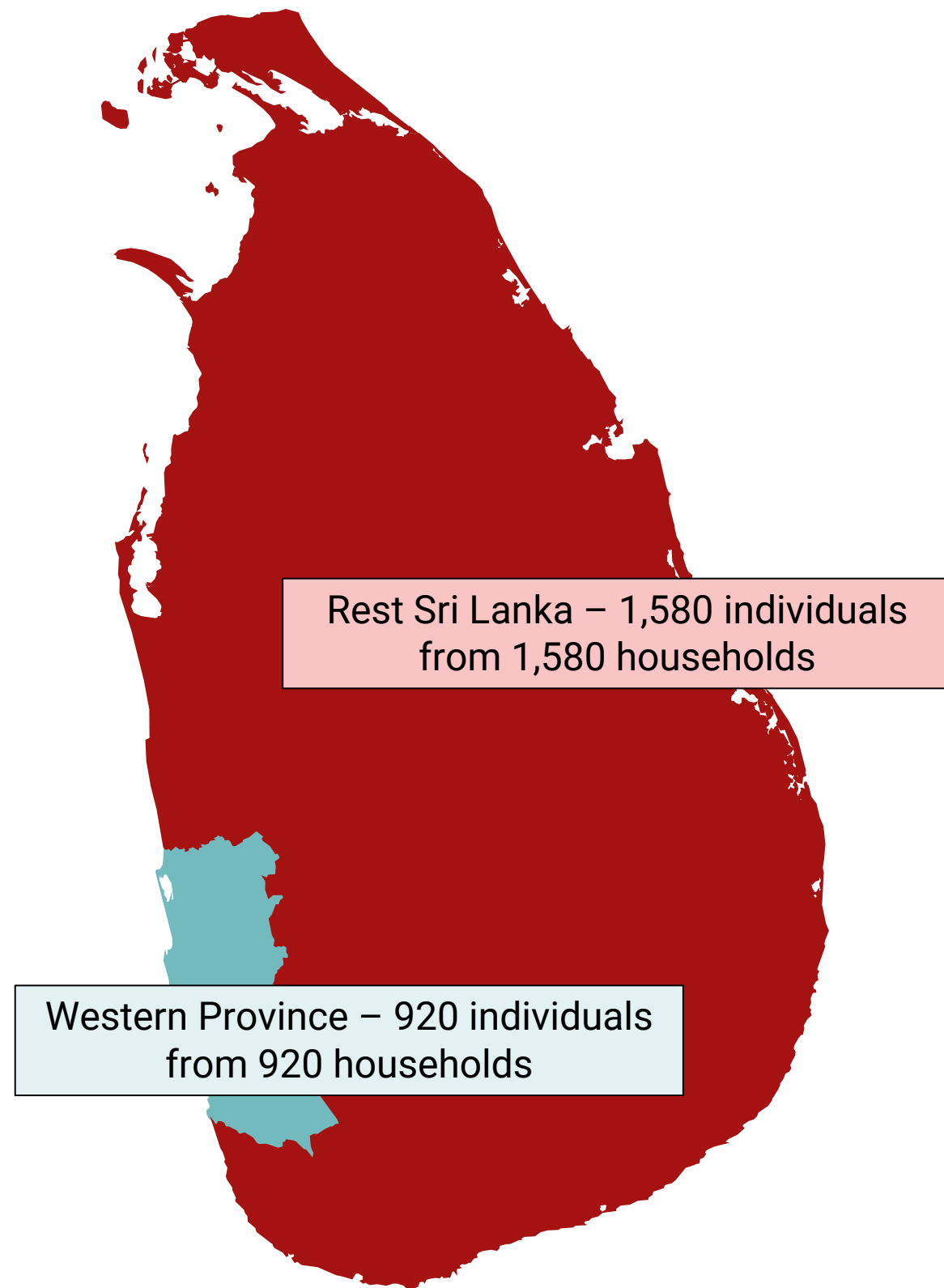


# Methodology



# Sri Lanka sample representative of population aged 15+

(95% confidence interval; +/-2.8% margin of error)



## Nationally representative sample

 **2,500**  
 Individuals

 **125**  
 GN divisions

Sample designed to be representative of 15+ population at:

- National level,
- Urban-rural level
- Men vs. women
- Western province vs rest Sri Lanka
- SEC (socio-economic classification, a proxy for income)
- Age

Fieldwork time period: 4-Mar-2021 to 11-Oct-2021

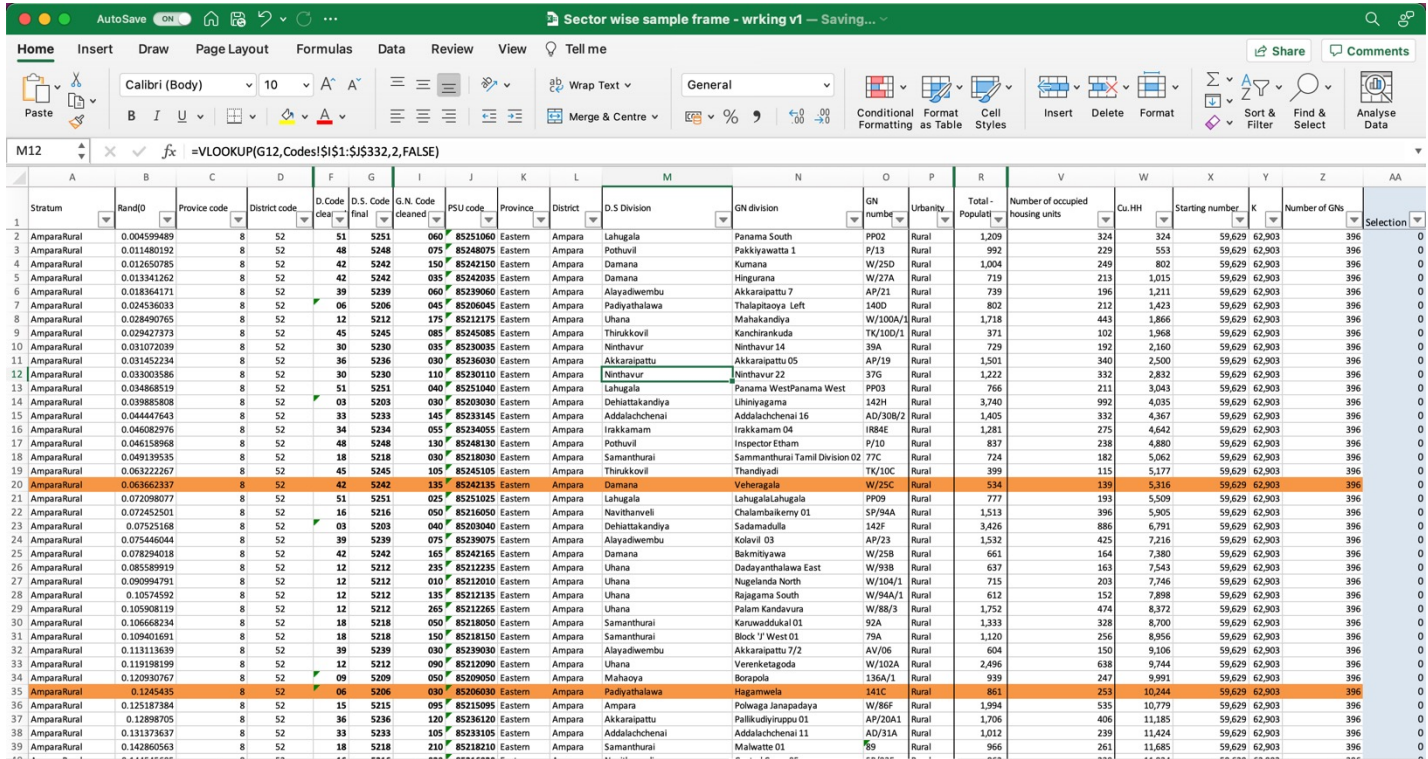
# Stage 1

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

Split the sample frame\* into urban and rural PSUs

Randomly select required number of PSUs using PPS

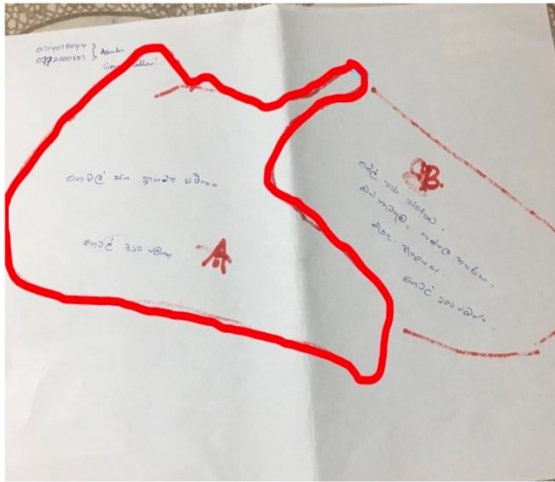
Segment PSUs with > 250 households, and select 1 segment randomly for listing



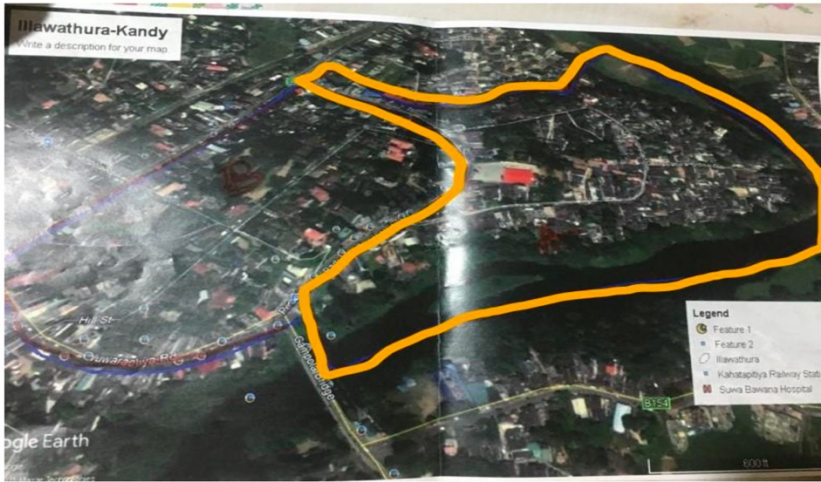
Stratum	Random	Province code	District code	D. Code	D. Code	G.N. Code	PSU code	Province	District	D.S Division	GN division	GN number	Urbanity	Total Population	Number of occupied housing units	Cu.HH	Starting number	Number of GNs	Selection
1																			
2	AmparaRural	0.004599489	8	52	51	5251	060	85251060	Eastern	Ampara	Lahugala	Panama South	PP02	Rural	1,209	324	324	59,629	396
3	AmparaRural	0.011480192	8	52	48	5248	075	85248075	Eastern	Ampara	Pothuvil	Pakkayawatta 1	P/13	Rural	992	229	553	59,629	396
4	AmparaRural	0.012650785	8	52	42	5242	130	85242130	Eastern	Ampara	Damana	Kumana	W/25D	Rural	1,004	249	802	59,629	396
5	AmparaRural	0.013341262	8	52	42	5242	035	85242035	Eastern	Ampara	Damana	Hingurana	W/21A	Rural	719	213	1,015	59,629	396
6	AmparaRural	0.018364171	8	52	39	5239	060	85239060	Eastern	Ampara	Alayadwembu	Akkarapattu 7	AP/21	Rural	739	196	1,211	59,629	396
7	AmparaRural	0.024536033	8	52	06	5206	045	85206045	Eastern	Ampara	Padiyathalawa	Thalapitaya Left	140D	Rural	802	212	1,423	59,629	396
8	AmparaRural	0.028490765	8	52	12	5212	175	85212175	Eastern	Ampara	Uhana	Mahakandya	W/100A/1	Rural	1,718	443	1,866	59,629	396
9	AmparaRural	0.029427373	8	52	45	5245	085	85245085	Eastern	Ampara	Thirukkivil	Kanchirankuda	TK/100D/1	Rural	371	102	1,968	59,629	396
10	AmparaRural	0.031072039	8	52	30	5230	085	85230085	Eastern	Ampara	Ninthavur 14	Ninthavur 14	38A	Rural	729	192	2,160	59,629	396
11	AmparaRural	0.031452234	8	52	36	5236	030	85236030	Eastern	Ampara	Akkarapattu	Akkarapattu 05	AP/19	Rural	1,501	340	2,500	59,629	396
12	AmparaRural	0.033003586	8	52	30	5230	110	85230110	Eastern	Ampara	Ninthavur	Ninthavur 22	37G	Rural	1,222	332	2,832	59,629	396
13	AmparaRural	0.034868519	8	52	51	5251	040	85251040	Eastern	Ampara	Lahugala	Panama WestPanama West	PP03	Rural	766	211	3,043	59,629	396
14	AmparaRural	0.039885808	8	52	03	5203	030	85203030	Eastern	Ampara	Dehiattakandya	Lihiniyagama	142H	Rural	3,740	992	4,035	59,629	396
15	AmparaRural	0.044447643	8	52	33	5233	145	85233145	Eastern	Ampara	Addalachenai	Addalachenai 16	AD/20B/2	Rural	1,405	332	4,367	59,629	396
16	AmparaRural	0.046082976	8	52	34	5234	055	85240555	Eastern	Ampara	Irakkamam	Irakkamam 04	IR04E	Rural	1,281	275	4,642	59,629	396
17	AmparaRural	0.046158968	8	52	48	5248	130	85248130	Eastern	Ampara	Pothuvil	Inspector Etham	P/10	Rural	837	238	4,880	59,629	396
18	AmparaRural	0.049139535	8	52	18	5218	030	85218030	Eastern	Ampara	Samanthural	Samanthural Tamil Division 02	77C	Rural	724	182	5,062	59,629	396
19	AmparaRural	0.063222627	8	52	45	5245	105	85245105	Eastern	Ampara	Thirukkivil	Thandiadi	TK/10C	Rural	399	115	5,177	59,629	396
20	AmparaRural	0.063662332	8	52	42	5242	135	85242135	Eastern	Ampara	Damana	Vehinagala	W/25C	Rural	534	139	5,316	59,629	396
21	AmparaRural	0.072098077	8	52	51	5251	025	85251025	Eastern	Ampara	Lahugala	LahugalaLahugala	PP09	Rural	777	193	5,509	59,629	396
22	AmparaRural	0.072452501	8	52	16	5216	050	85216050	Eastern	Ampara	Navithanveli	Chalambalkemmy 01	SP/94A	Rural	1,513	396	5,905	59,629	396
23	AmparaRural	0.07525168	8	52	03	5203	040	85203040	Eastern	Ampara	Dehiattakandya	Sadamadulla	142F	Rural	3,426	886	6,791	59,629	396
24	AmparaRural	0.079446044	8	52	39	5239	075	85239075	Eastern	Ampara	Alayadwembu	Kolavil 03	AP/21	Rural	1,532	425	7,216	59,629	396
25	AmparaRural	0.078294016	8	52	42	5242	165	85242165	Eastern	Ampara	Damana	Bakimiyawa	W/25B	Rural	661	164	7,380	59,629	396
26	AmparaRural	0.085589919	8	52	12	5212	235	85212235	Eastern	Ampara	Uhana	Dadayanthala East	W/93B	Rural	637	163	7,543	59,629	396
27	AmparaRural	0.090994791	8	52	12	5212	010	85212010	Eastern	Ampara	Uhana	Nugelanda North	W/104/1	Rural	715	203	7,746	59,629	396
28	AmparaRural	0.10574592	8	52	12	5212	135	85212135	Eastern	Ampara	Uhana	Rajagama South	W/94A/1	Rural	612	152	7,898	59,629	396
29	AmparaRural	0.105908119	8	52	12	5212	265	85212265	Eastern	Ampara	Uhana	Palam Randavura	W/86/3	Rural	1,752	474	8,372	59,629	396
30	AmparaRural	0.106608234	8	52	18	5218	050	85218050	Eastern	Ampara	Samanthural	Karawaddakal 01	92A	Rural	1,333	328	8,700	59,629	396
31	AmparaRural	0.109401691	8	52	18	5218	150	85218150	Eastern	Ampara	Samanthural	Block 'J' West 01	79A	Rural	1,120	256	8,956	59,629	396
32	AmparaRural	0.113113639	8	52	39	5239	030	85239030	Eastern	Ampara	Alayadwembu	Akkarapattu 7/2	AV/06	Rural	604	150	9,106	59,629	396
33	AmparaRural	0.119198199	8	52	12	5212	090	85212090	Eastern	Ampara	Uhana	Vereketagoda	W/102A	Rural	2,496	638	9,744	59,629	396
34	AmparaRural	0.120910767	8	52	09	5209	050	85209050	Eastern	Ampara	Mahayva	Boripola	136A/1	Rural	939	247	9,991	59,629	396
35	AmparaRural	0.12454535	8	52	06	5206	030	85206030	Eastern	Ampara	Padiyathalawa	Hagamenia	141C	Rural	861	253	10,244	59,629	396
36	AmparaRural	0.125187384	8	52	15	5215	095	85215095	Eastern	Ampara	Ampara	Pohwaga Janapadaya	W/86F	Rural	1,594	535	10,779	59,629	396
37	AmparaRural	0.12888705	8	52	36	5236	120	85236120	Eastern	Ampara	Akkarapattu	Pallikudyiruppu 01	AP/20A1	Rural	1,706	406	11,185	59,629	396
38	AmparaRural	0.131373637	8	52	33	5233	105	85233105	Eastern	Ampara	Addalachenai	Addalachenai 11	AD/31A	Rural	1,012	239	11,424	59,629	396
39	AmparaRural	0.142860563	8	52	18	5218	210	85218210	Eastern	Ampara	Samanthural	Malwate 01	76	Rural	966	261	11,685	59,629	396

Sri Lanka sample frame

GN's identification on GN borders and HH Number



Overlay HH numbers on GN map & select a segment randomly that makes 250+/- HHs



EG. ILLAWATHURA – KANDY

A segmentation map

\*Grama Niladhari division data from the 2011 Sri Lanka Census of Population and Housing



## Stage 2

# Mapping and listing of selected PSUs

Obtain PSU information (boundaries, households, etc.) from key informants (KIs)

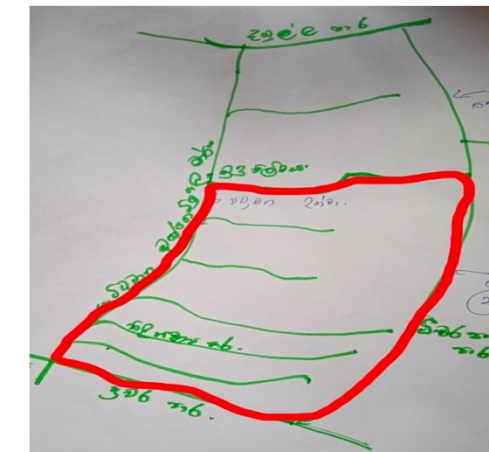
## Mapping & segmentation

- Verify the Survey department's GN level map of randomly selected GN with the help of key informants
- Segment wards and villages where the number of households > 250

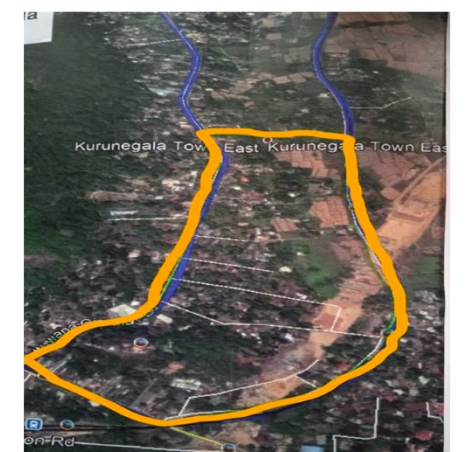
## Listing of households

List structures of the entire segment to identify the eligible households for sampling

GN's identification on GN borders and HH Number



Overlay HH numbers on GN map & select a segment randomly that makes 250+/- HHs



EG. KURUNEGALA TOWN EAST

Segment map of Kurunegala town east GN



Listing is being conducted by enumerators

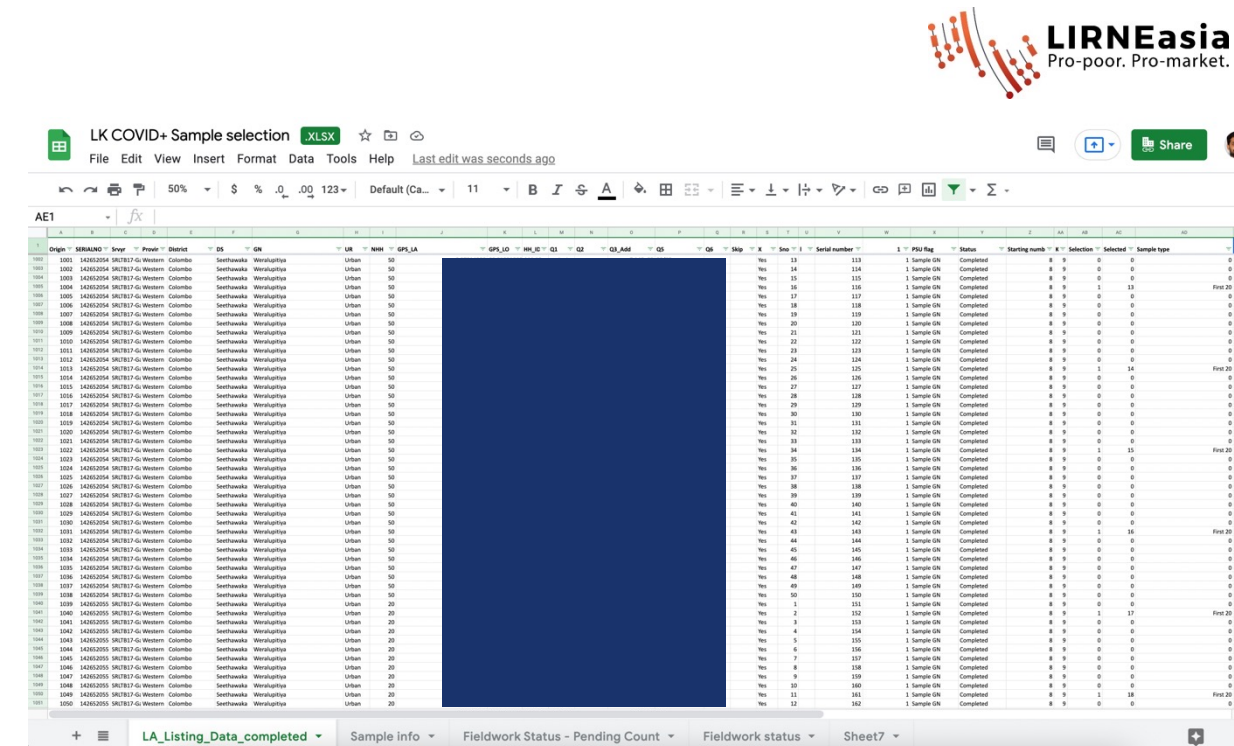


## Stage 3

Random selection  
of listed  
households

Randomly select households through systematic  
random sampling using the household lists  
collected during the listing

Randomly select 20-25 households for the main survey by  
the research team



The screenshot shows an Excel spreadsheet titled "LK COVID+ Sample selection". The spreadsheet contains a list of households with columns for ID, Name, Address, and Status. The data is organized into a table with multiple rows, each representing a household. The status column indicates whether the household is "Completed" or "Not Completed".

## Stage 4

Household  
interview (with  
household head or  
suitable  
representative)  
and individual  
interview (with  
randomly selected  
individual)

List all the household members in the household  
roster

Select the household head or suitable  
representative from the list

Conduct the household section of the interview

Randomly select a member aged 15+ from the  
list

Conduct the individual section of the interview

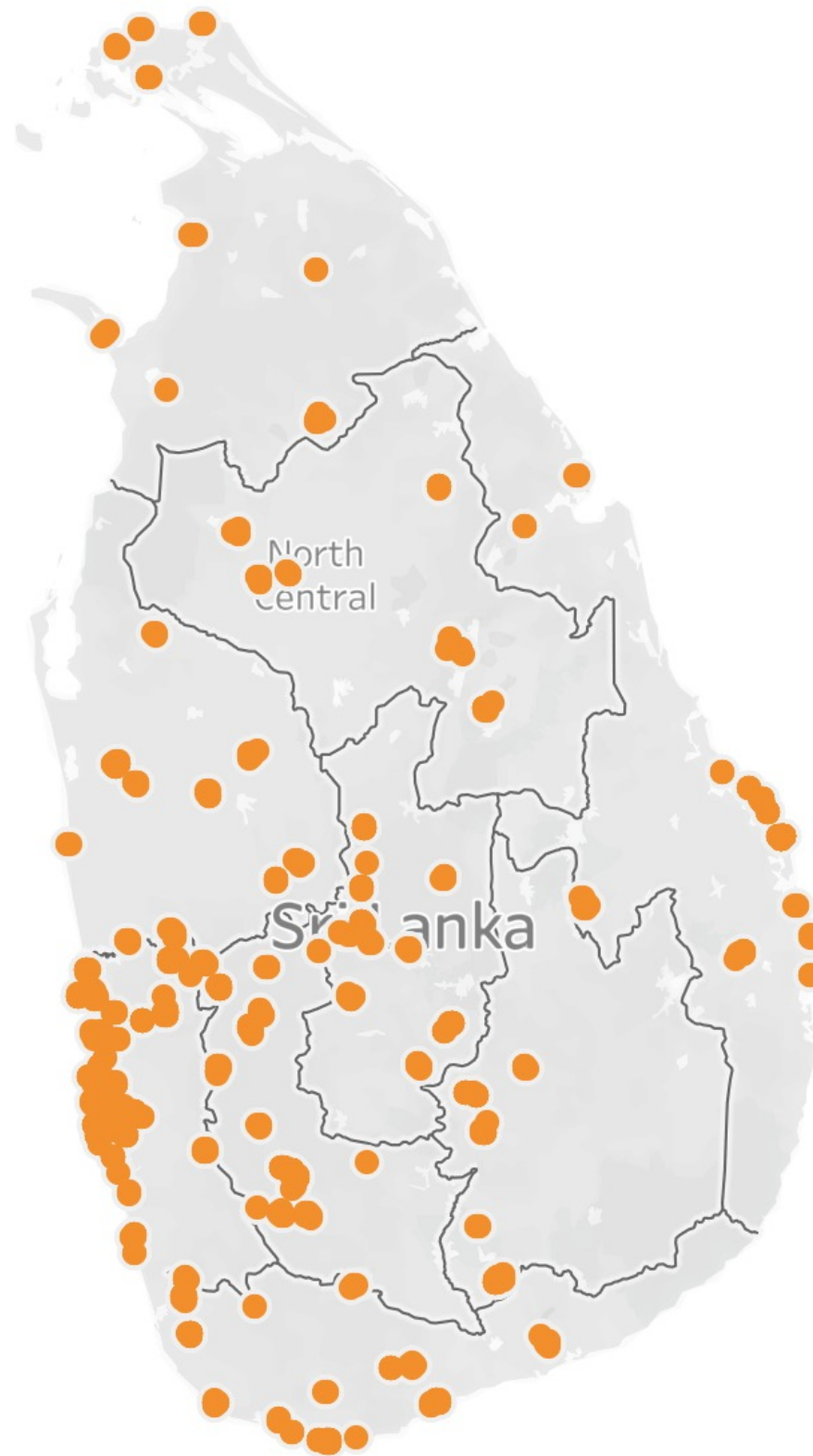
Random selection of households for the main survey



Household and individual interviews are being conducted by enumerators



# Sample household locations (GPS locations)





# Findings

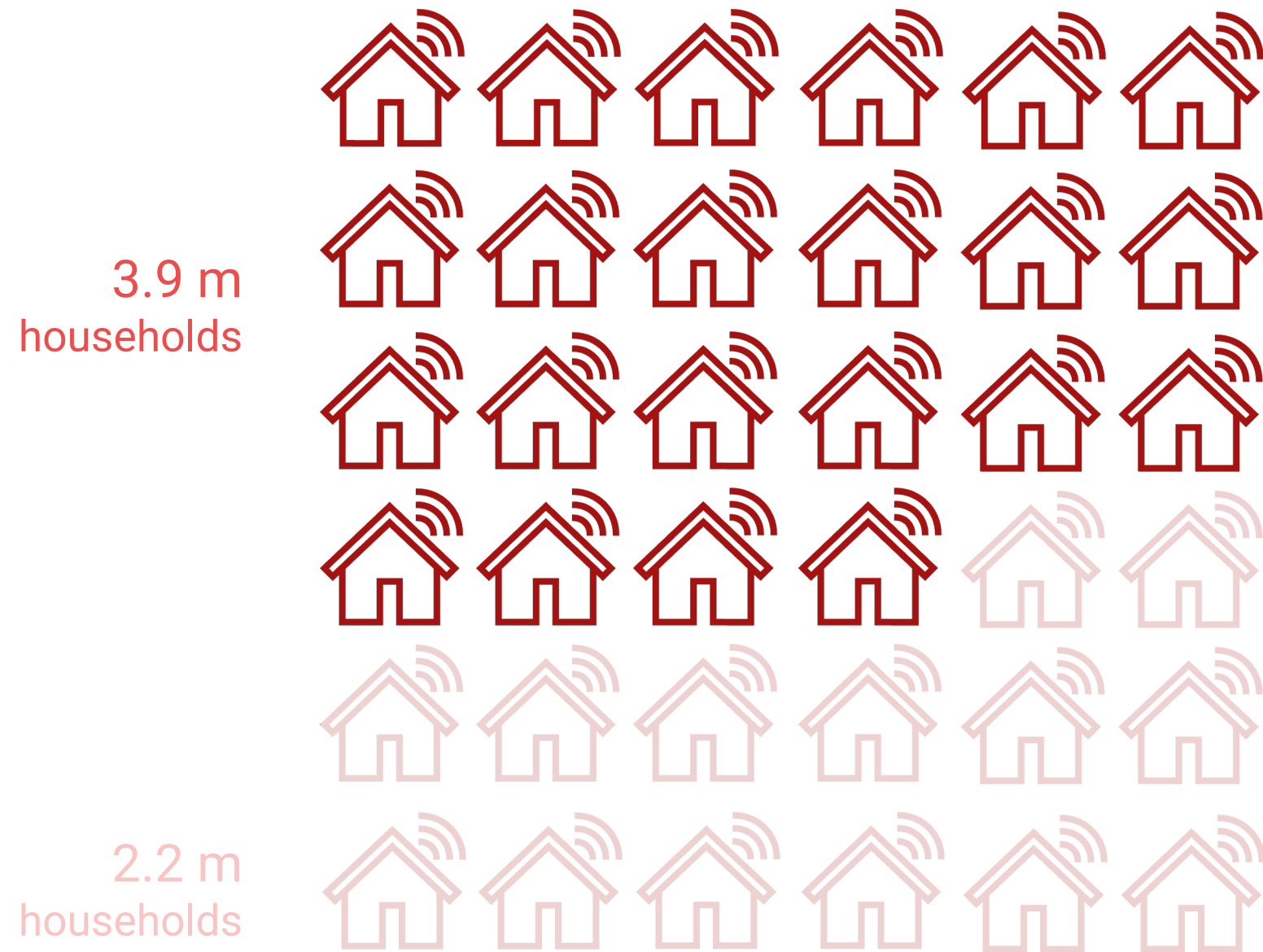
- Internet access & use
- Impacts on
  - Education
  - Work & household income
  - Access to food & platforms
  - Government services & contact tracing



# Internet access & use

# 61% of households had an active internet connection; 44% of the population aged 15+ were internet users

**61%** of households had an active internet connection



**44%** of 15 + population were internet users



Q1: Does this household have a working Internet connection, if so what type? (one that is exclusive for the household and is accessible to all household members)

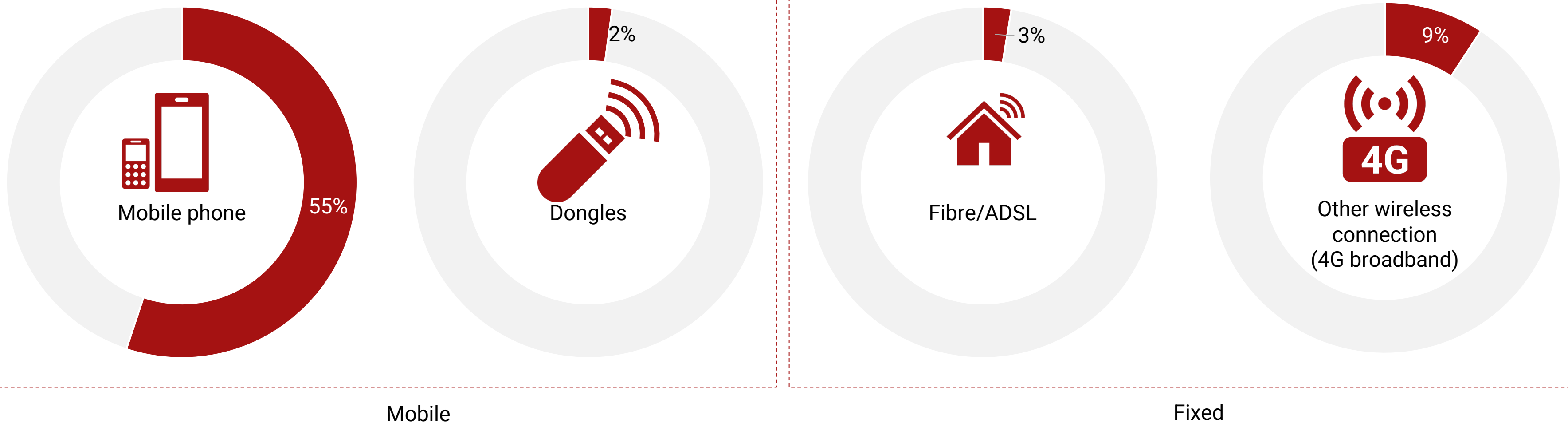
Q2: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

Base: All respondents and households (n=2,501) 21



# 55% of households used mobile phones for internet connectivity

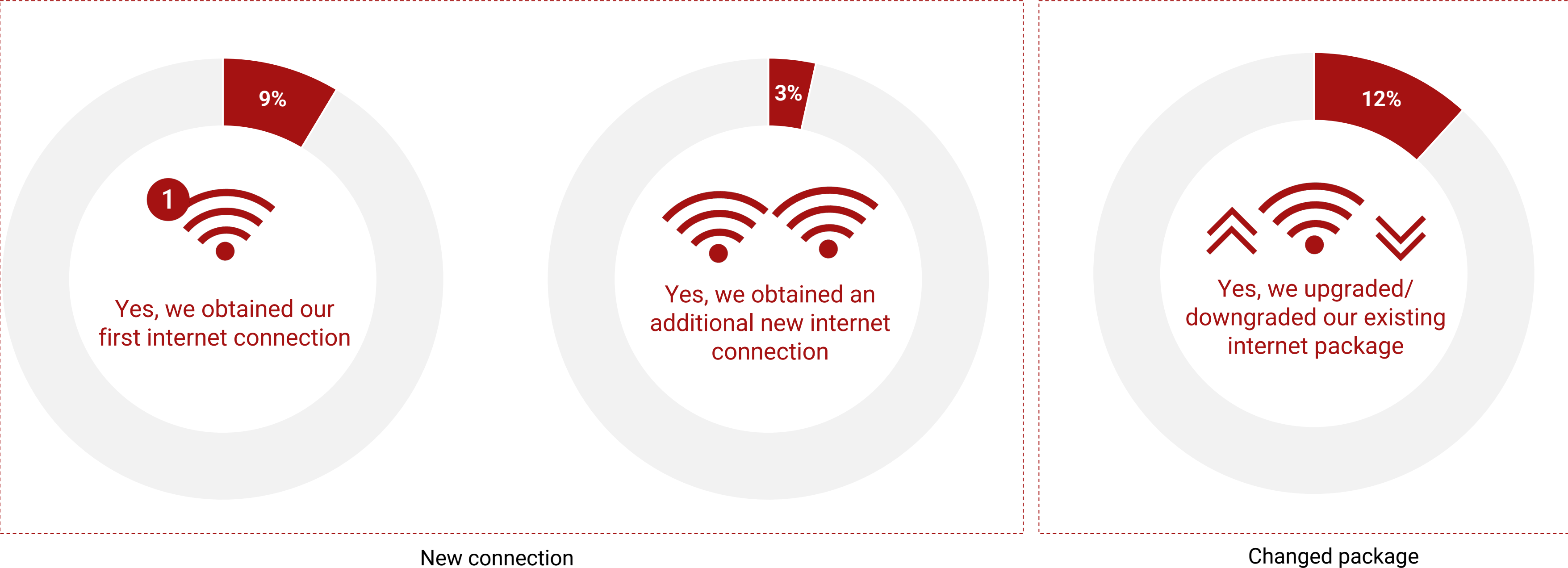
Type of internet connectivity (% of households)



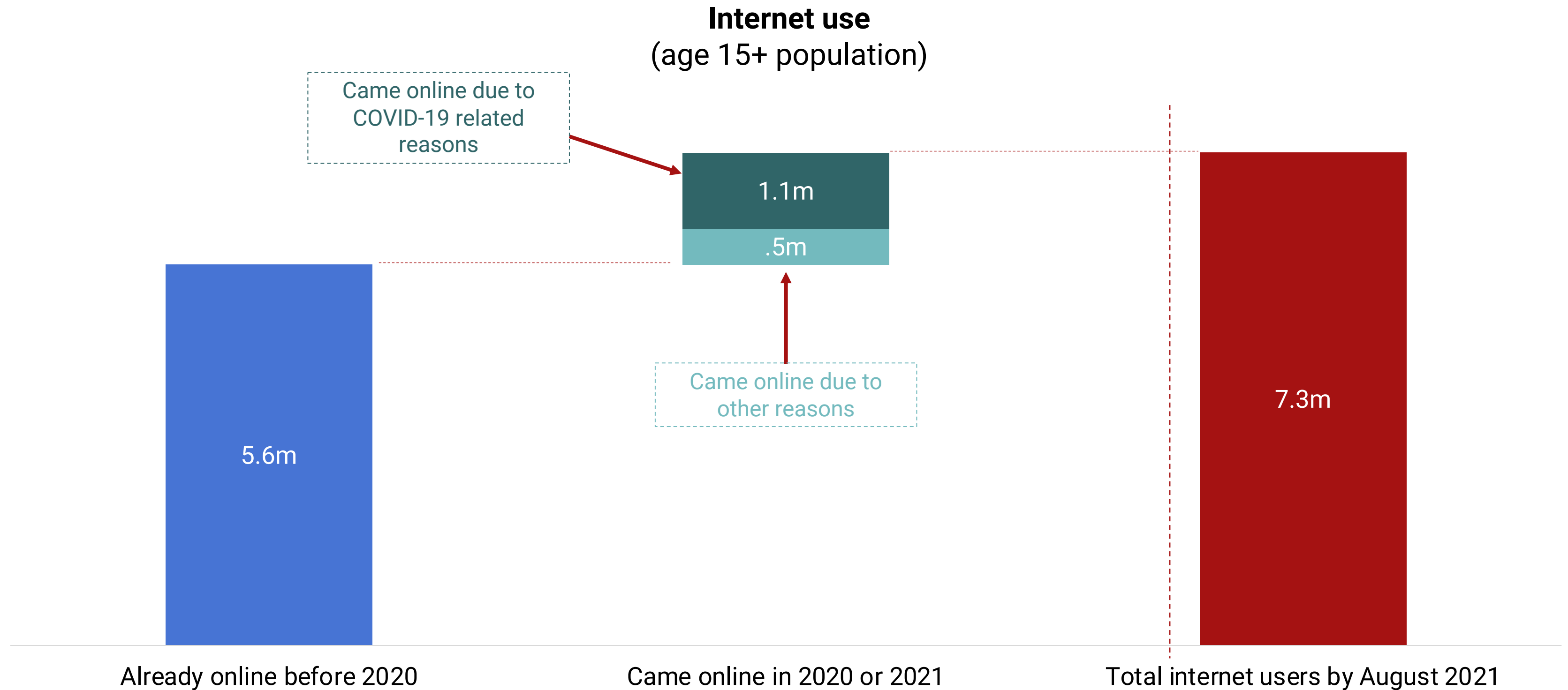
- Q1: Does this household have a working Internet connection, if so what type? - Internet using mobile phones (using the mobile phone itself or using the mobile as a Wi-Fi hotspot)  
 Q2: Does this household have a working Internet connection, if so what type? - Internet using dongles  
 Q3: Does this household have a working Internet connection, if so what type? - Internet access using wired connection such as Fibre/ADSL  
 Q4: Does this household have a working Internet connection, if so what type? - Internet using other wireless connection (4G broadband etc.)

# 12% of households obtained a new internet connection due to the pandemic; another 12% changed their existing internet package

Changes to the internet connection due to COVID-19 crisis  
(% of households)



# 1.6 million individuals came online in 2020 and 2021; 68% (1.1m) of which due to COVID-19 related reasons



An earlier version of this slide set contained an error in this slide. This has been corrected.

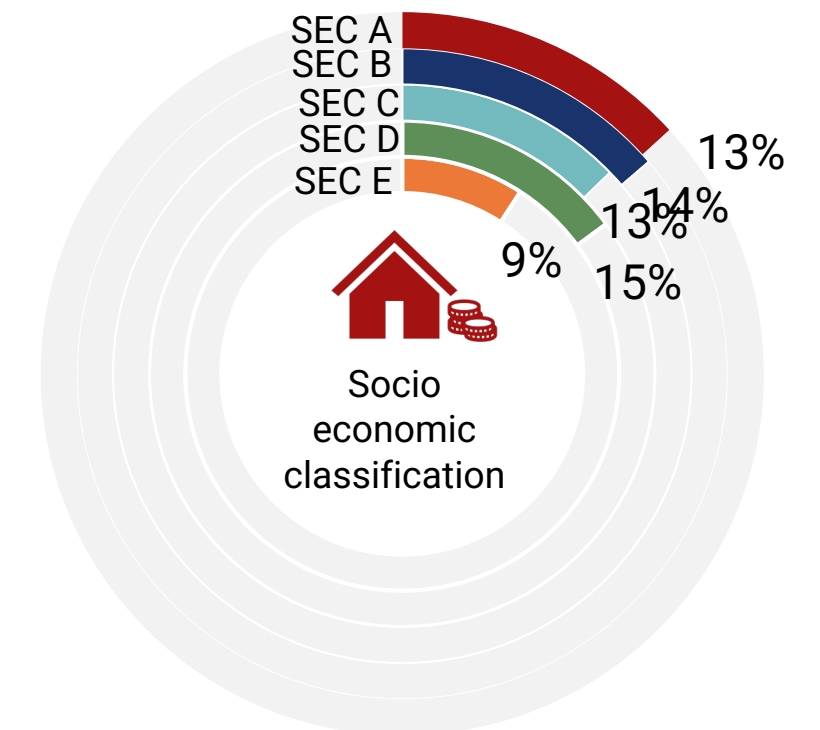
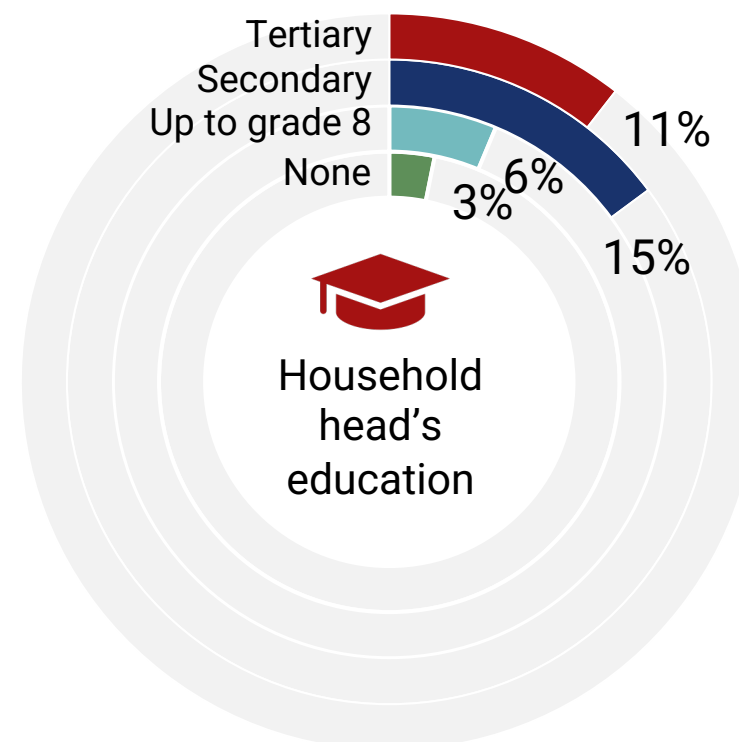
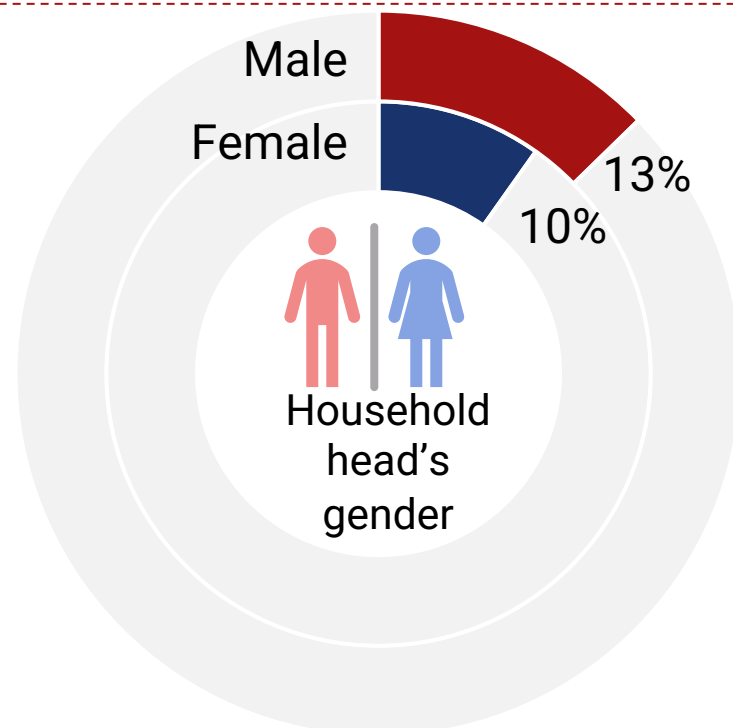
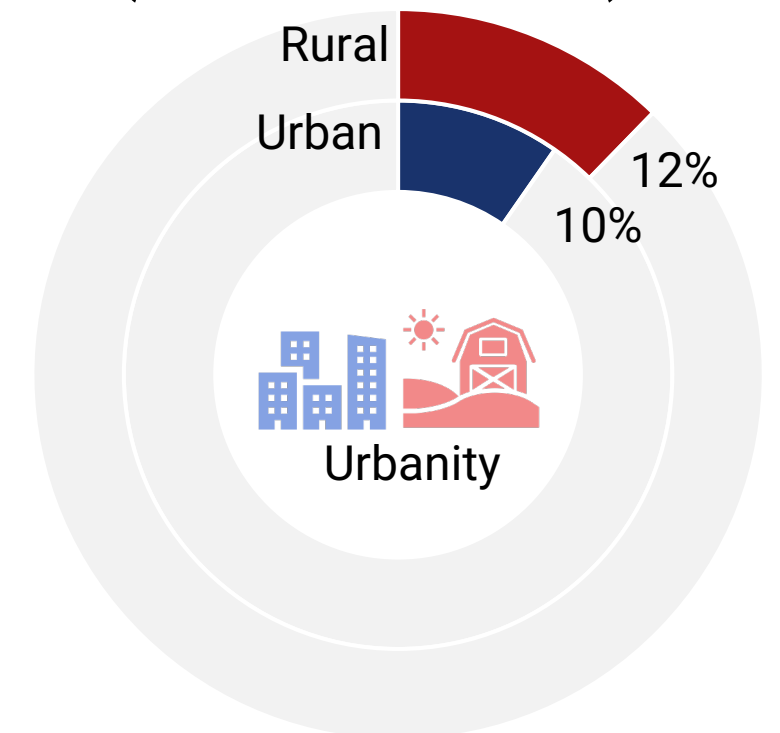
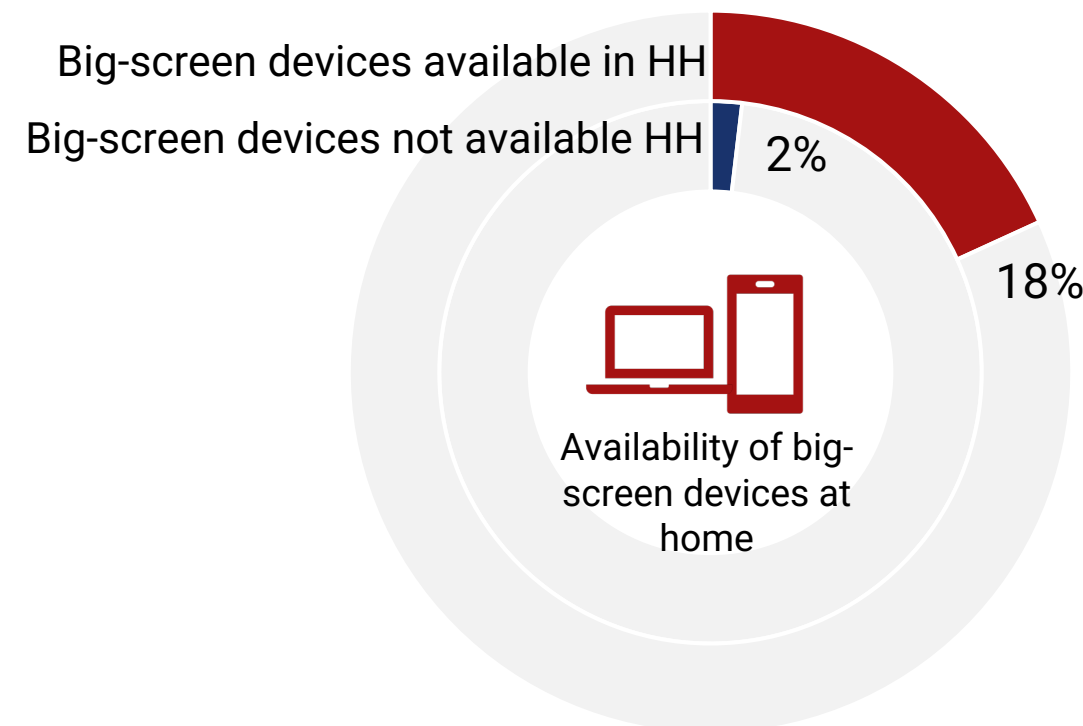
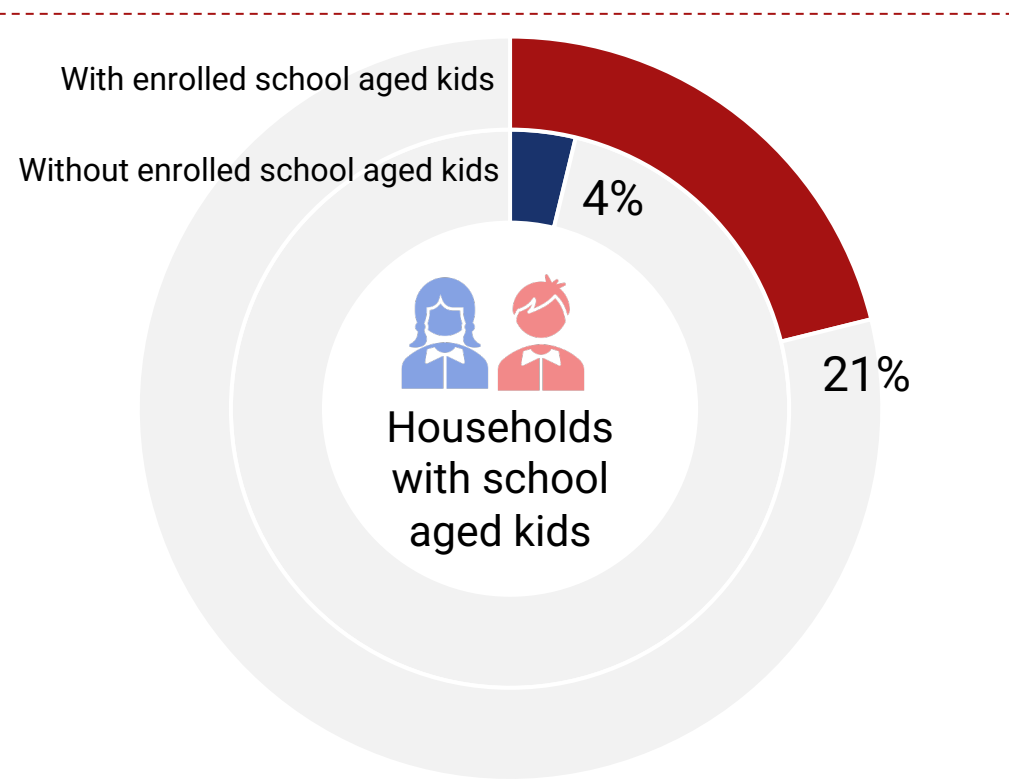
Q1: When did you first use the internet?

Q2 : Did you begin using the internet/get online as a result of the COVID-19 crisis?

Base: All respondents (n=2,501)

# Majority of households that got connected were those with school going children

Households who obtained a new internet connection due to COVID-19 related reasons (% of households)



# Internet use in Sri Lanka below that of countries with lower GNI per capita such as India and Nigeria

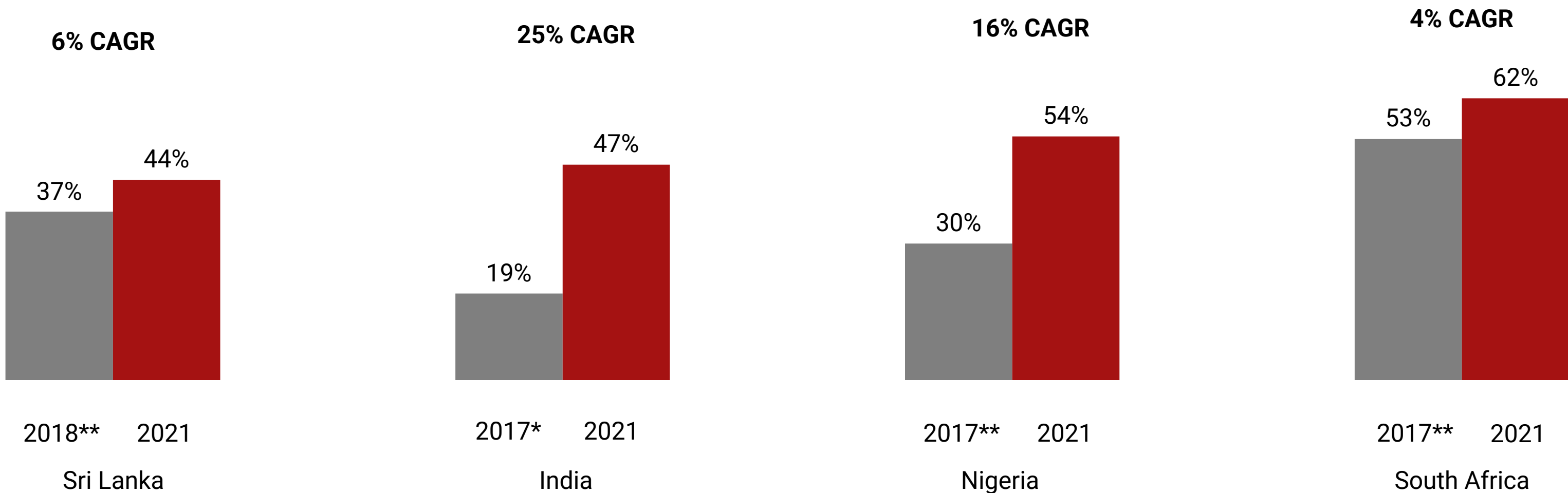
Country	GNI per capita (Atlas method, current USD, 2020)	Internet use (% of 15+ population, 2021)
India	1,900	47%
Nigeria	2,000	54%
Sri Lanka	3,720	44%
South Africa	5,410	62%

Sources: World Bank, LIRNEasia, Research ICT Africa

Q: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

# India's and Nigeria's faster internet take up responsible for Sri Lanka being overtaken

**Internet use**  
(% of age 15+ population)



\* for the ages of 15-65 population including Kerala.

\*\* for the ages of 15-65

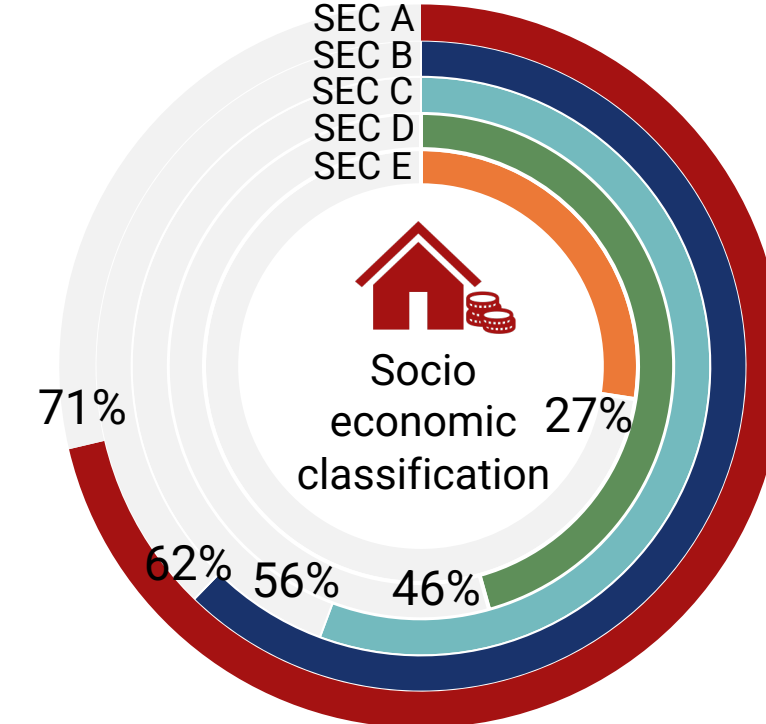
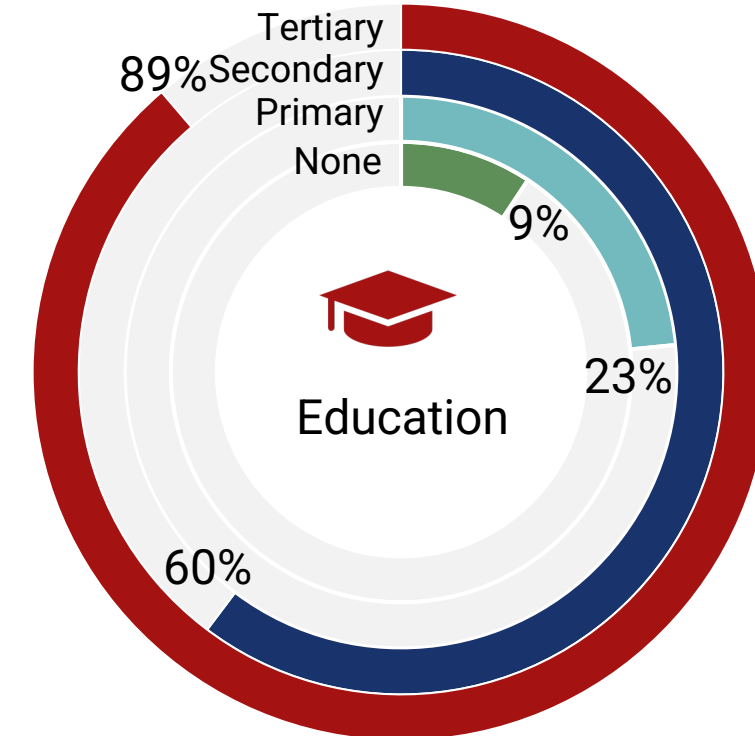
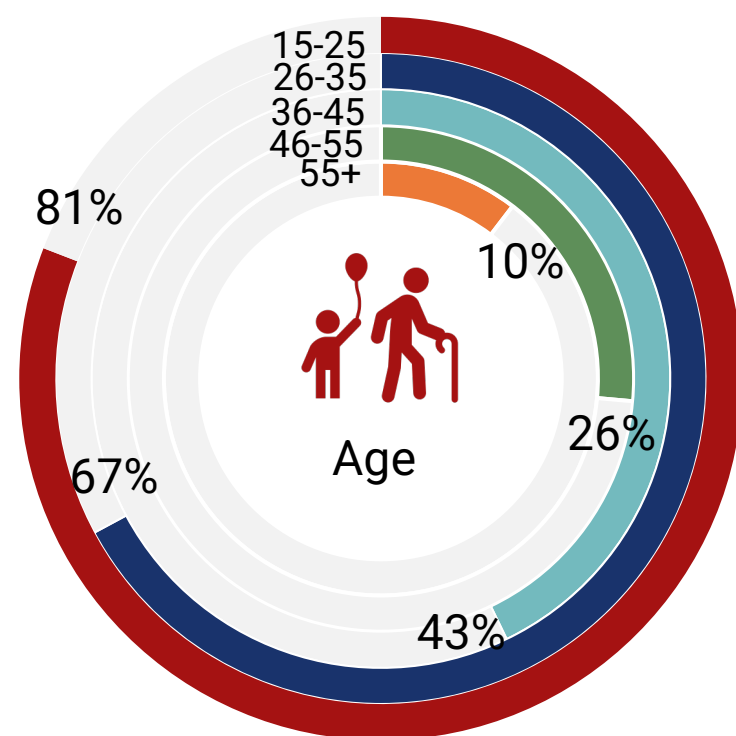
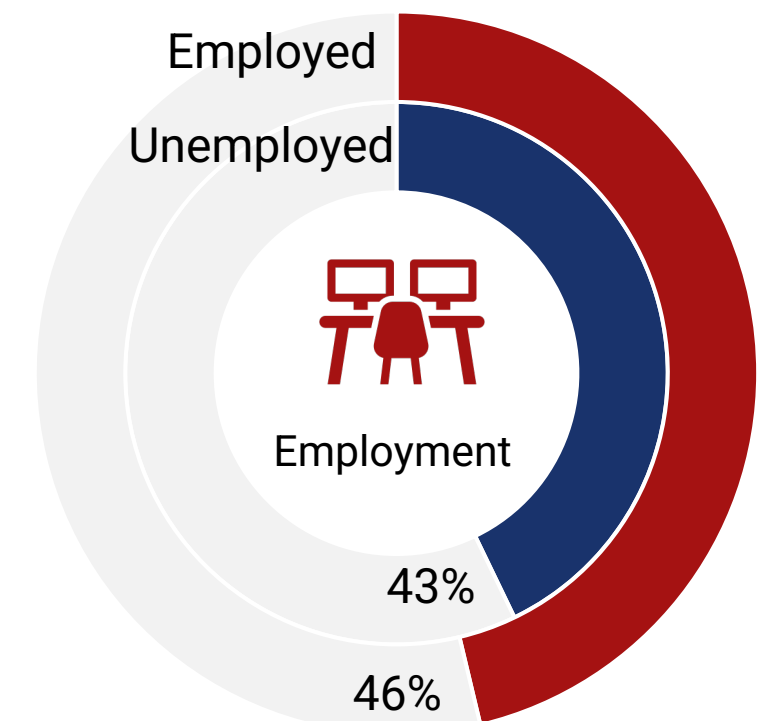
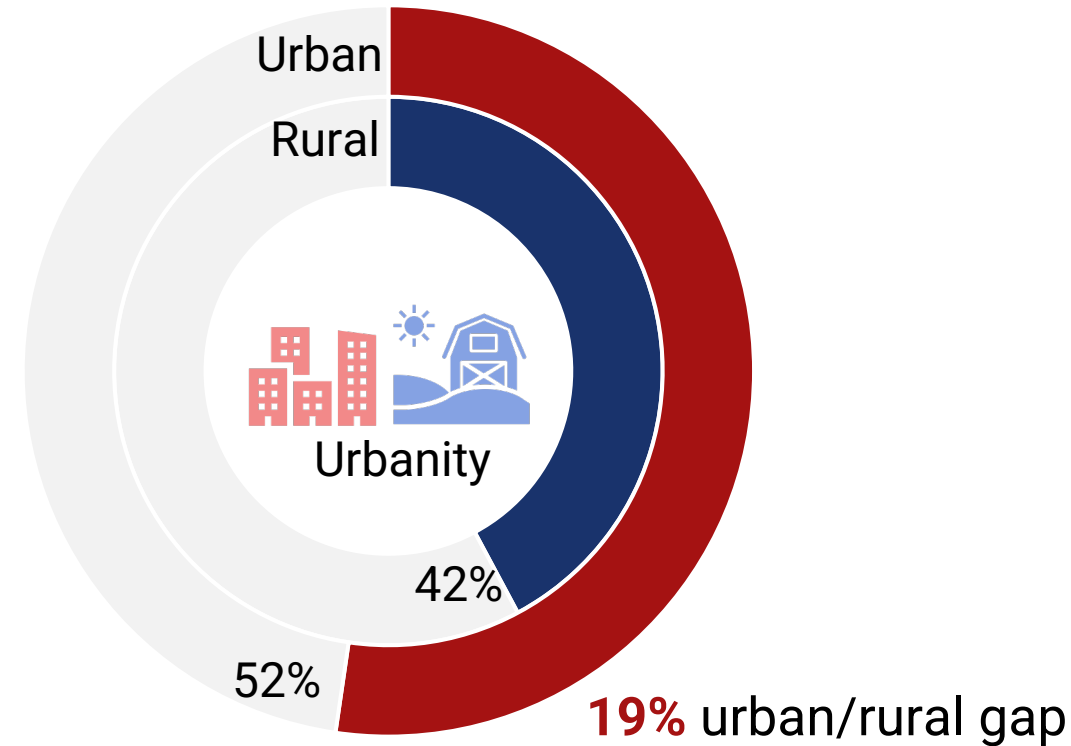
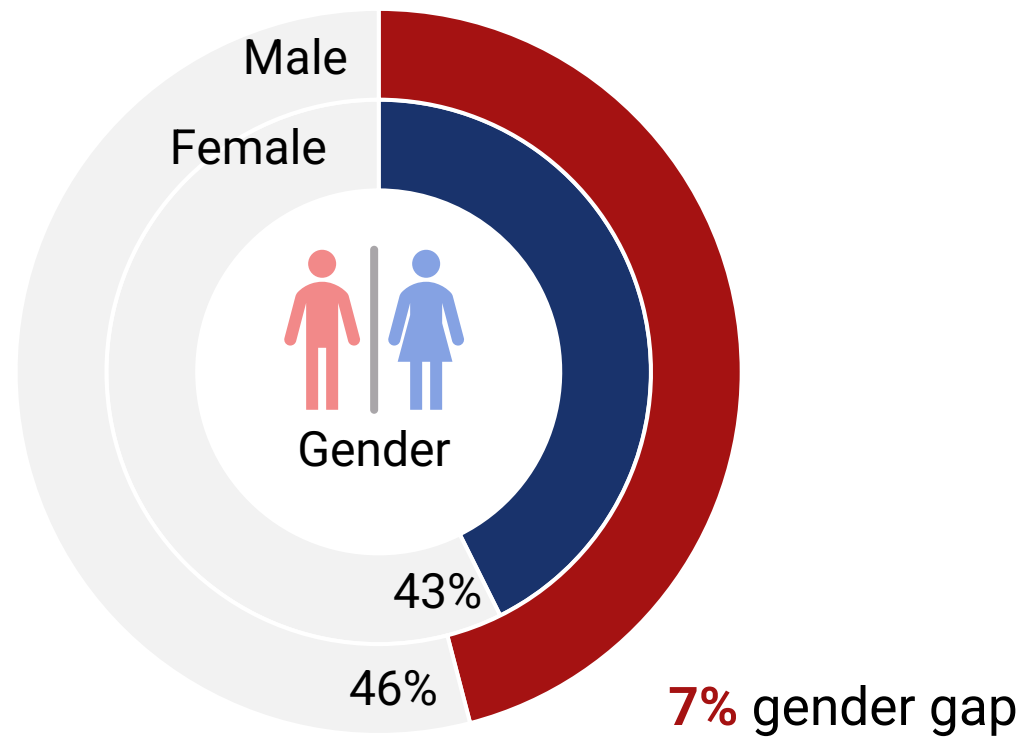
Q: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

Base: All respondents

Sri Lanka: (n=2,017 in 2018) and (n=2,501 in 2021), India: (n=5,069 in 2017) and (n=6,995 in 2021), Nigeria (n=1,706 in 2017) and (n=3,024 in 2021), South Africa : (n=1,815 in 2017) and (n=1,400 in 2021)

# Internet use lower among the poor, less educated, elderly, rural, unemployed and women

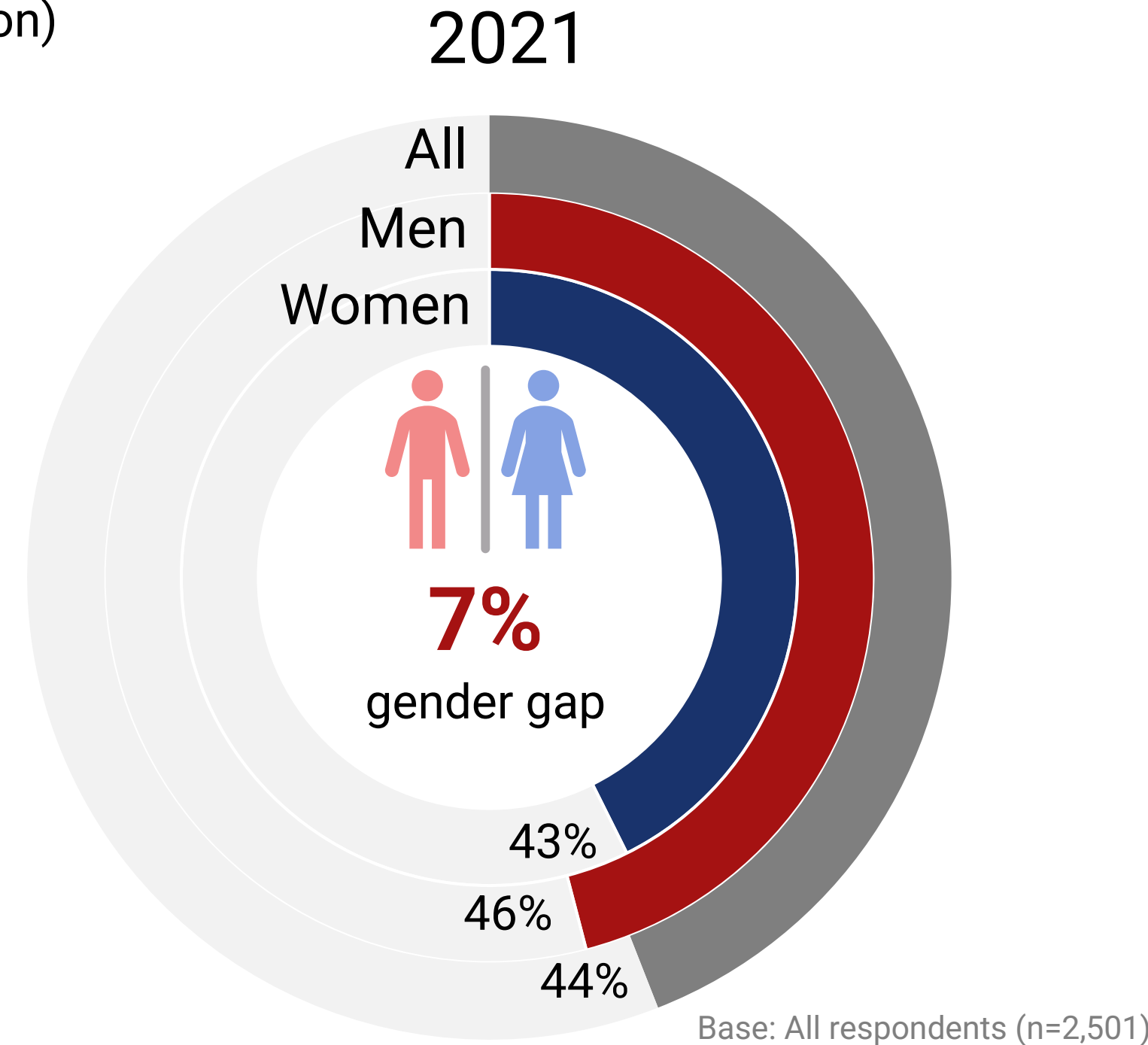
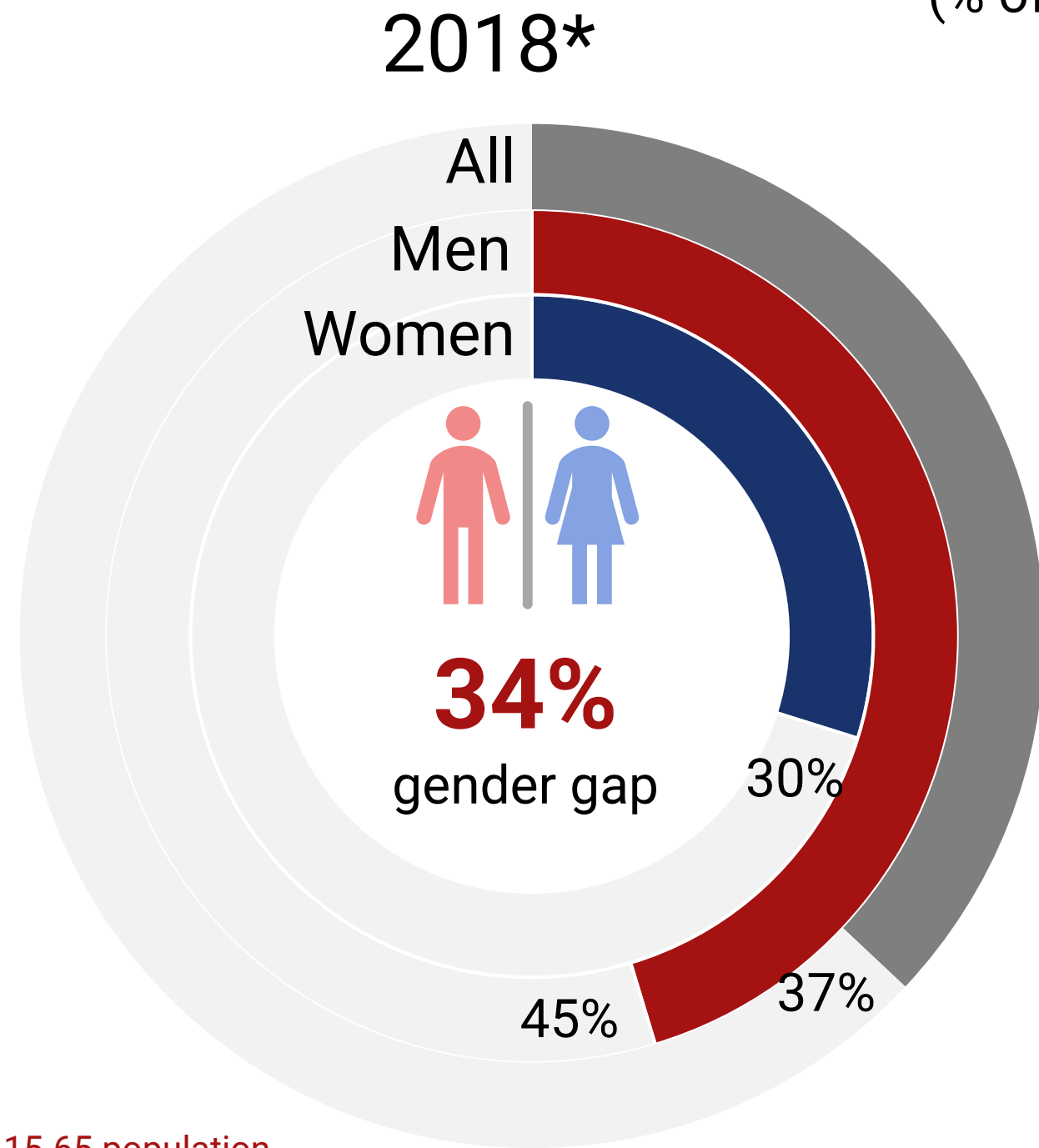
Internet use  
(% of age 15+ population)





# Gaps are reducing -- gender gap fell from 34% to 7% over 4 years

**Internet use**  
(% of age 15+ population)



\* for the ages of 15-65 population

Q: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

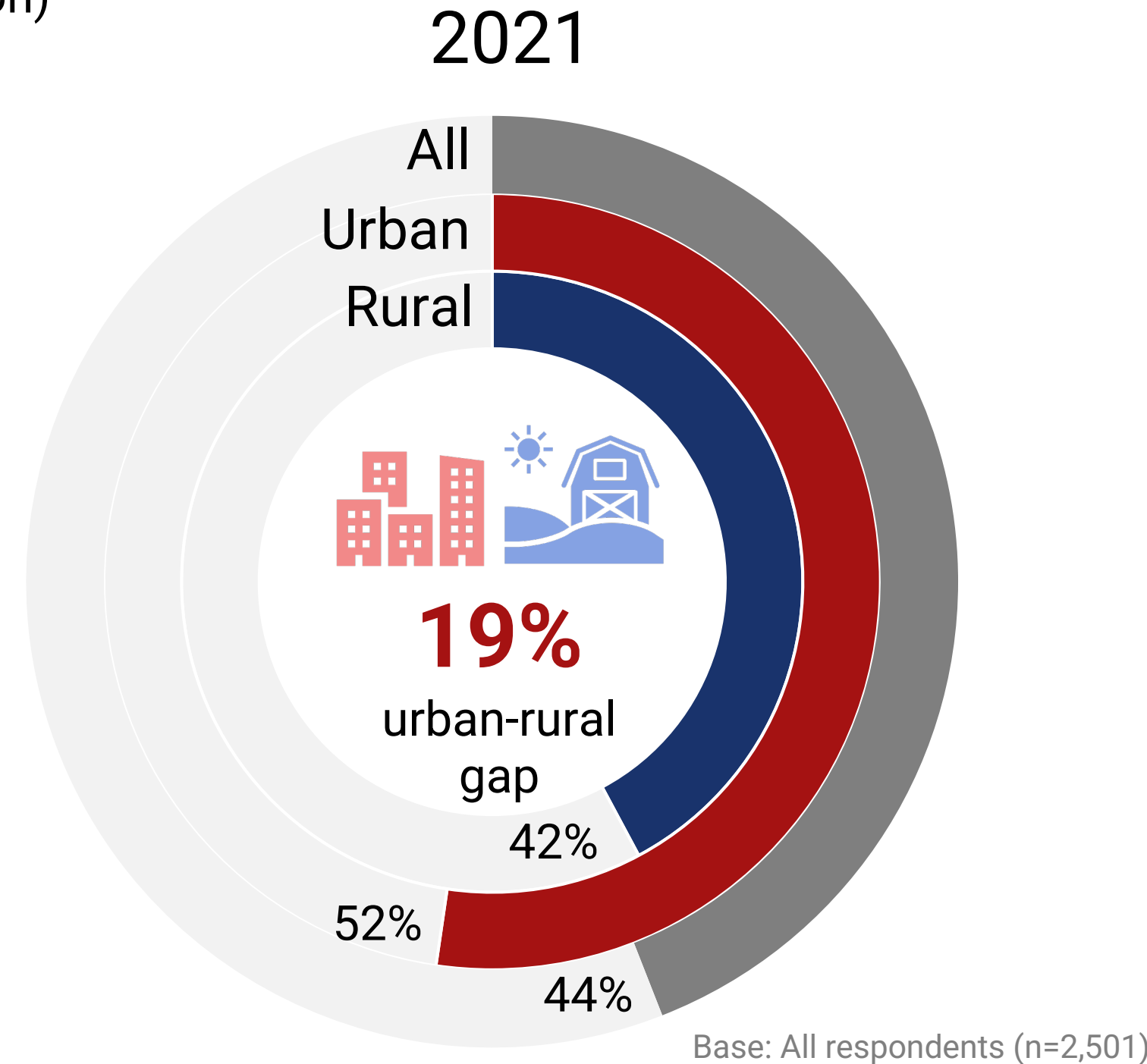
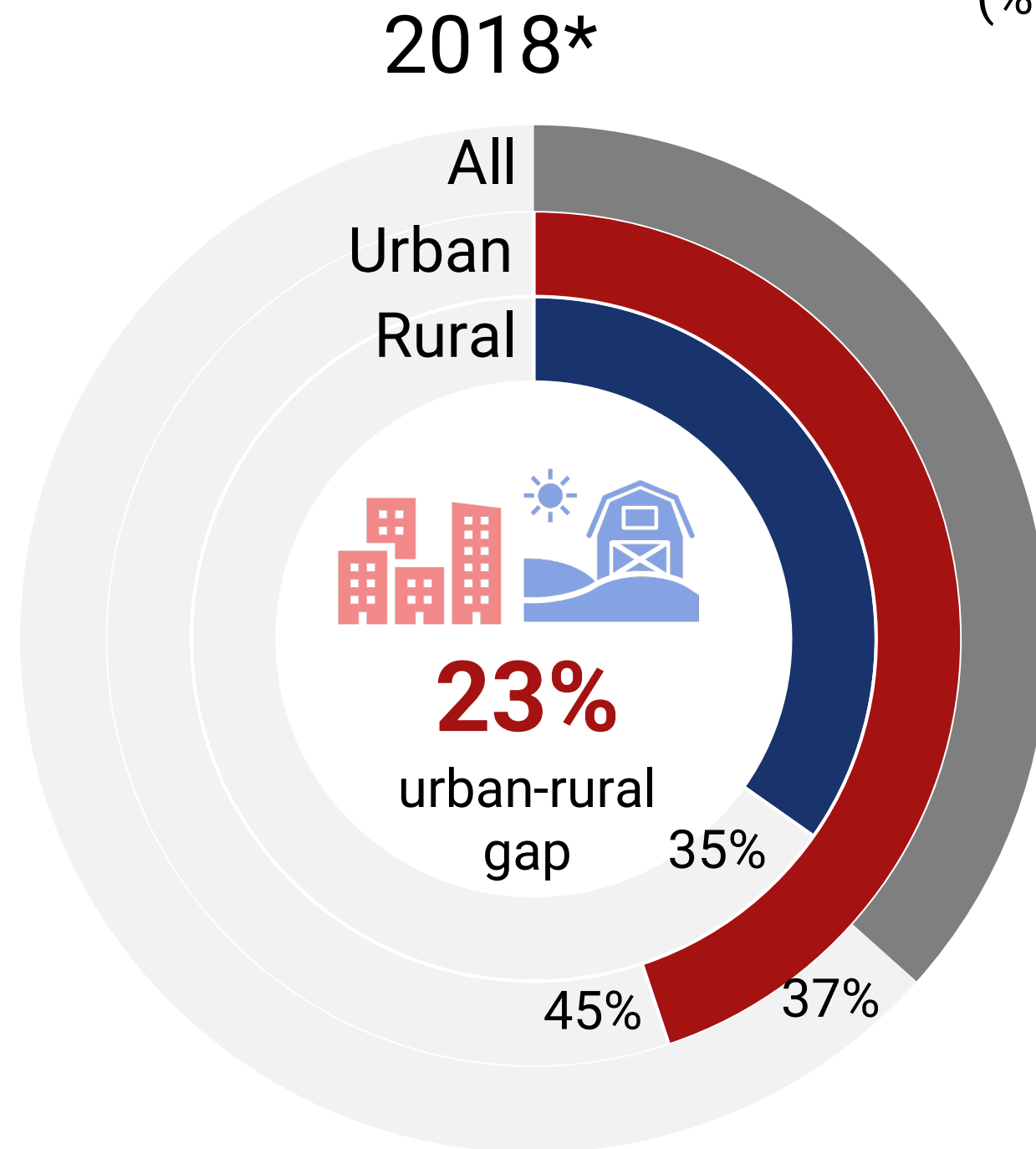
Base: All respondents (n=2,017)

$$\text{Gender gap in Internet use (\%)} = \frac{\text{Male internet users (\% of male population)} - \text{Female internet users (\% of female population)}}{\text{Male internet users (\% of male population)}}$$



# But some other gaps (e.g.: urban-rural) remained

Internet use  
(% of age 15+ population)



\* for the ages of 15-65 population

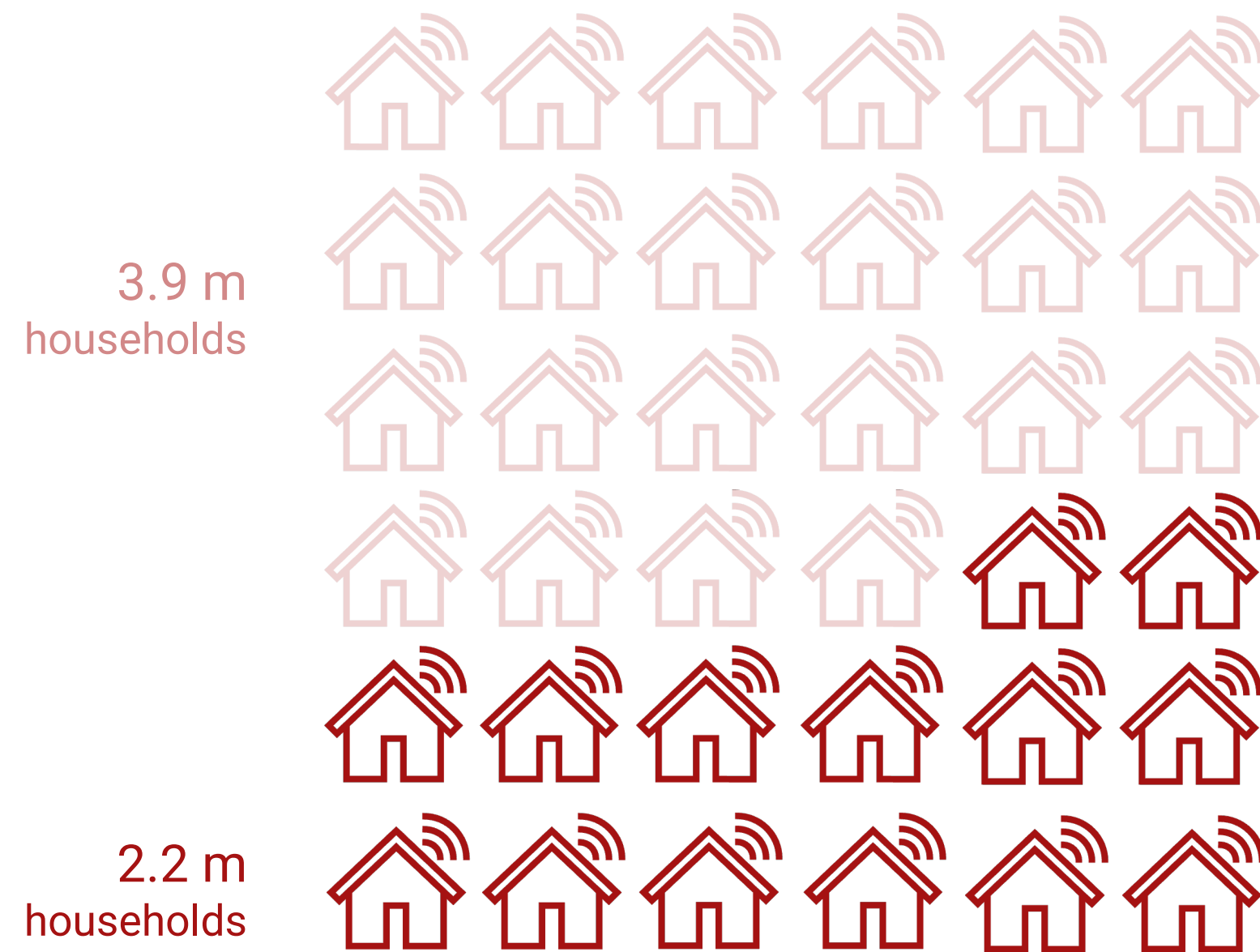
Q: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

Base: All respondents (n=2,017)

$$\text{Urban-rural gap in Internet use (\%)} = \frac{\text{Urban internet users (\% of urban population)} - \text{Rural internet users (\% of rural population)}}{\text{Urban internet users (\% of urban population)}}$$

# But 2.2 million households and over 9.2 million individuals were still unconnected

**39%** of households **did not have an active internet connection**



**56%** of 15 + population **were not internet users**



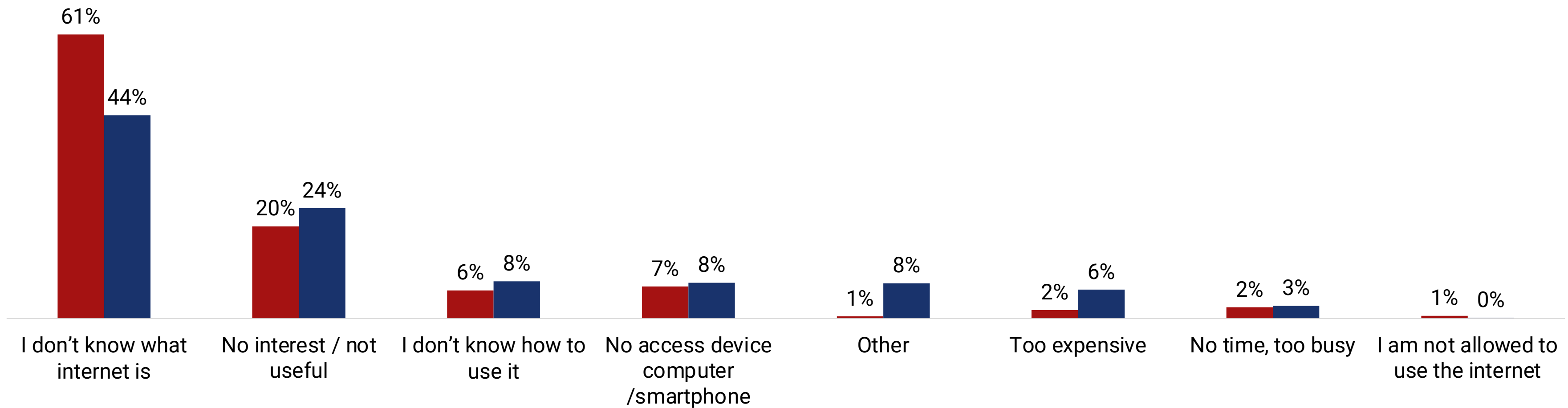
Q1: Does this household have a working Internet connection, if so what type? (one that is exclusive for the household and is accessible to all household members)

Q2: Have you ever used the Internet? (Websites and applications like Google, Facebook, WhatsApp, email, etc.)

Base: All respondents and households (n=2,501) 36

# Lack of awareness remains a key challenge to non-use, but non-users are increasingly citing skills, access to devices and cost as constraints to use

**Main reason for non-use**  
 (% of age 15+ non internet users)  
 ■ 2018\* ■ 2021

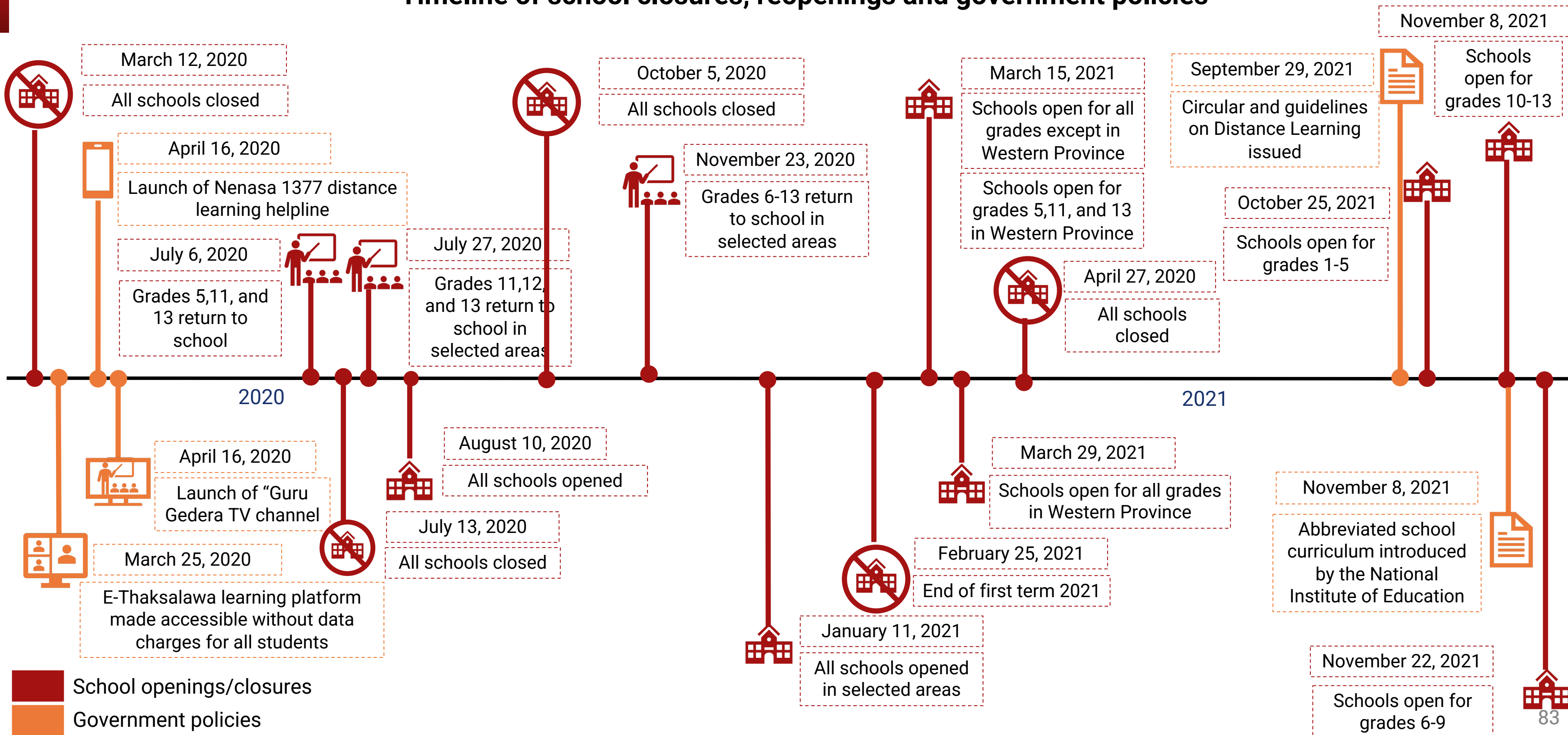




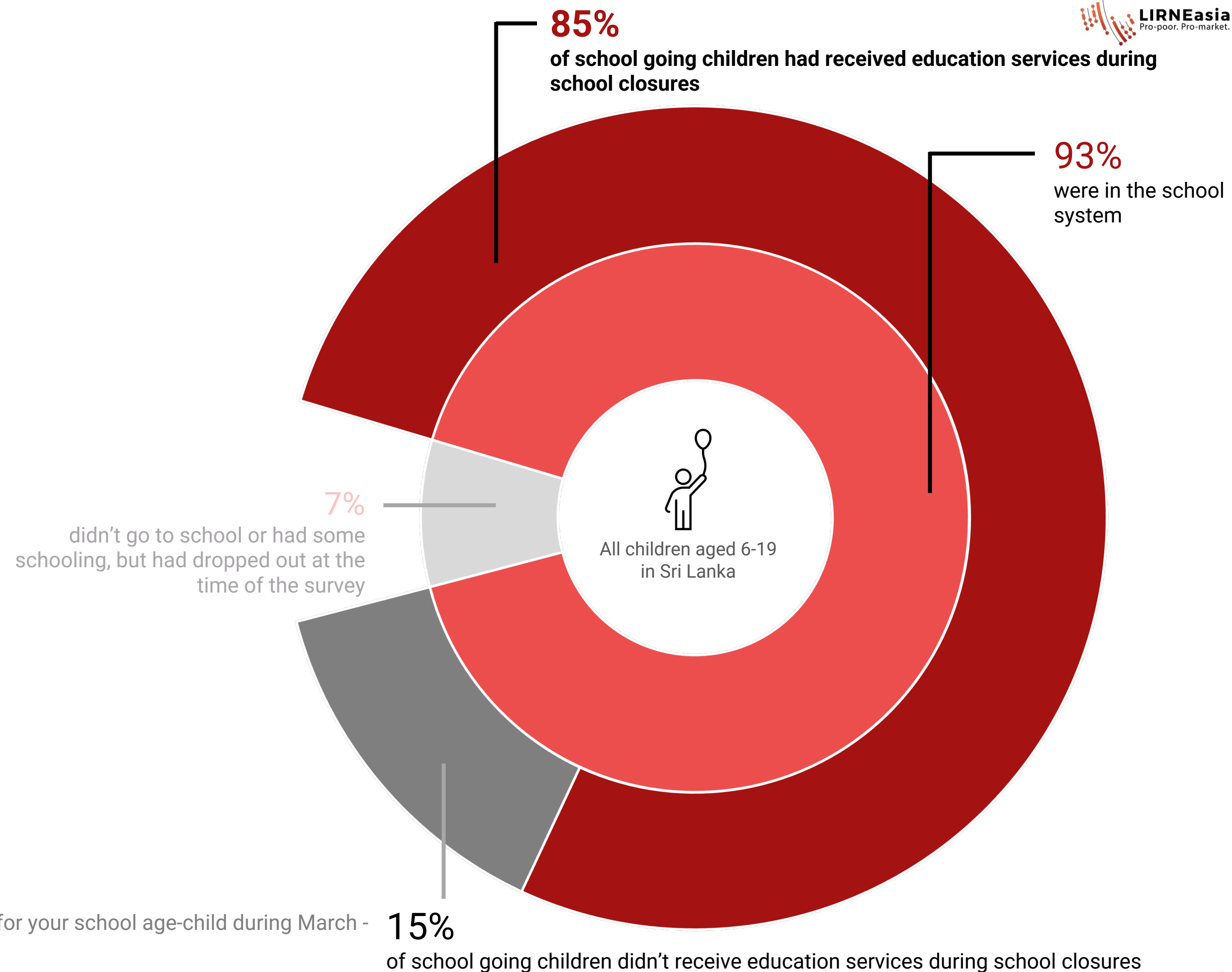
# Education

# COVID-19 led to unforeseen school closures, necessitating new policies and programmes to be launched

## Timeline of school closures, reopenings and government policies



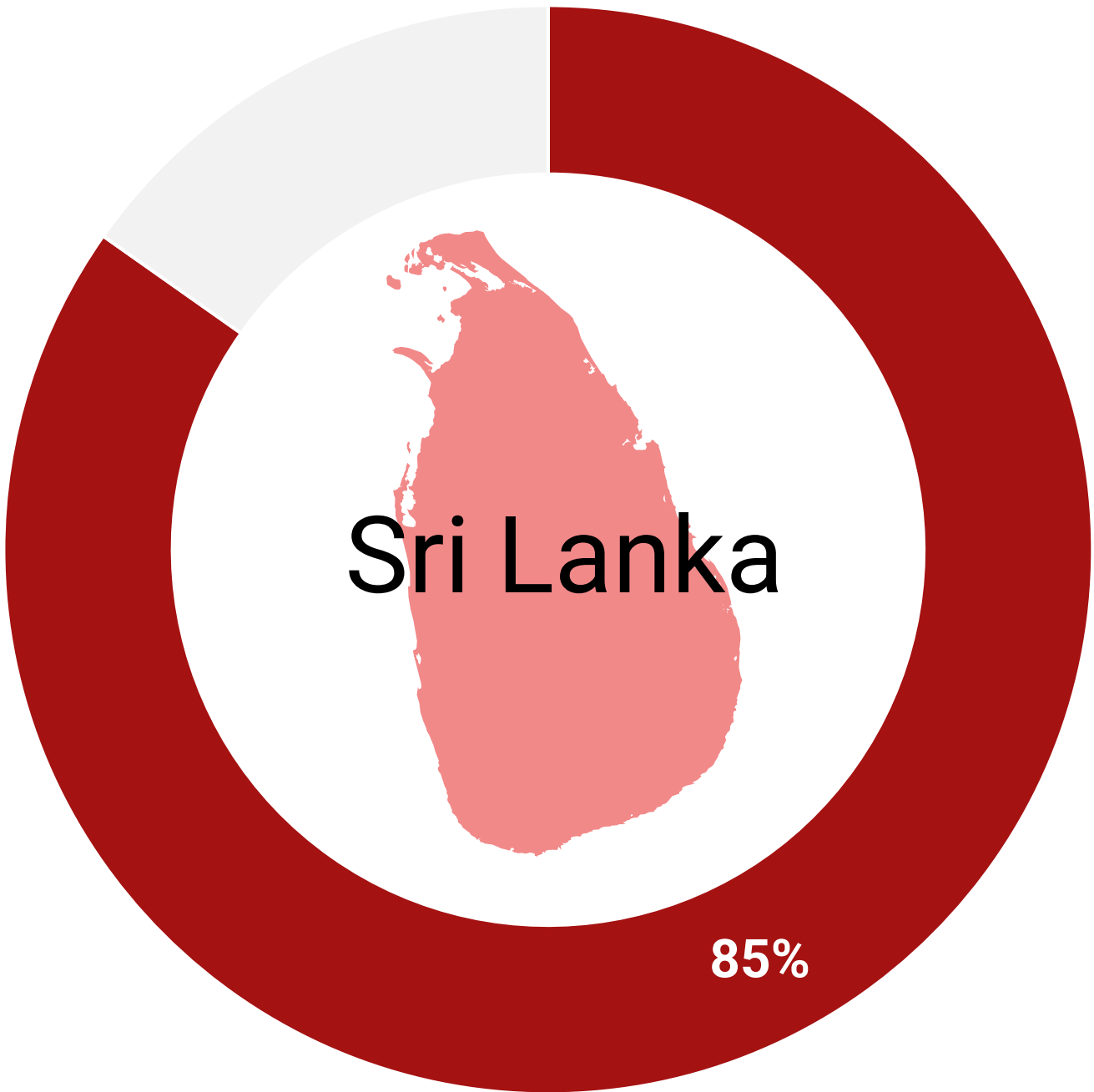
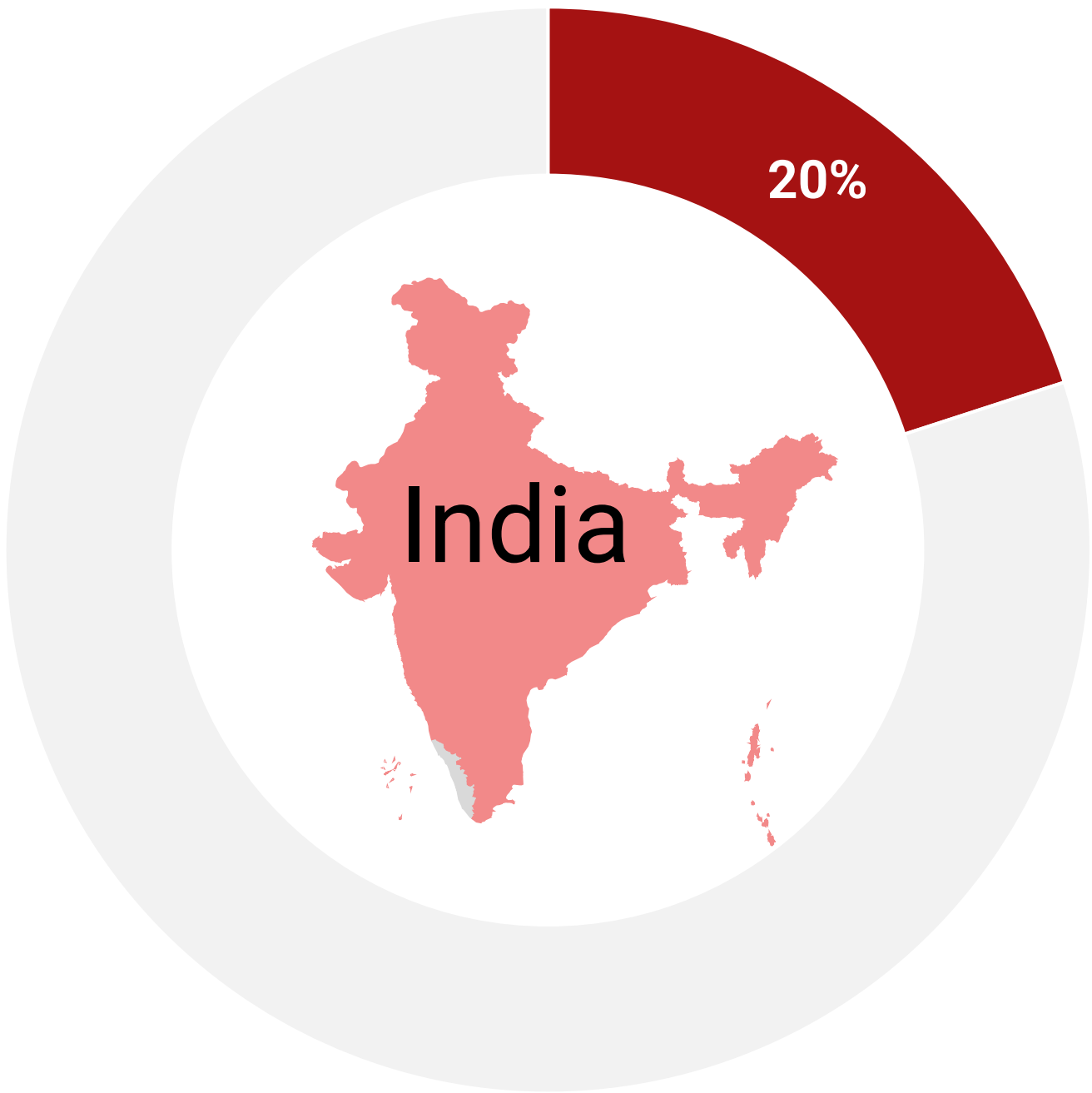
**85%** of school going children had received education services during school closures between March and July 2020



Q: Did you receive any of the following education services for your school age-child during March - July period when schools were closed?  
Base: School aged children (n=1,963)

# Sri Lanka greatly outperformed India in access to education during school closures

**Education during the lockdown**  
(% of enrolled school-aged children)



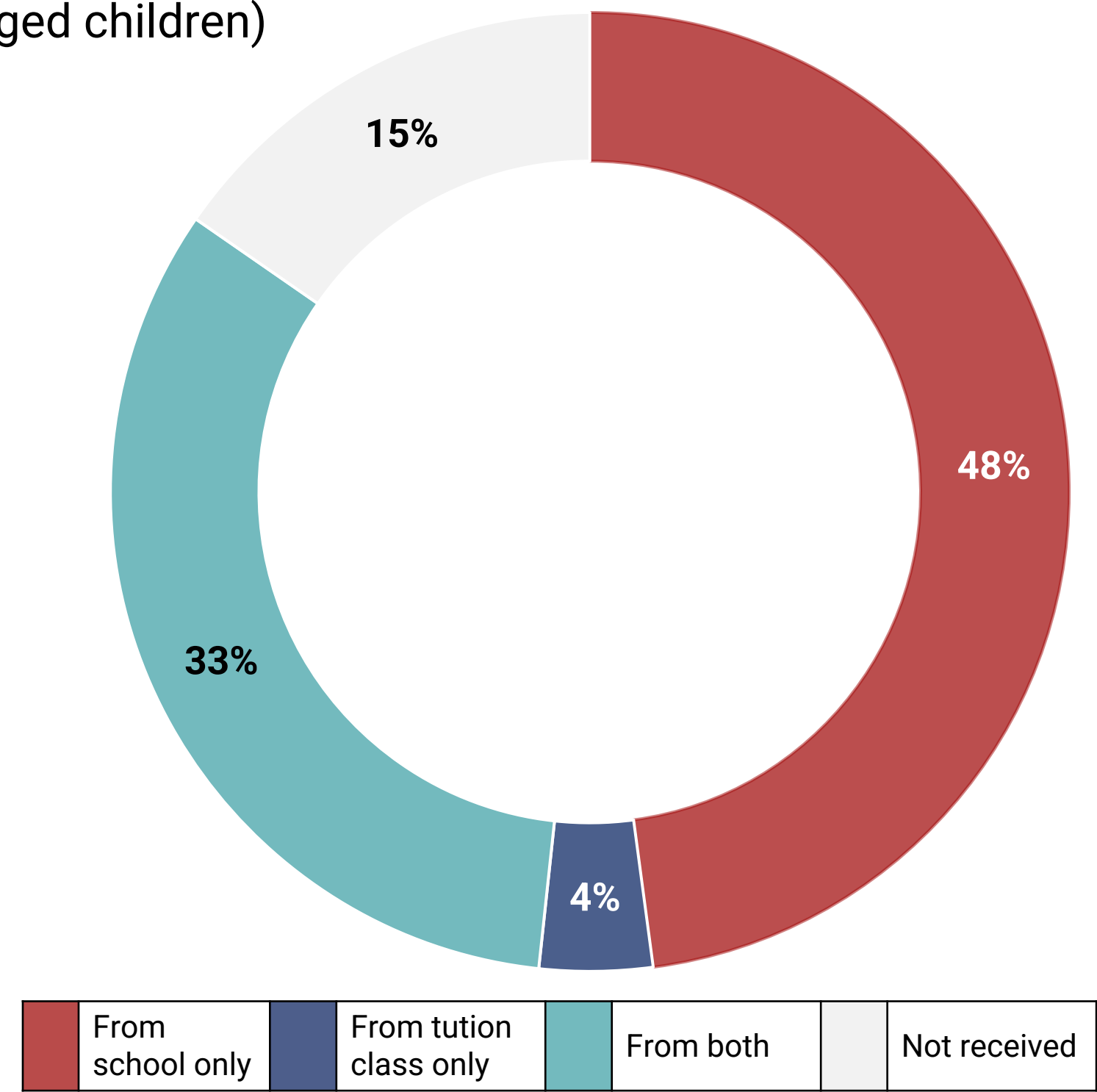
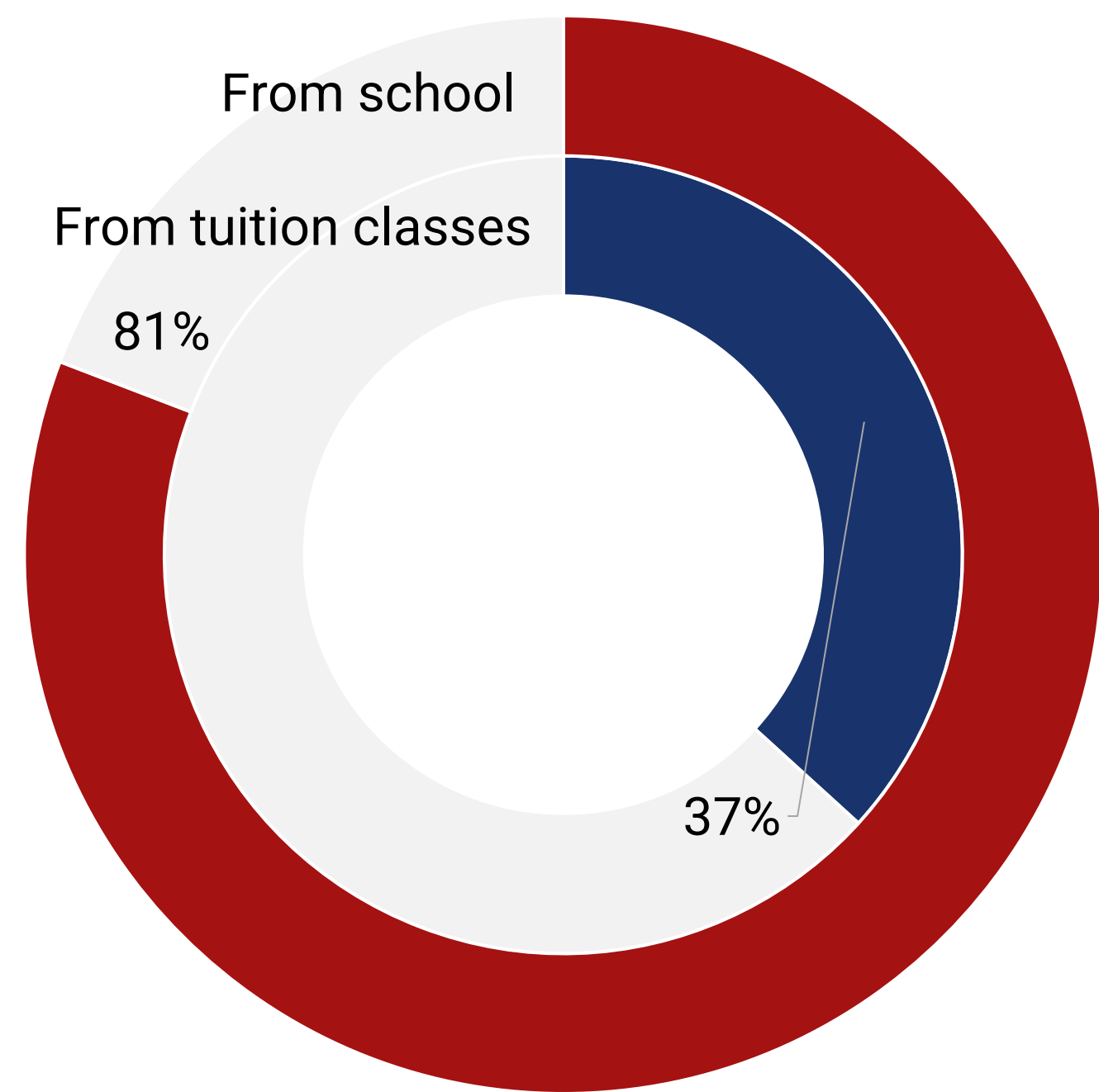
India: When schools were closed due to COVID-19, did any child in the household receive any educational services from the school they attended or from the tuition providers?  
Sri Lanka: Did you receive any of the following education services for your school age-child during March -July period when schools were closed?

Base: Enrolled school-aged children(India n = 6,716)(Sri Lanka: n=1,809)86



# 81% of the students received remote education from school; 37% relied on tuition classes

Education during the lockdown  
(% of enrolled school-aged children)

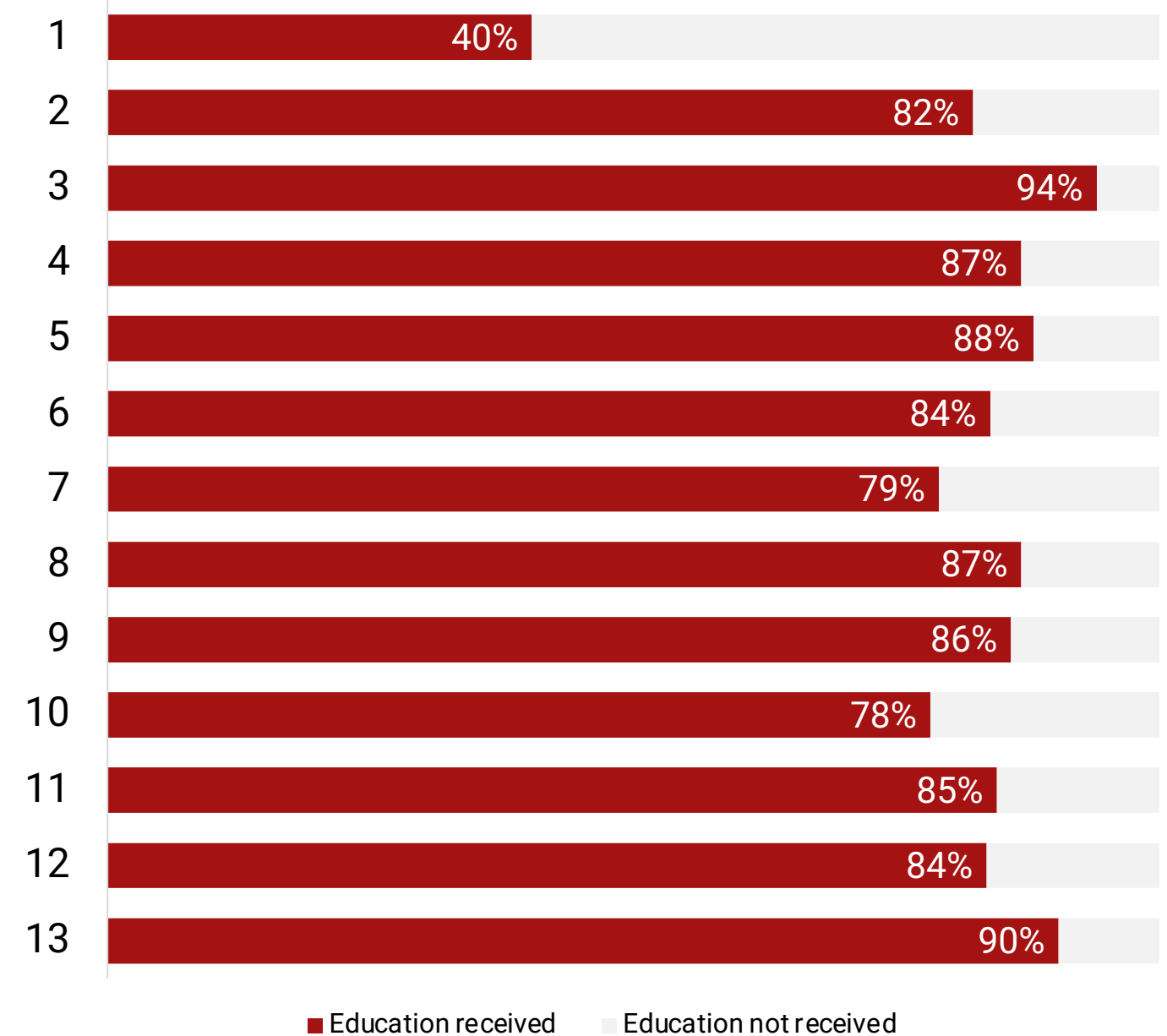
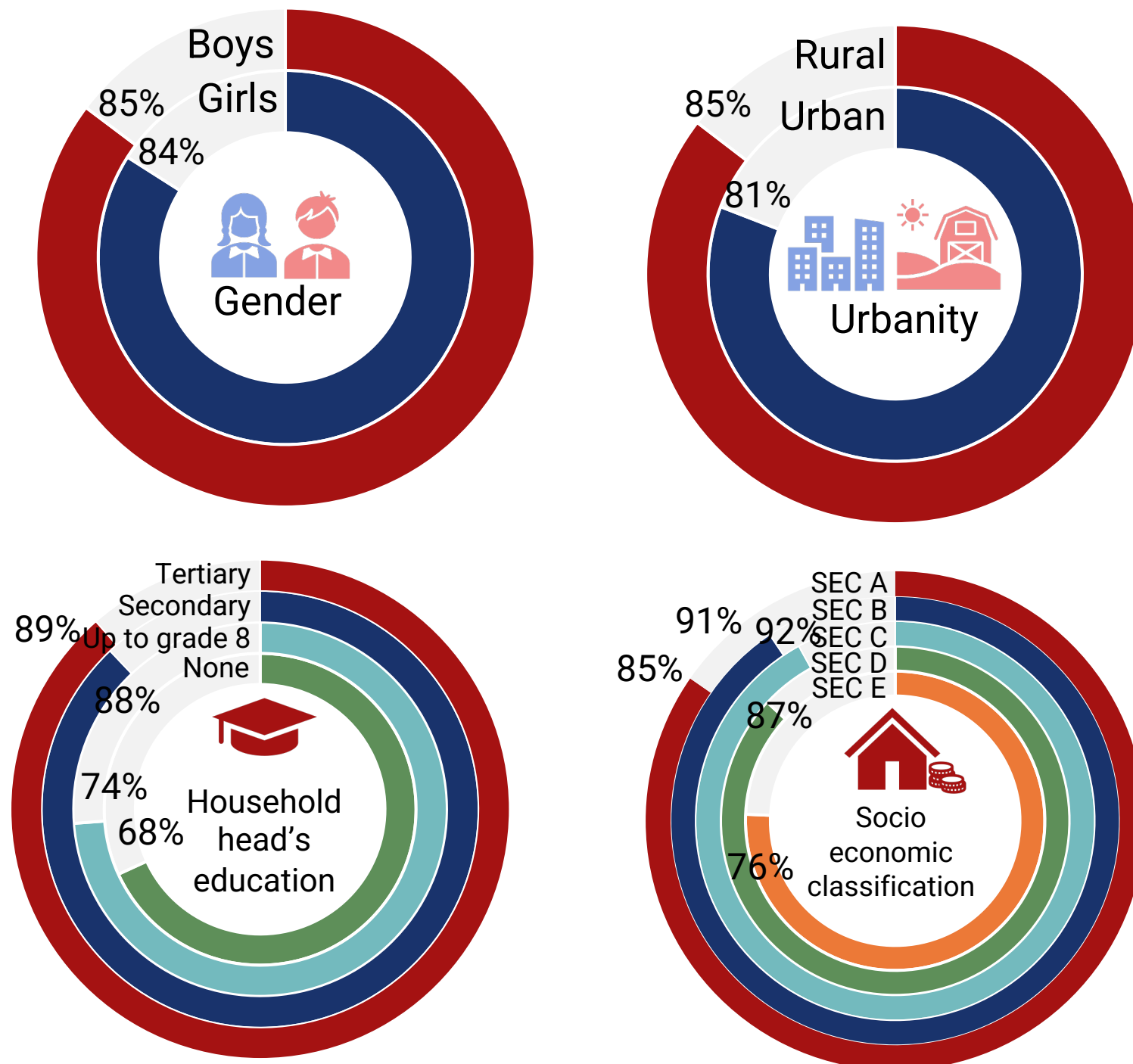




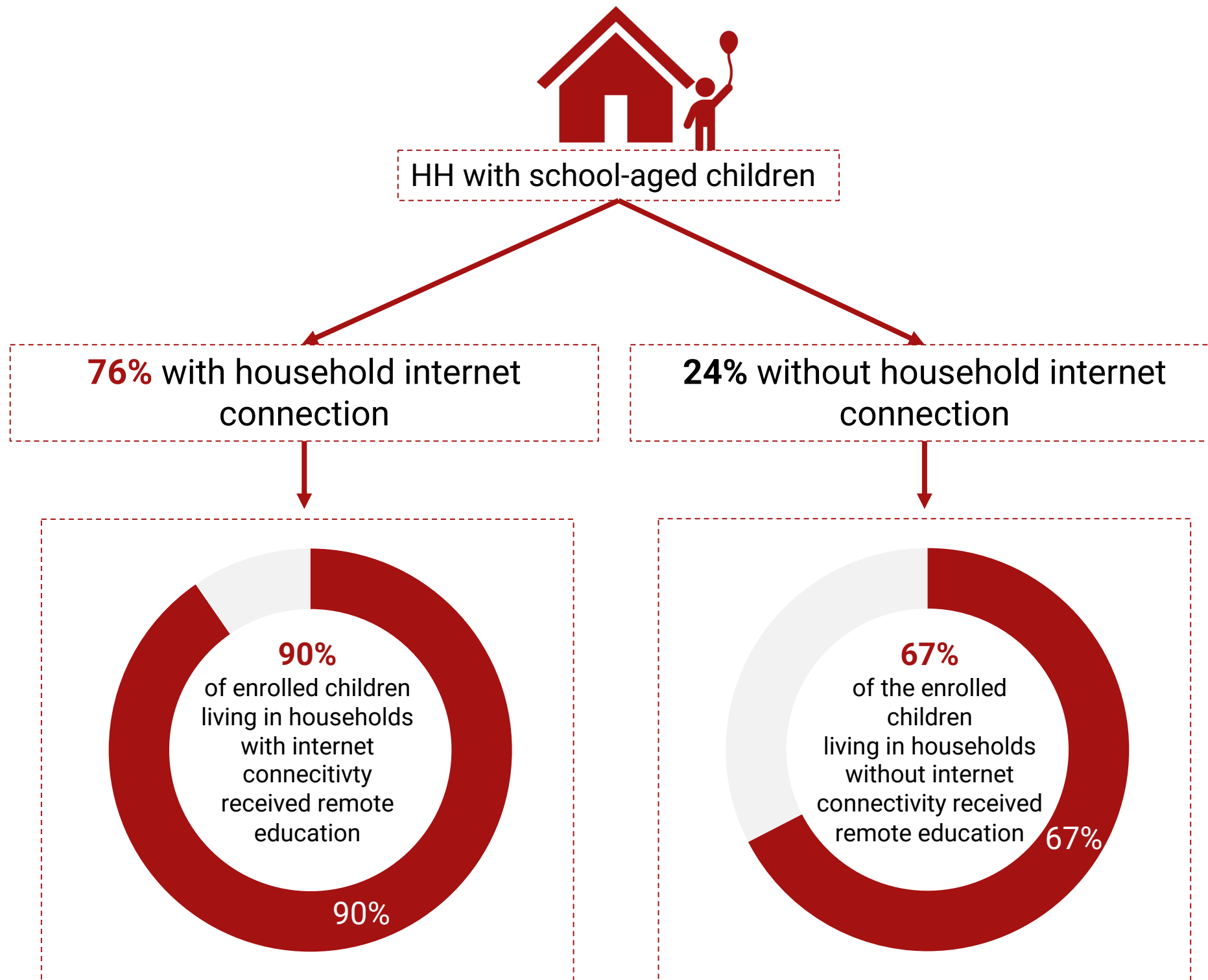
# Access to education was greater among children from households with more educated household heads, but age, gender and urban-rural gaps were minimal

## Education during the lockdown (% of enrolled school-aged children)

### Grade of the student



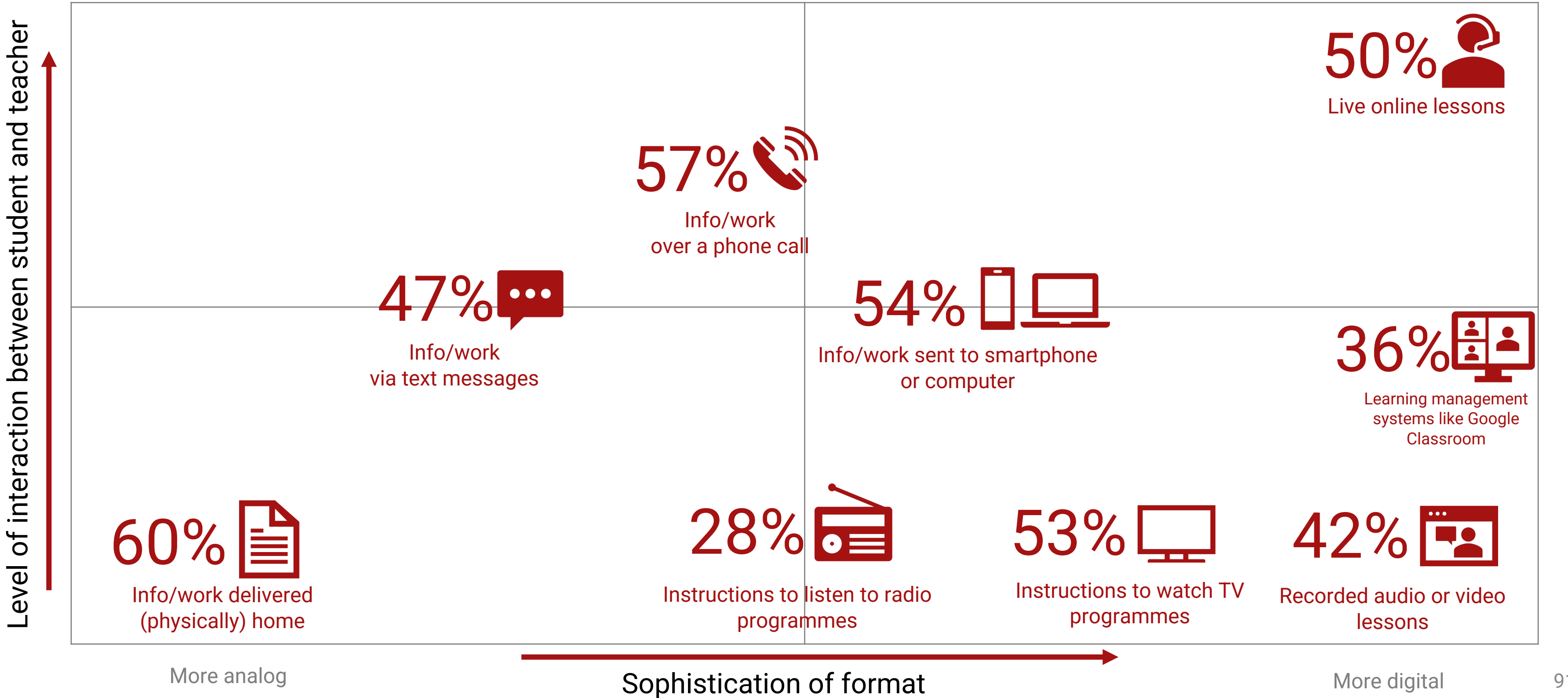
# Internet connectivity was a key factor in facilitating remote education



- **Connected** households more often:
  - Richer
  - Have more educated household heads
  - Have big-screen devices
- **Unconnected** households more often:
  - Poor
  - Have less educated household heads
  - Don't have big-screen devices

# Students' remote "learning" experience varied vastly

Channels of receiving education (% of enrolled school aged children)

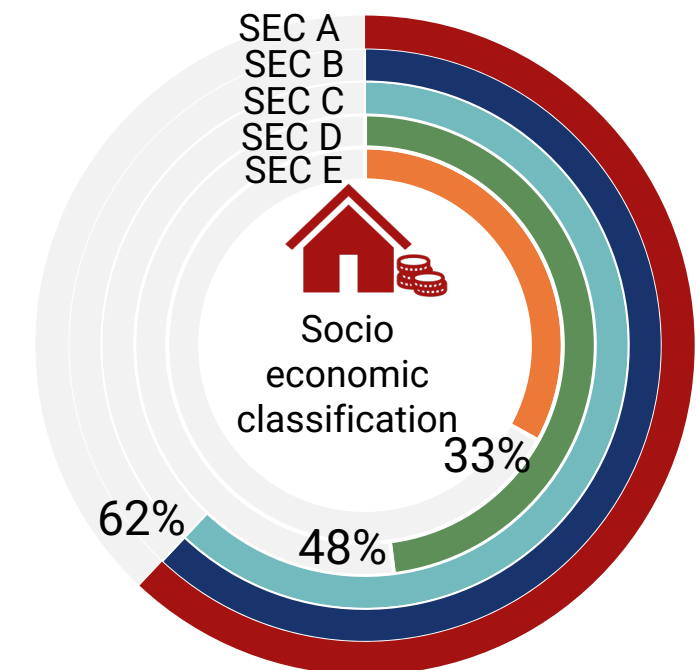
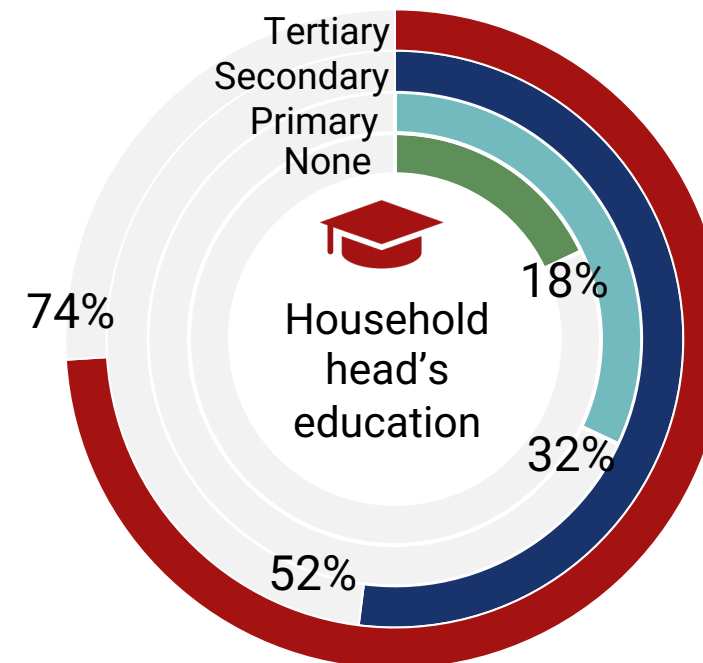
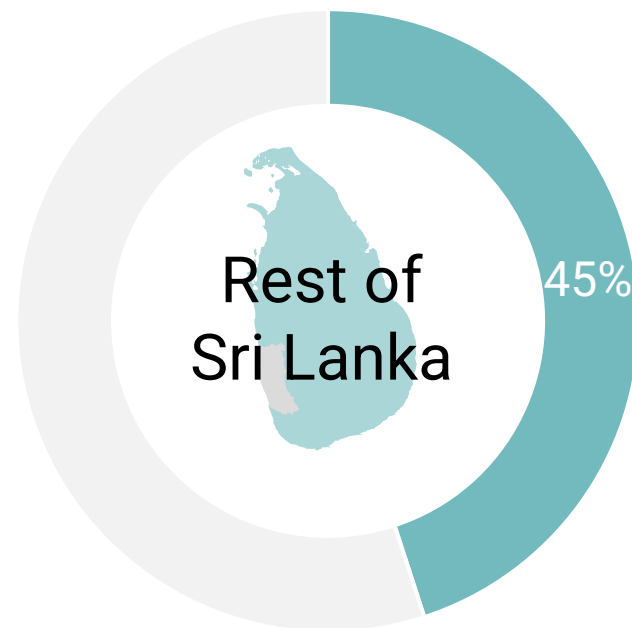
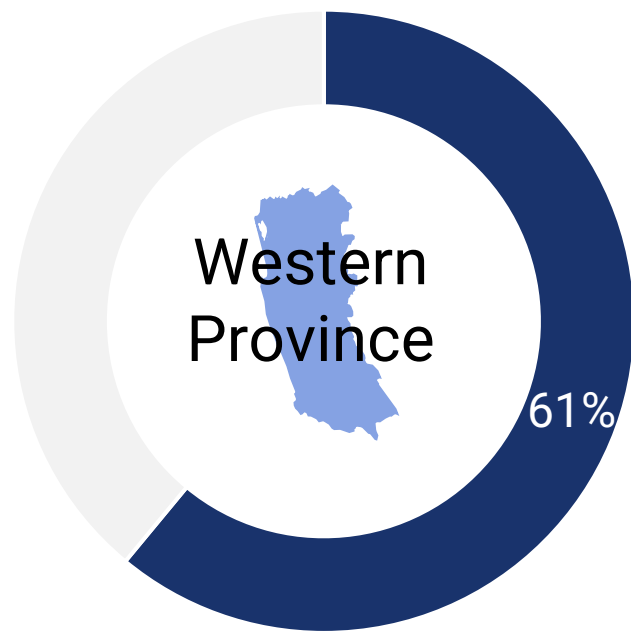


# Feedback is important for learning: not everyone got feedback during their remote learning experience



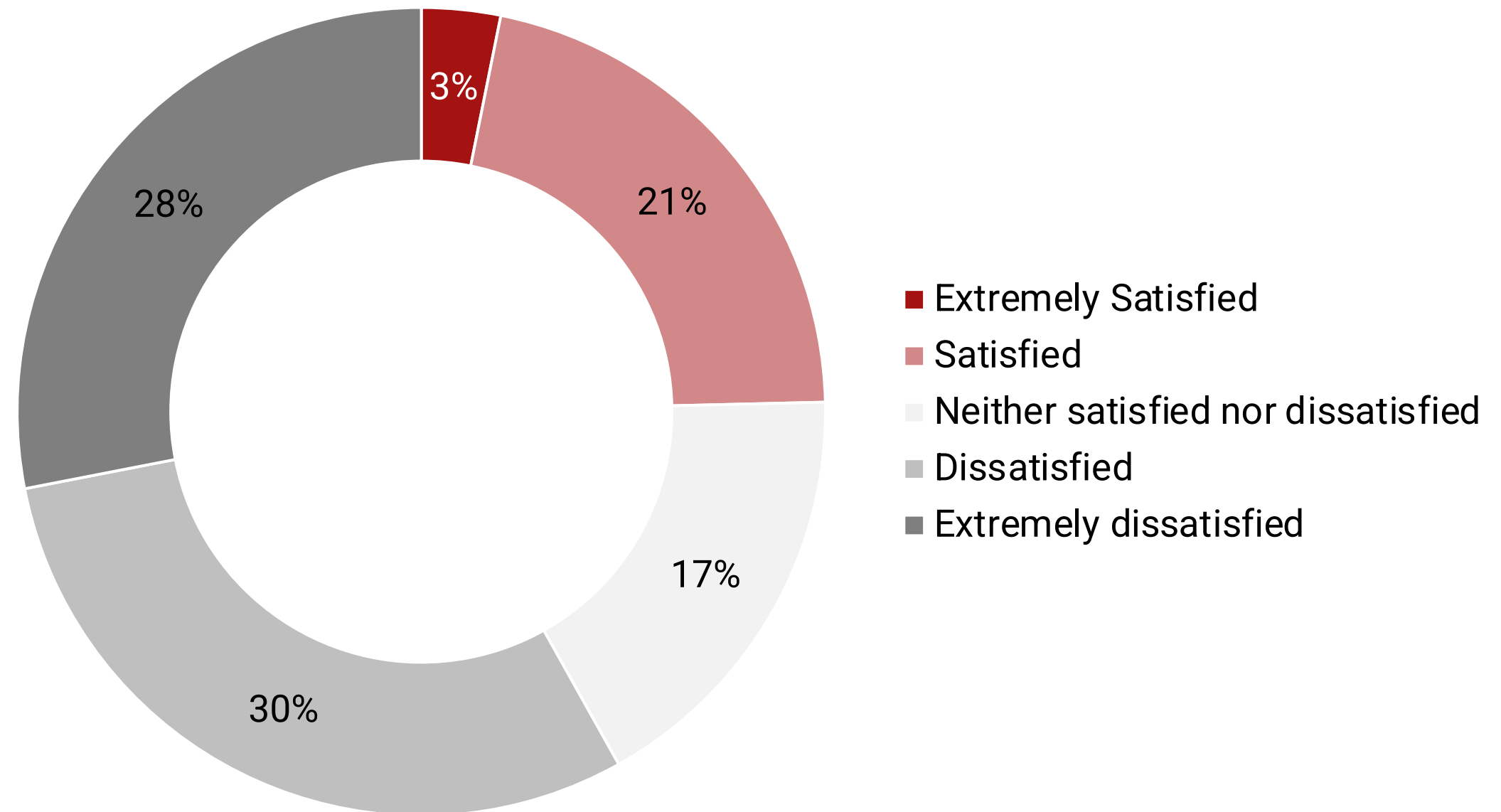
48%

of enrolled children during school closures received feedback from teachers



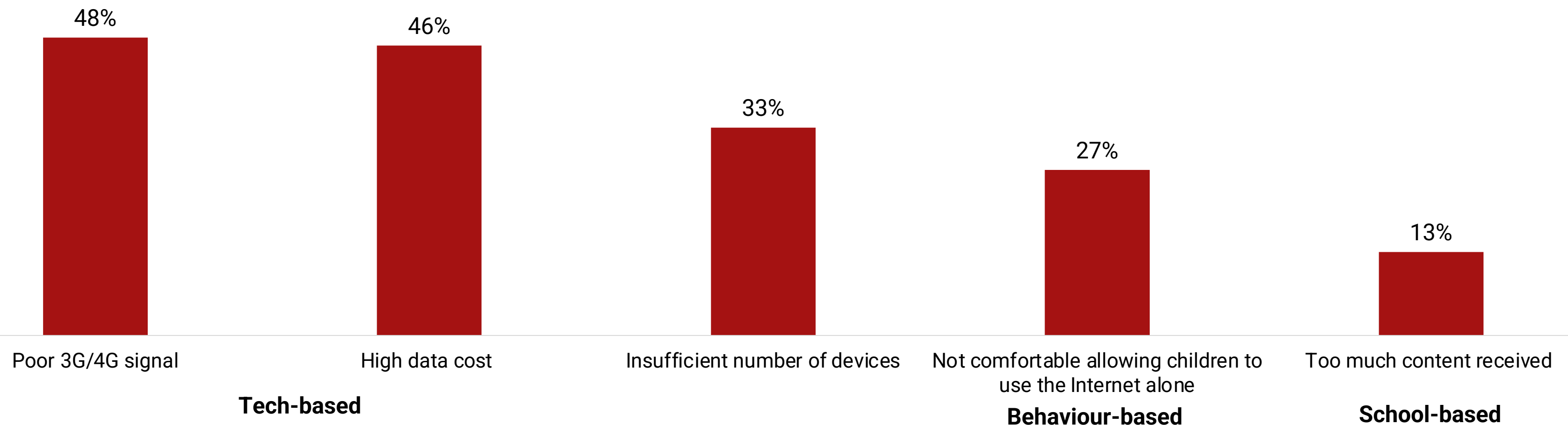
# Despite high access to remote education, over 58% of households were dissatisfied with their experience

**Satisfaction with remote education**  
(% of households who received education)



# Nearly half of households with students receiving education cited poor connectivity and high data costs as challenges around access to education

**Difficulties with respect to education during the pandemic**  
 (% of households with kids who received education)

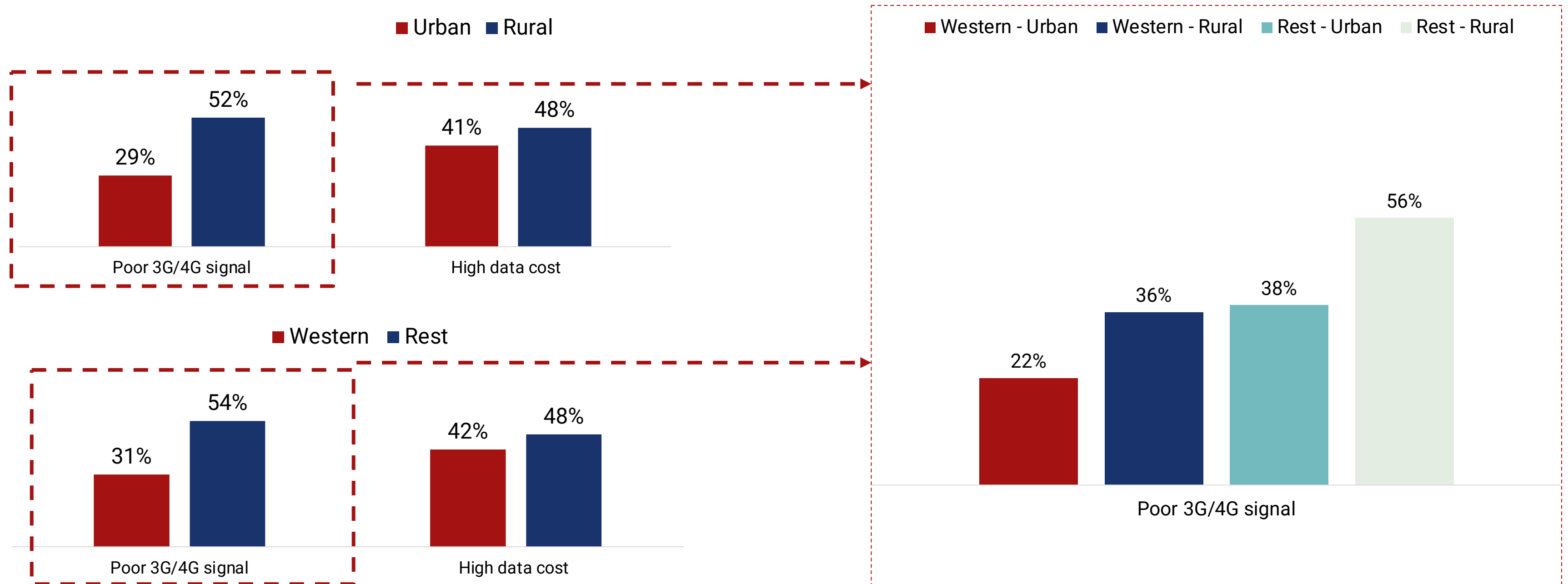


Q: Which statement is applicable for you with regards to the education of the children of this household during lockdown?

Base: Households with enrolled school aged kids (n=1,171) 112

# Poor connectivity constraining education of those outside urban areas and the Western Province

Difficulties with respect to education during the pandemic  
(% of households with kids who received education)



Q: Which statement is applicable for you with regards to the education of the children of this household during lockdown?

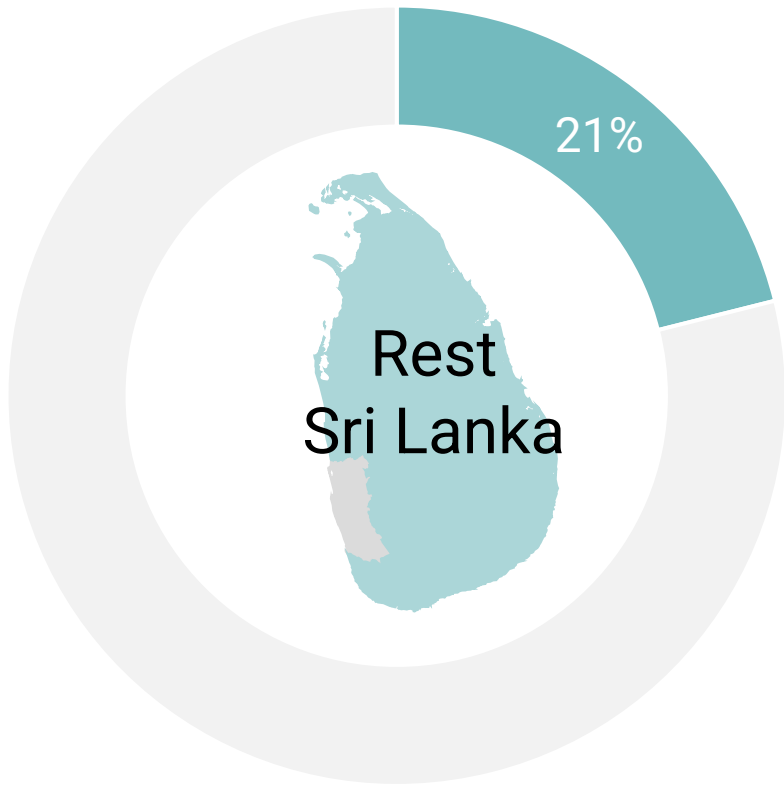
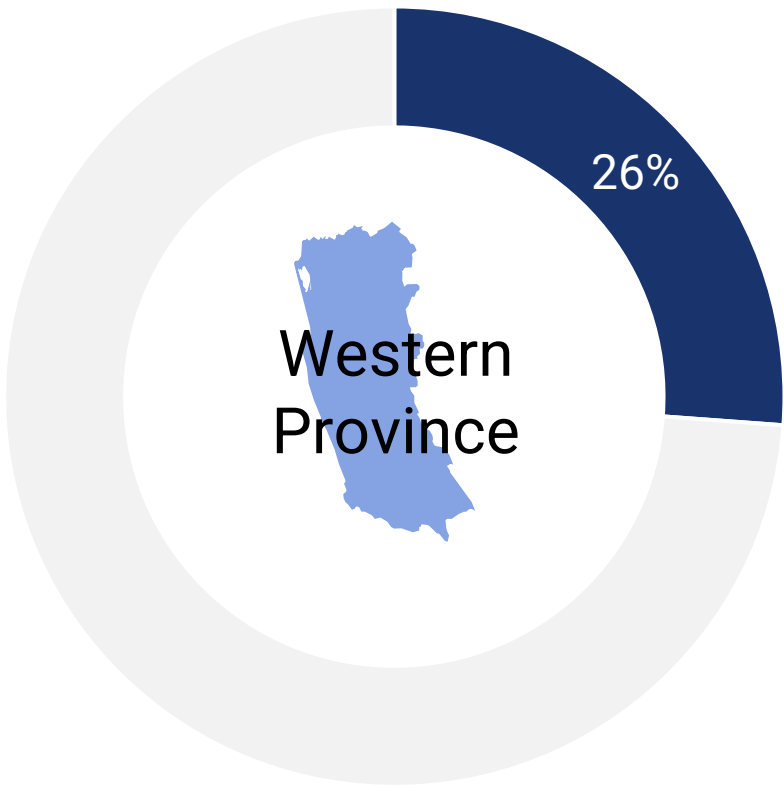
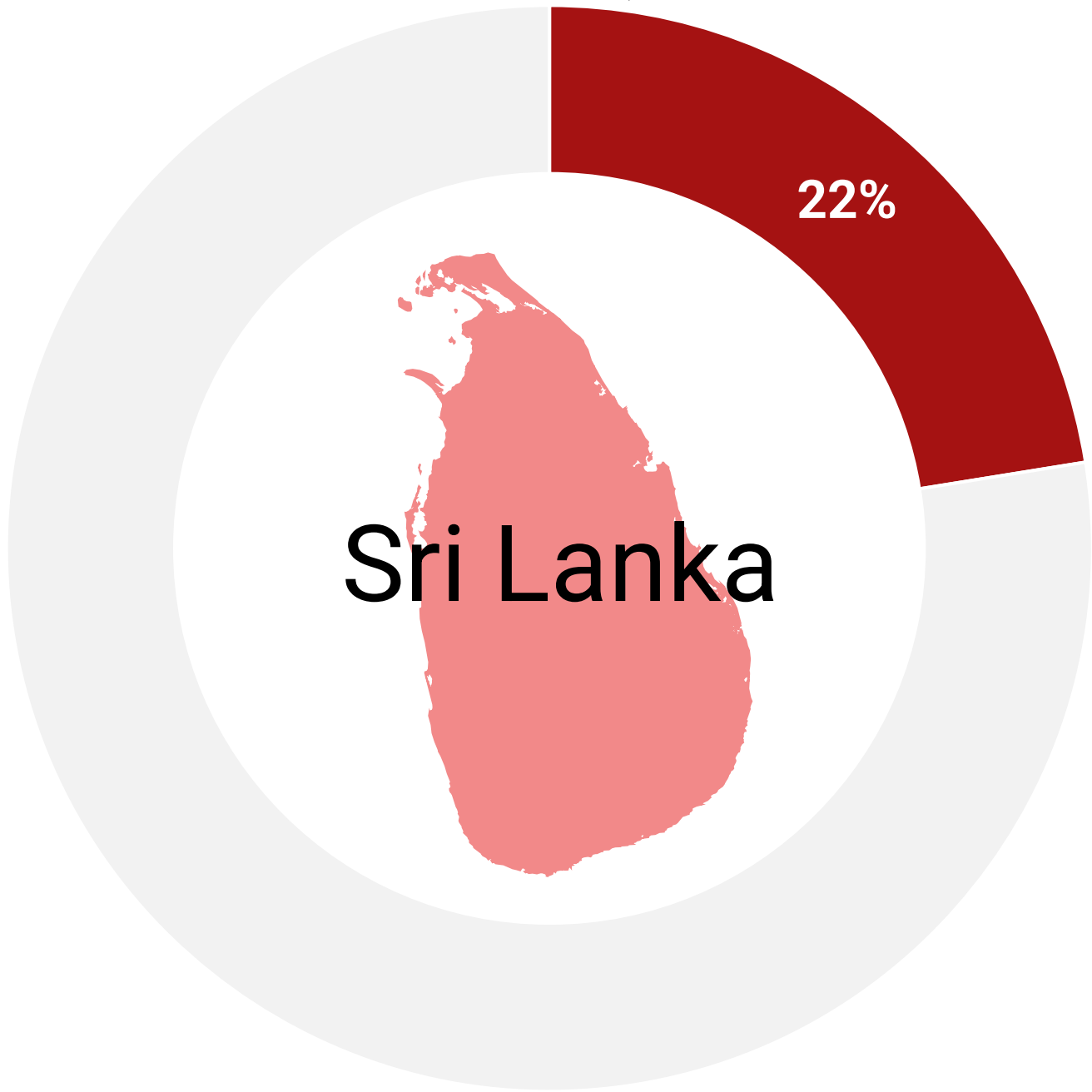


Work



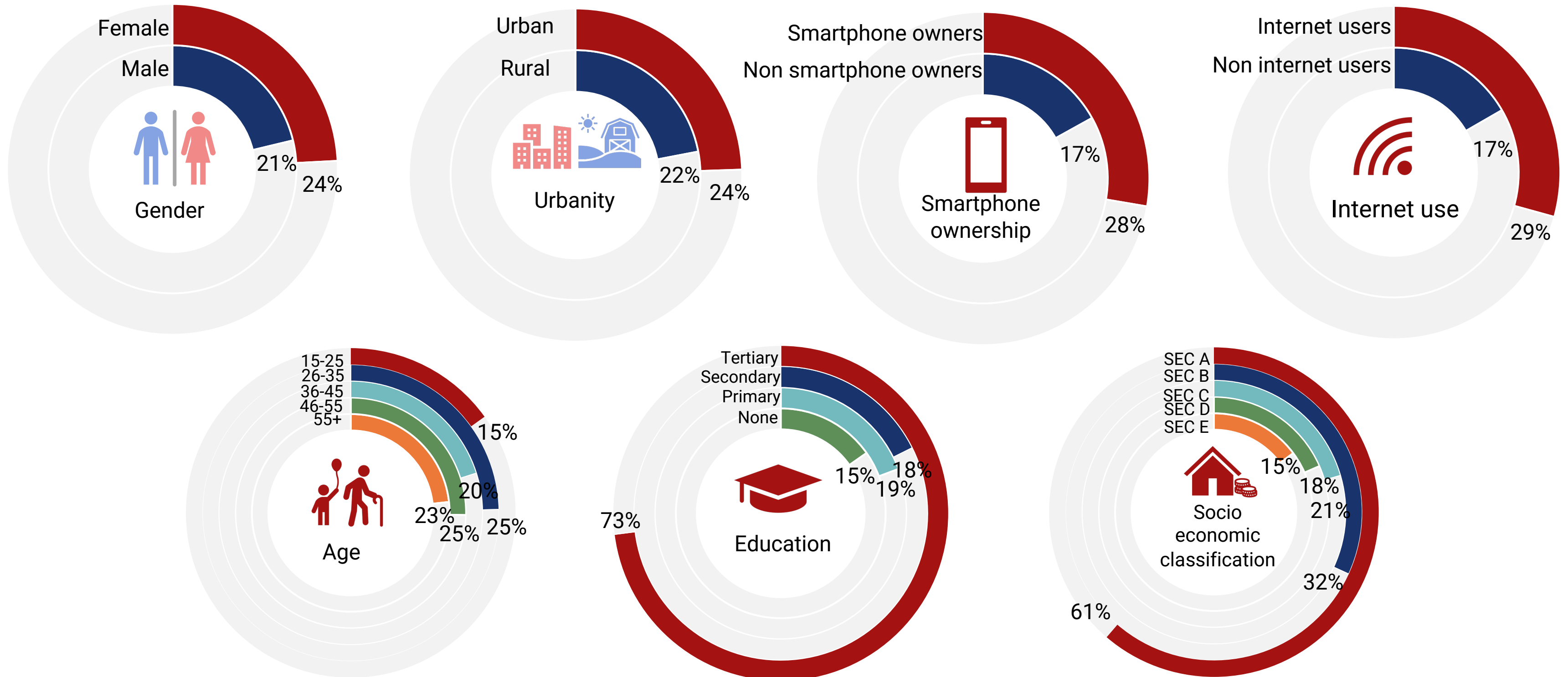
# 22% of those who had a job during the lockdown worked remotely

**Working from home during the lockdown**  
(% of age 15+ population who had a job during the lockdown)



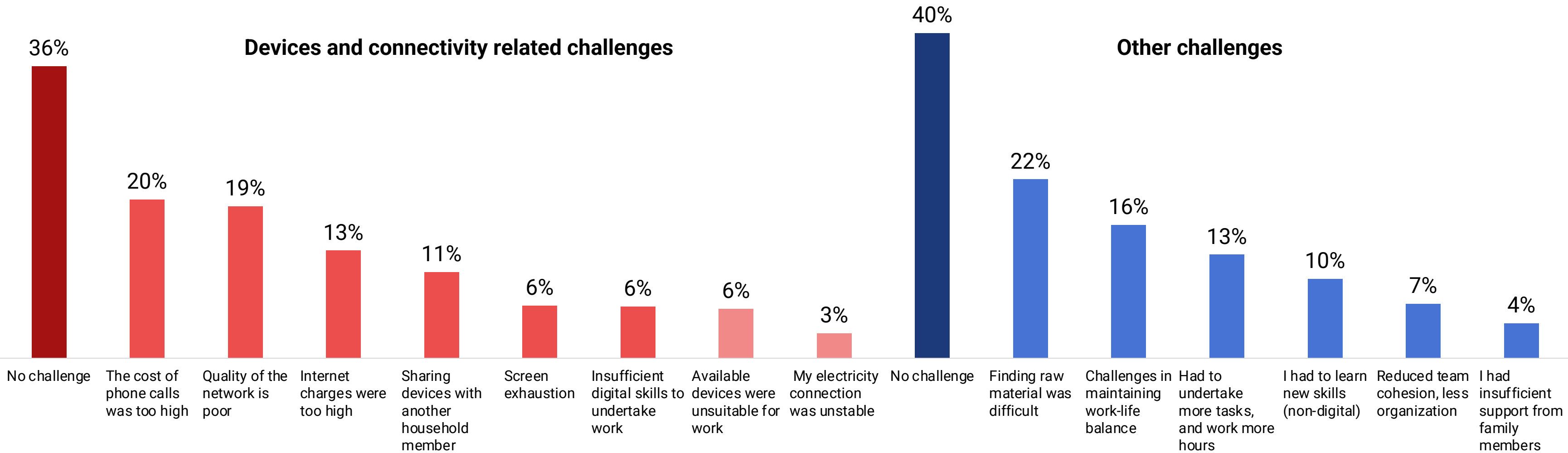
# Those who worked from home were more educated, and from a higher socio-economic background

**Working from home during the lockdown** (% of age 15+ population who had a job during the lockdown)



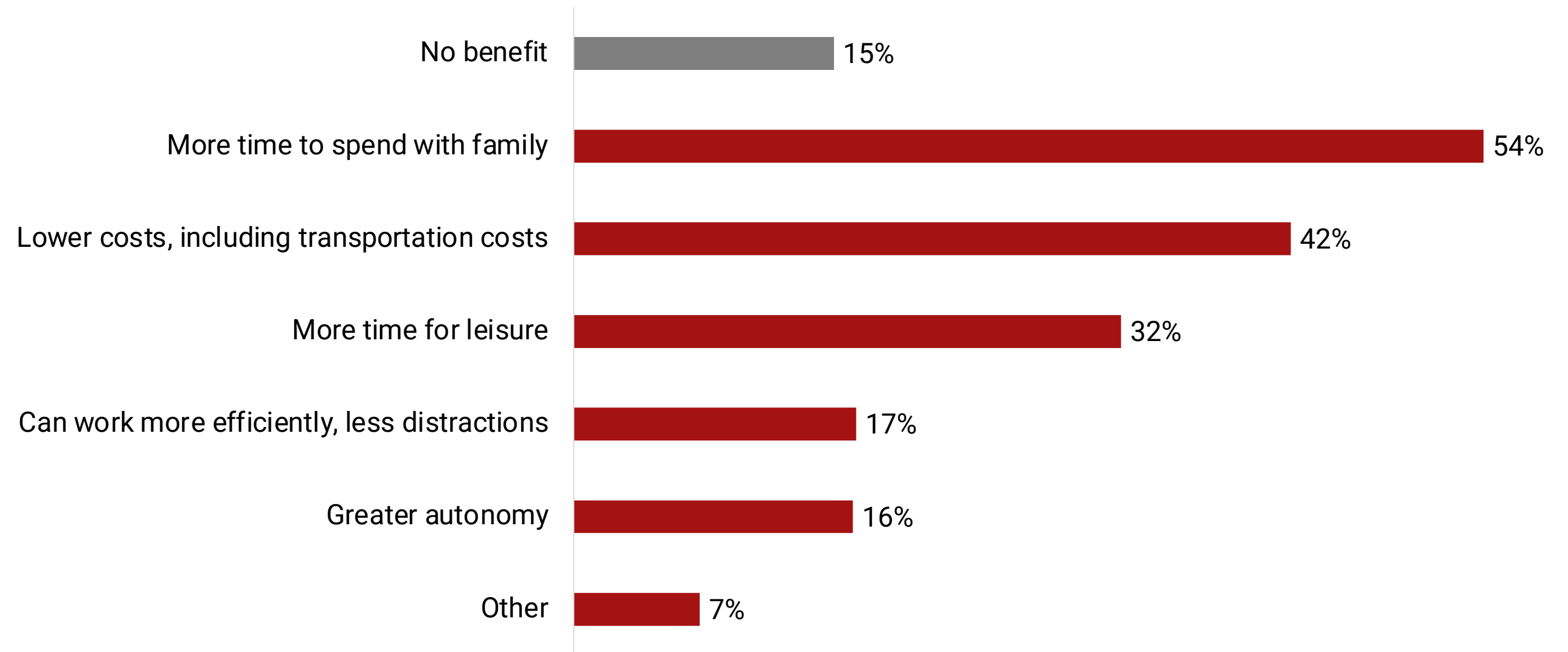
# Finding raw material and the costly phone calls were the greatest challenges to remote work

**Challenges faced when engaging in remote work**  
(% of those who engaged in remote work during lockdown)



# 54% stated that they were able to spend more time with family due to engaging in remote work

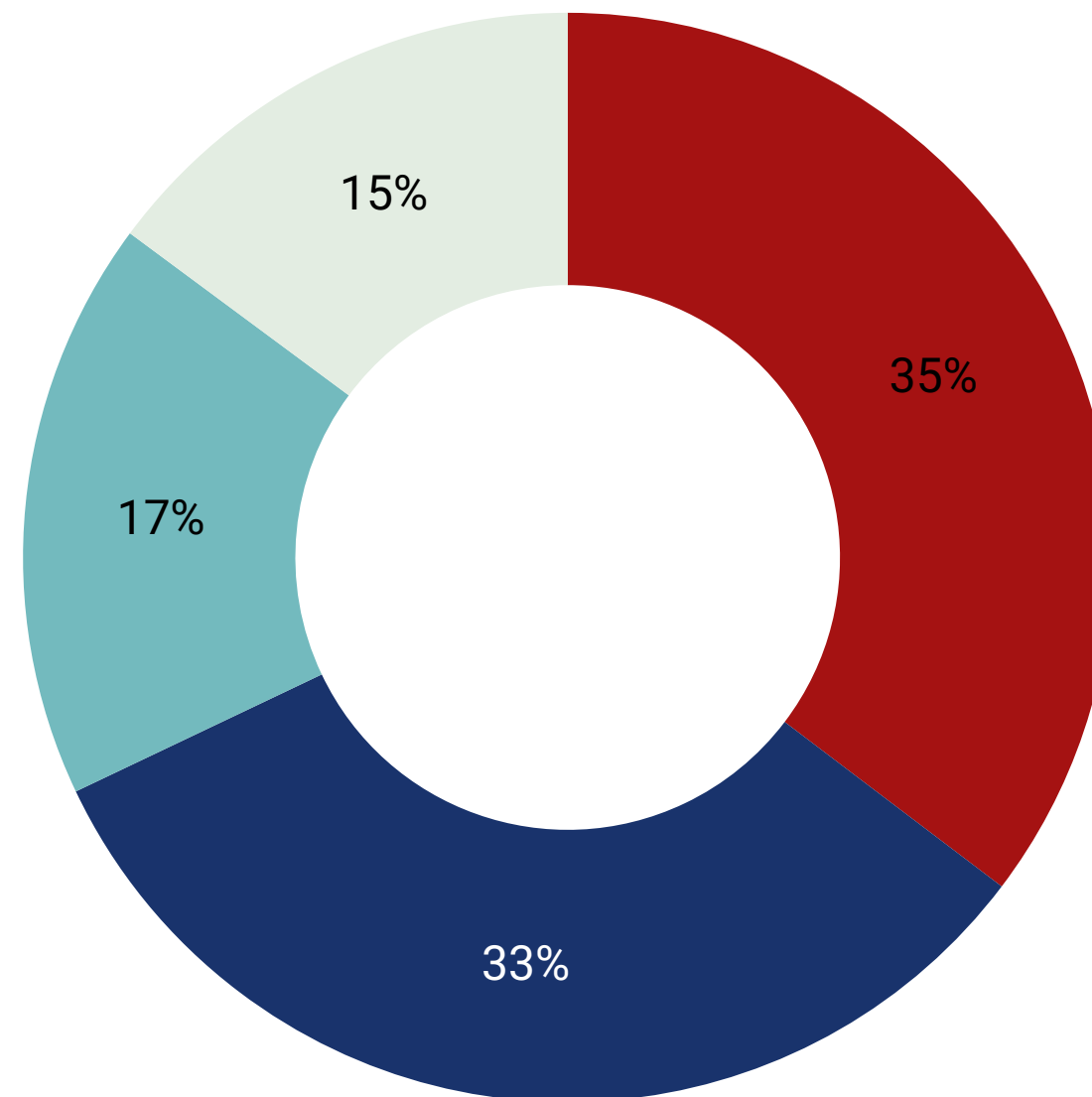
**Benefits experienced when engaging in remote work**  
(% of those who engaged in remote work during lockdown)



# Only 35% had returned to a workplace full time

**Returning to physical workplace post lockdown**  
(% of those who engaged in remote work during lockdown)

- Yes, I have returned to a physical workplace full-time
- I am no longer employed
- Yes, I have returned to a physical workplace, but only on select days/weeks or for select tasks, and do the rest at home
- I continue to work remotely full time



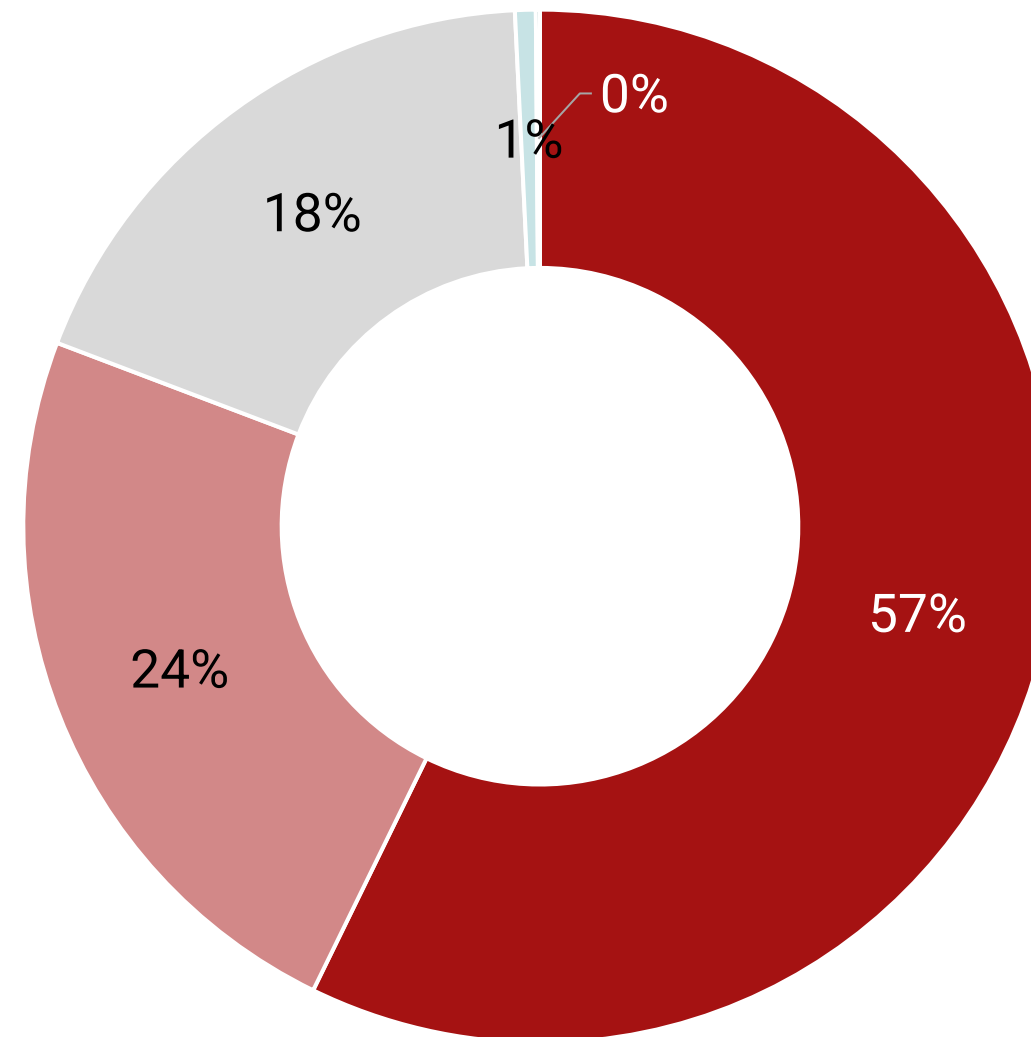


# Household income

# Over 80% experienced income loss during the lockdown

## Monthly household income: Before the pandemic vs during lockdown (% of all households)

■ Income reduced substantially ■ Income reduced slightly ■ Income remained the same ■ Income increased slightly ■ Income increased substantially

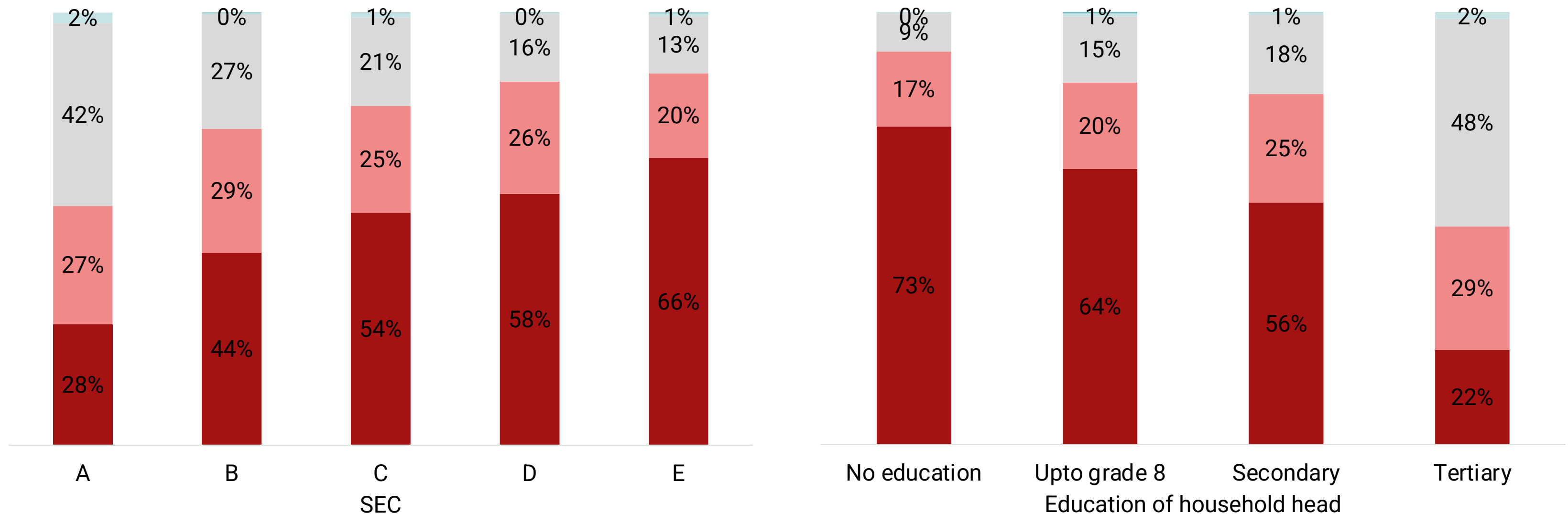


Q1: Think about the entire monthly income of your household, Think about the entire monthly income of your household, Please tell me by looking at this card, which statement is most applicable for the income of your household during the lockdown due to COVID-19 compared to before lockdown?



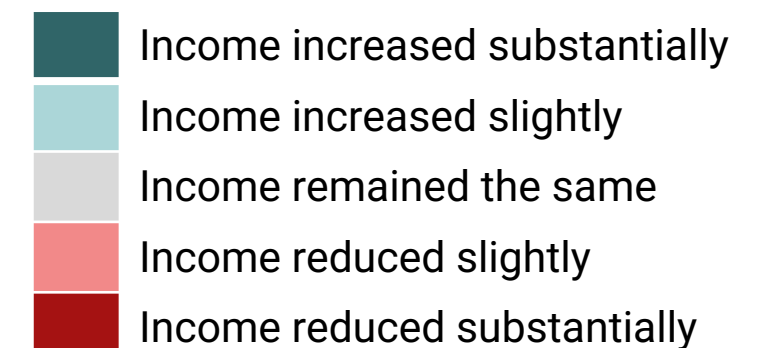
# Poorer households with less educated household heads were most impacted

**Monthly household income: Before the pandemic vs during the severest lockdown**  
(% of all households whose income reduced substantially )



Q: Think about the entire monthly income of your household,  
Please tell me by looking at this card , which statement is most applicable for the income of your household during your most severe lockdown period as compared to the period before COVID 19.

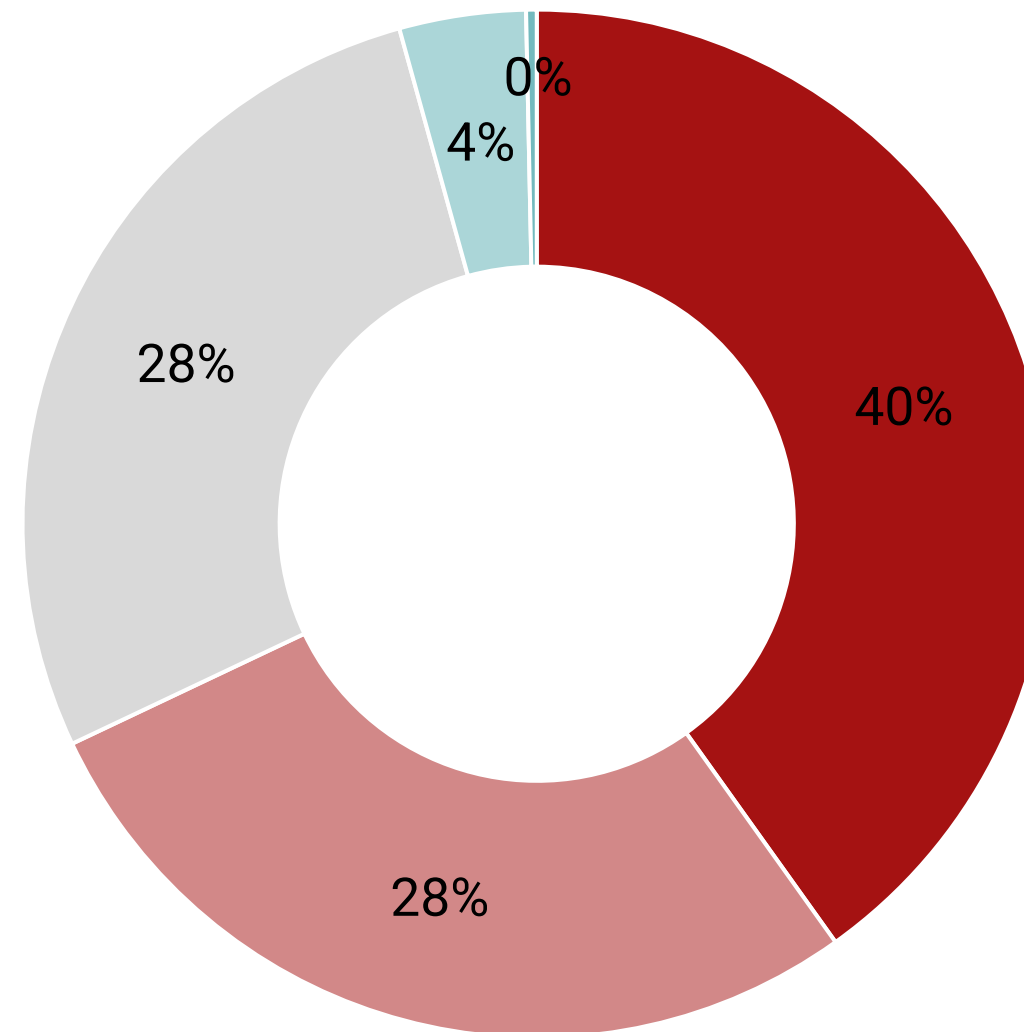
Base: All households



# Incomes at the time of survey implementation were below pre-pandemic levels in 74% of households

**Monthly household income: Before the pandemic vs during the survey 2021**  
(% of all households)

- Income reduced substantially
- Income reduced slightly
- Income remained the same
- Income increased slightly
- Income increased substantially

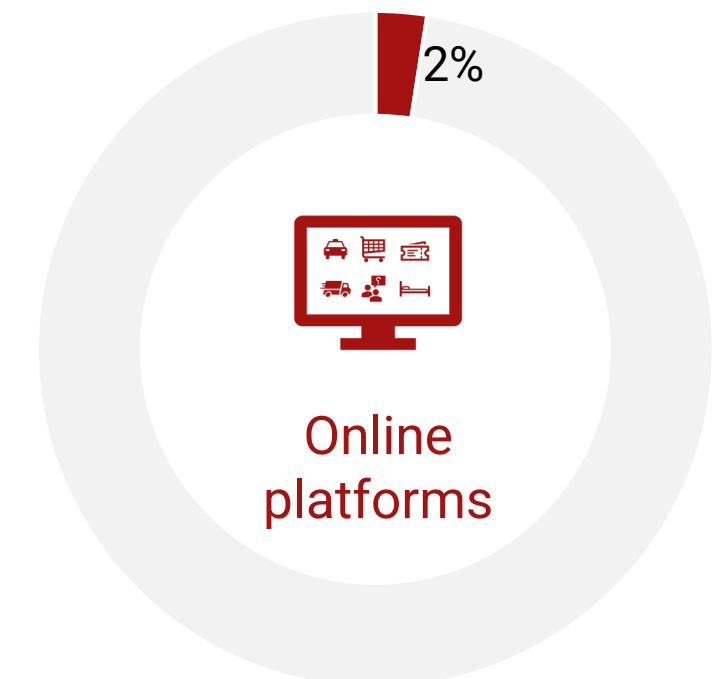
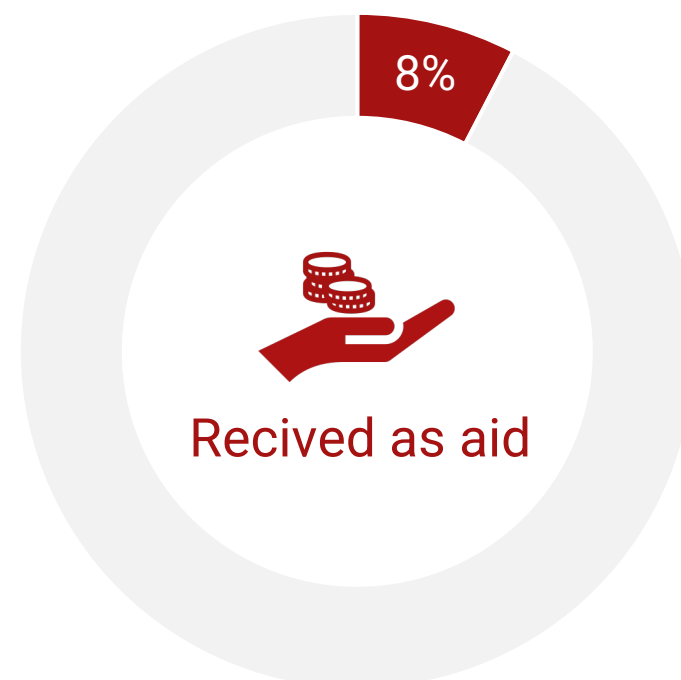
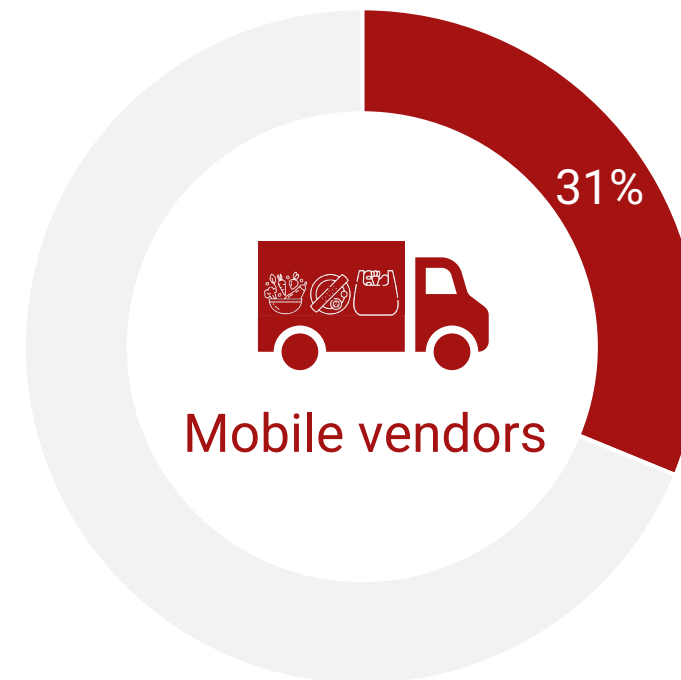




Access to food

# Most accessed food and groceries through local grocery shops and mobile vendors; only 2% of households used online platforms

**Methods used to access food and grocery during lockdown**  
(% of households)

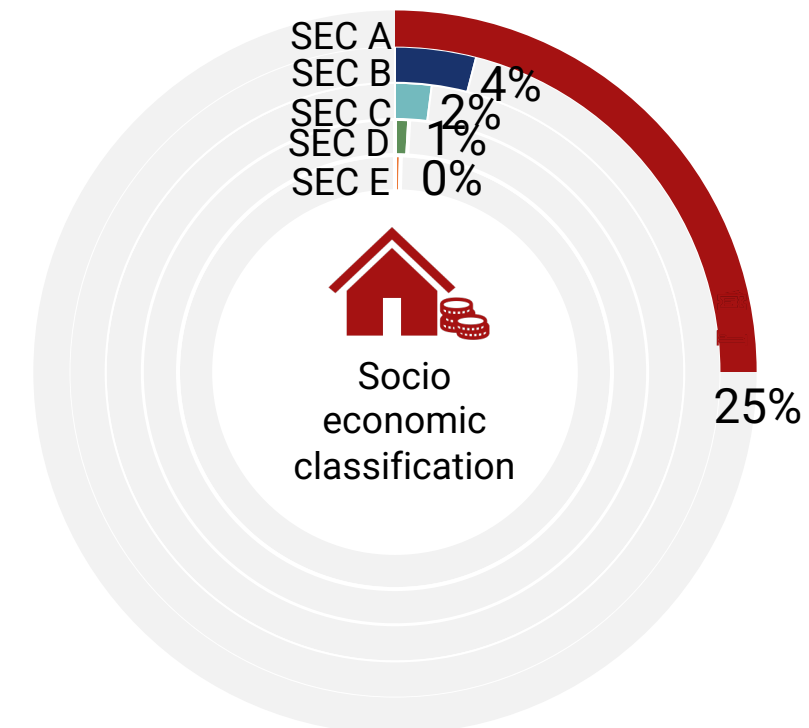
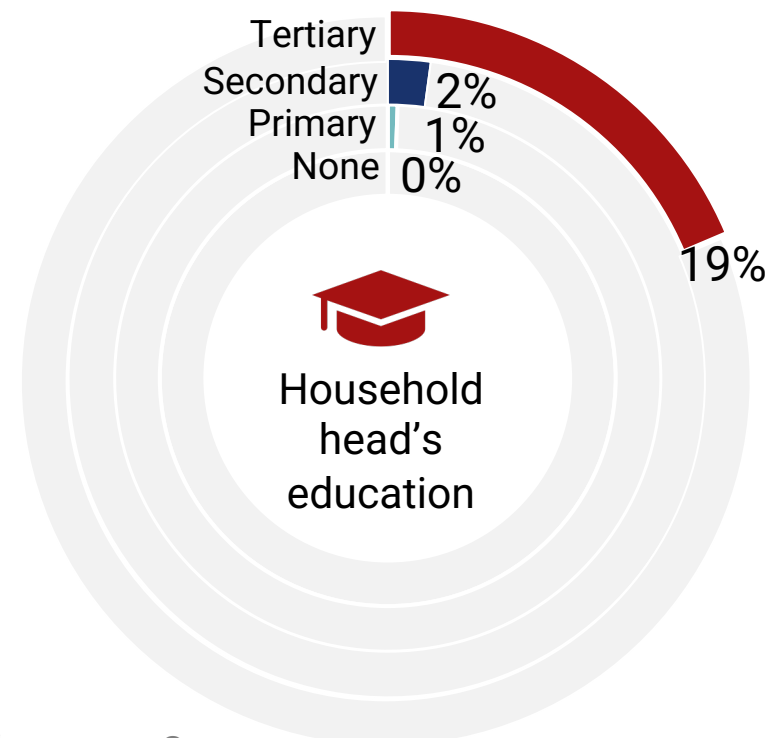
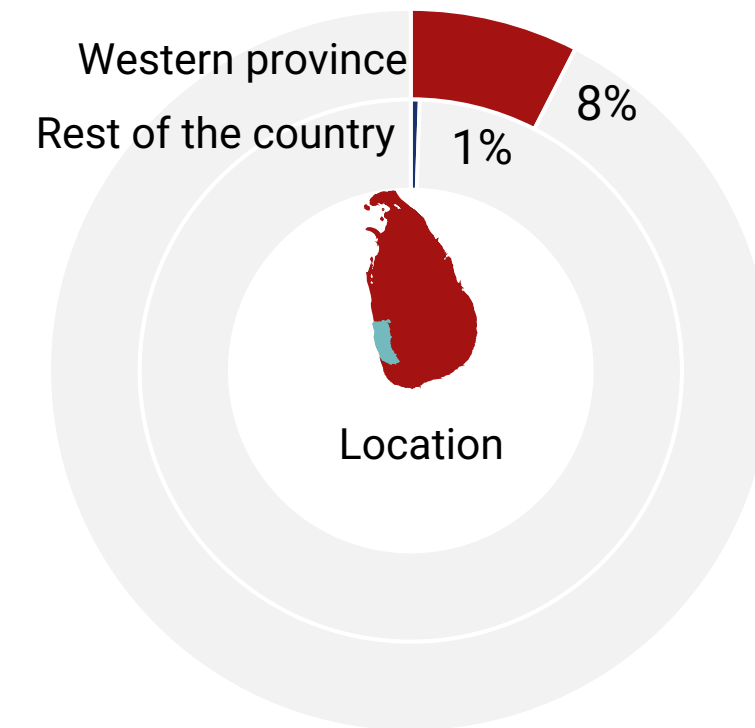
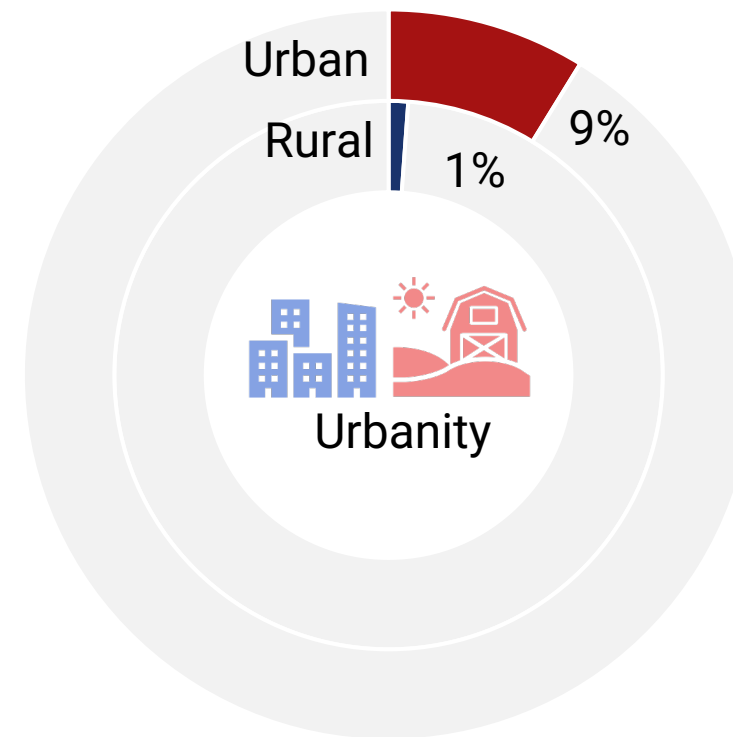
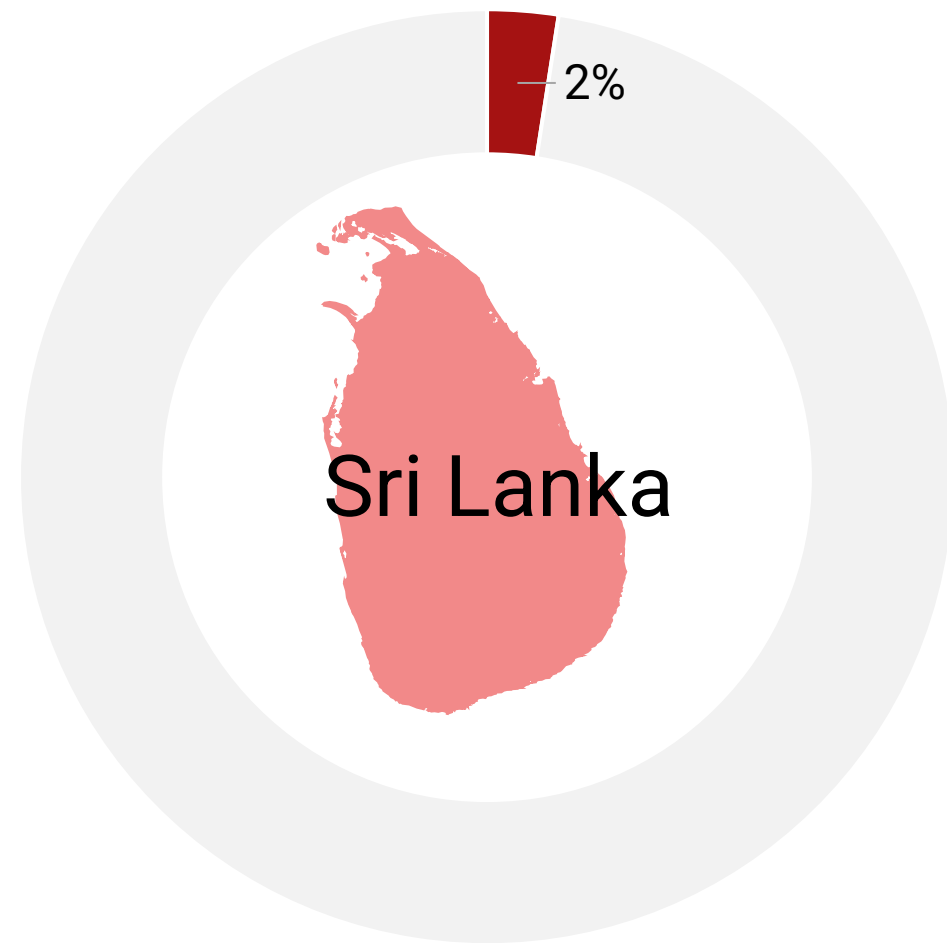


Q: Did/do your household purchase food and groceries from .....?

Base: All households (n=2,501)

# Households using online platforms were predominantly in the Western Province, urban, wealthy, with more educated household heads

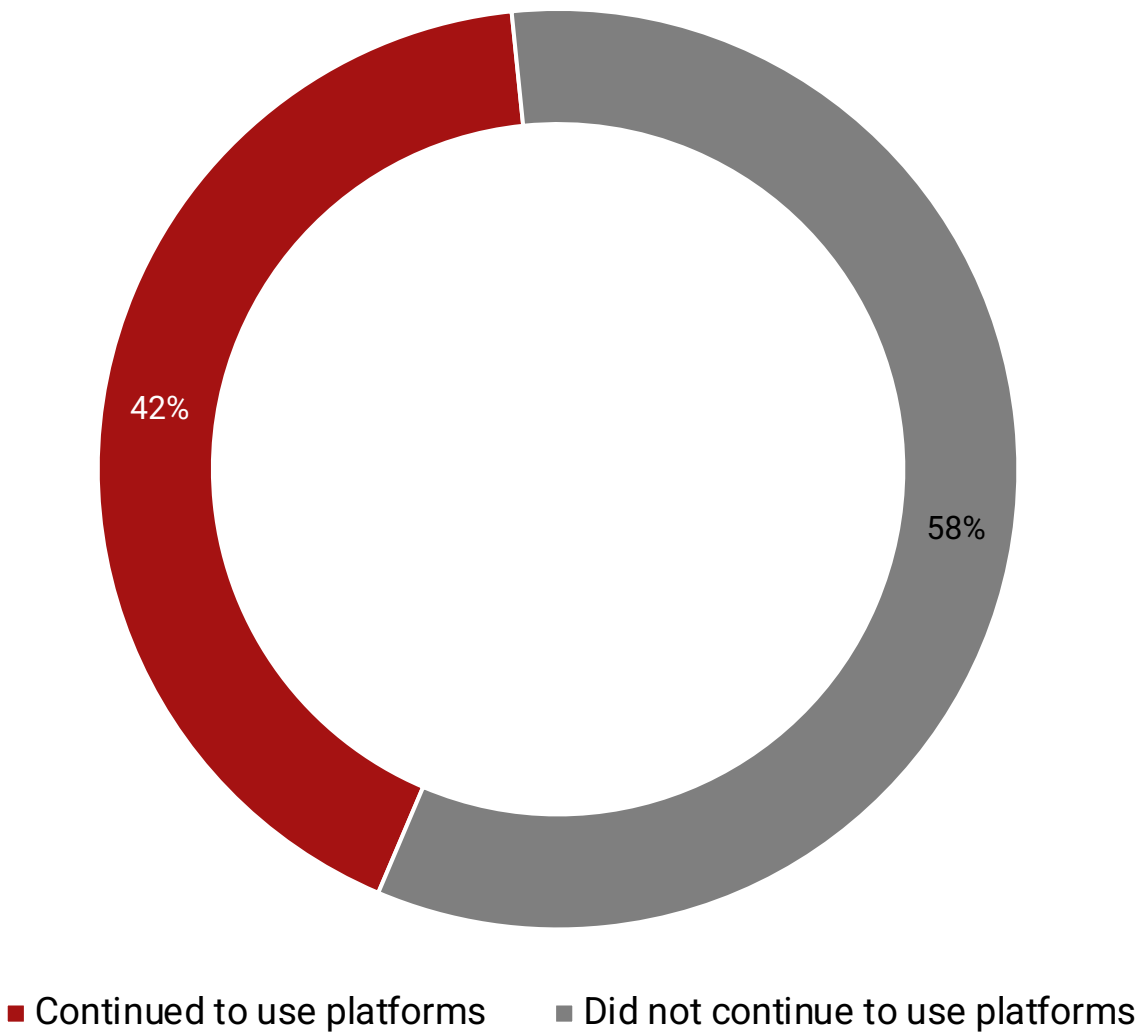
Obtaining food via online platforms  
(% of households)





# 58% of platform users during lockdown did not use them after – most cited the lack of need as a reason for not doing so

**Use of platforms after the lockdown**  
(% of households who used online platforms for food delivery during the lockdown)



**Reason for not continuing to use online platforms for food delivery**  
(% of households did not continue to use online platforms for food delivery)



Q: What are the reasons for not continuing to use these platforms for food delivery?

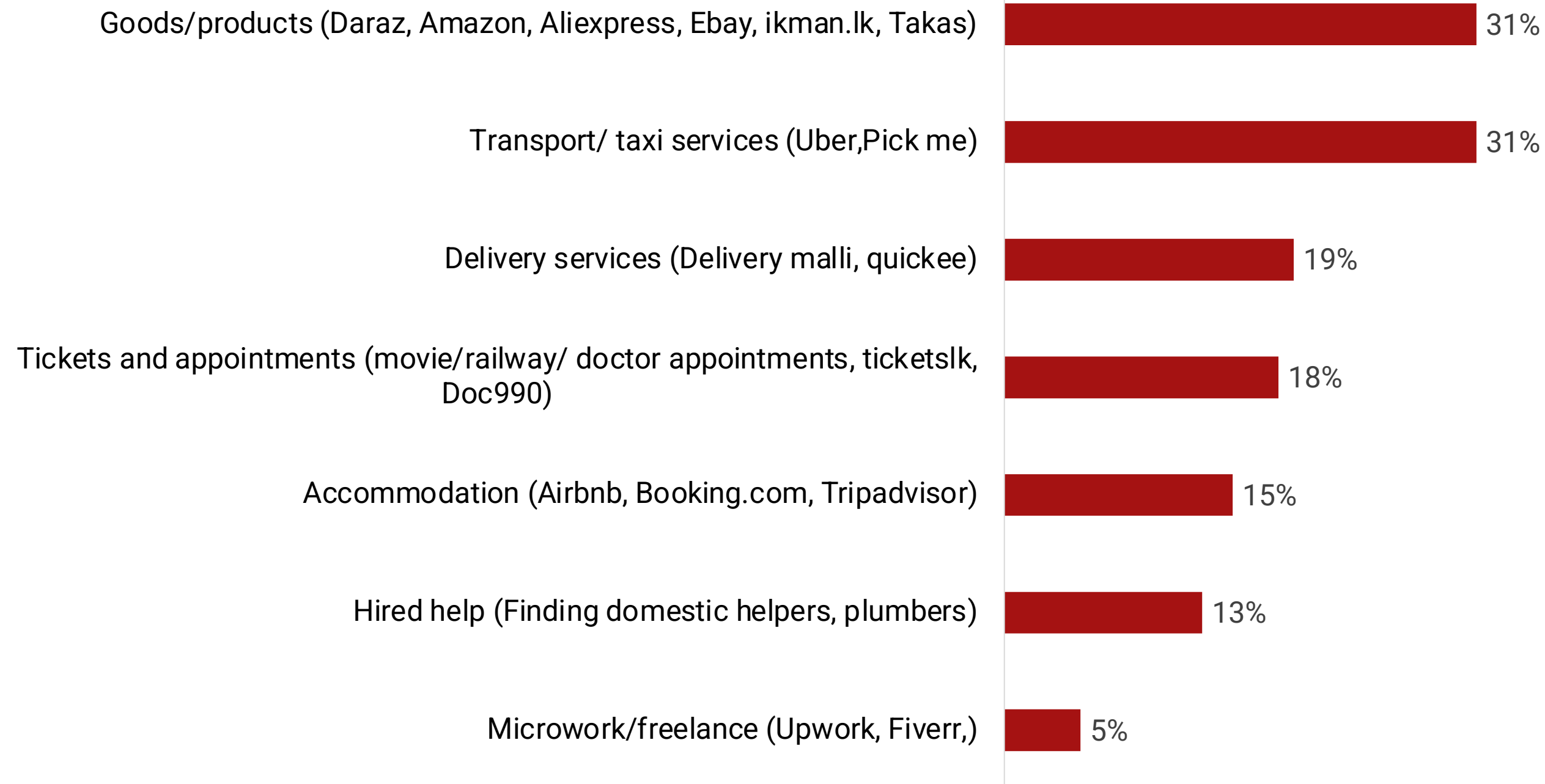
Base: Households did not continue to use online platforms for food delivery (n=70)



# Platform use

# 31% were aware of platforms selling goods/products, and providing transport and taxi services

## Awareness of internet platforms and applications (% of population aged 15+)



# Awareness did not always translate to use

## Awareness and use of platforms and applications to buy and sell goods or services (% of age 15+ population)

	Awareness	Use
Platform	All time	During lockdown
Goods/products (Daraz, Amazon, Aliexpress, Ebay, ikman.lk, Takas)	31%	3.0%
Transport/ taxi services (Uber,Pickme etc.)	31%	3.2%
Delivery services (DTDC, Fastrack)	19%	1.2%
Tickets and appointments (ticketslk, Doc990)	18%	0.4%
Accommodation (Airbnb, Goibibo, Booking.com, Tripadvisor)	15%	0.1%
Hired help (Finding domestic helpers) e.g. Urban Company	13%	0.2%
Microwork/freelance (Upwork, Fiverr)	5%	0.0%

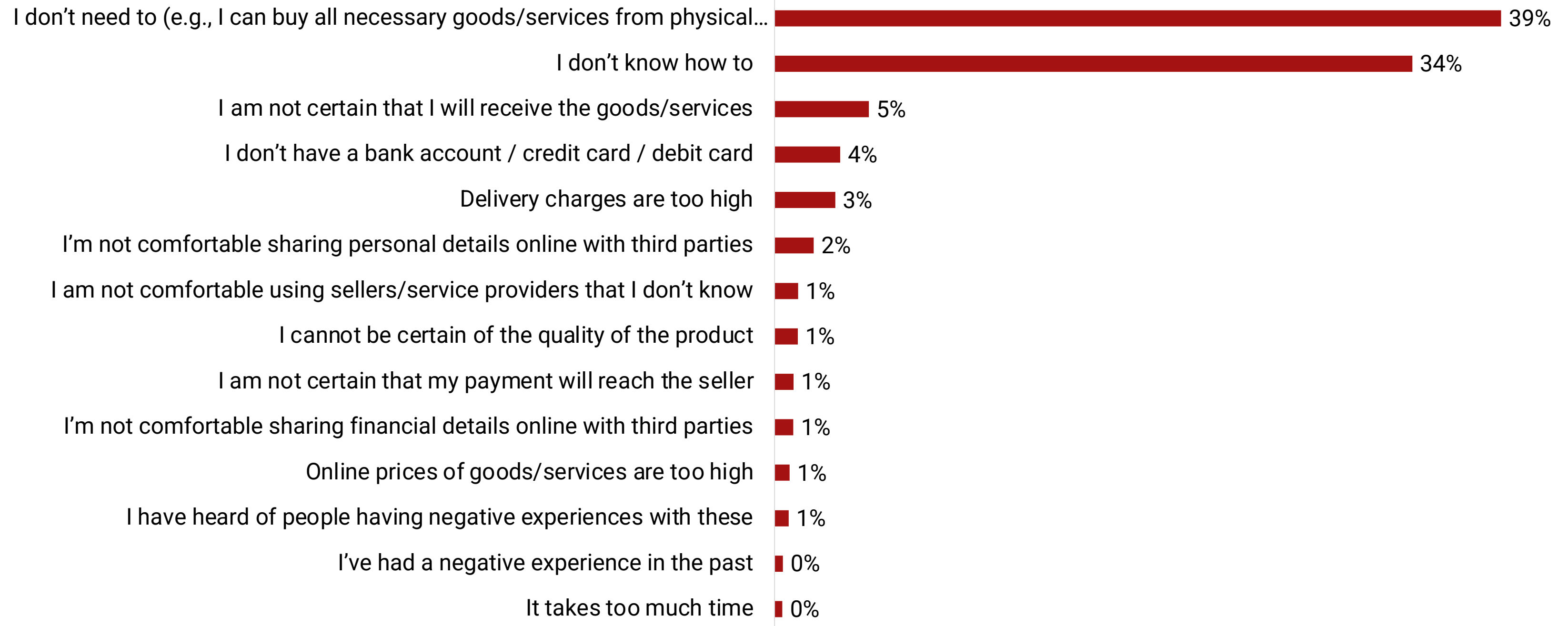
Q1: Have you heard of Internet platforms or applications being available to buy and sell goods in the following areas?

Q2: Have you used Internet platforms/apps to buy goods or services of the following types?

Base: All respondents (n=2,501) 167

# 39% cited the lack of knowledge about platforms as the reason for non-use

## Reasons for not using internet platforms and applications to buy goods or services (% of those who have not used internet platforms and applications)



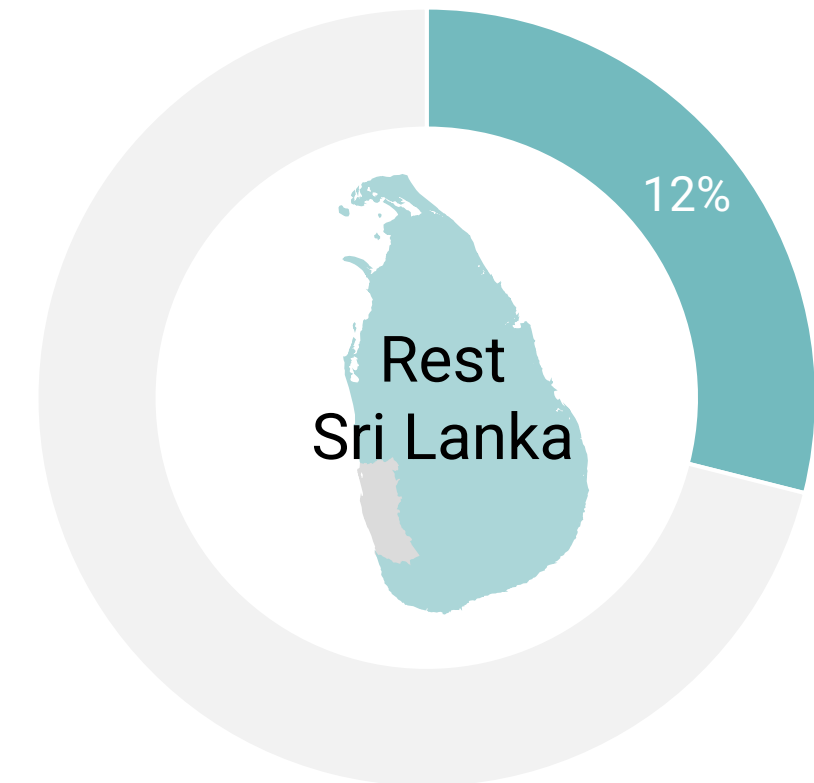
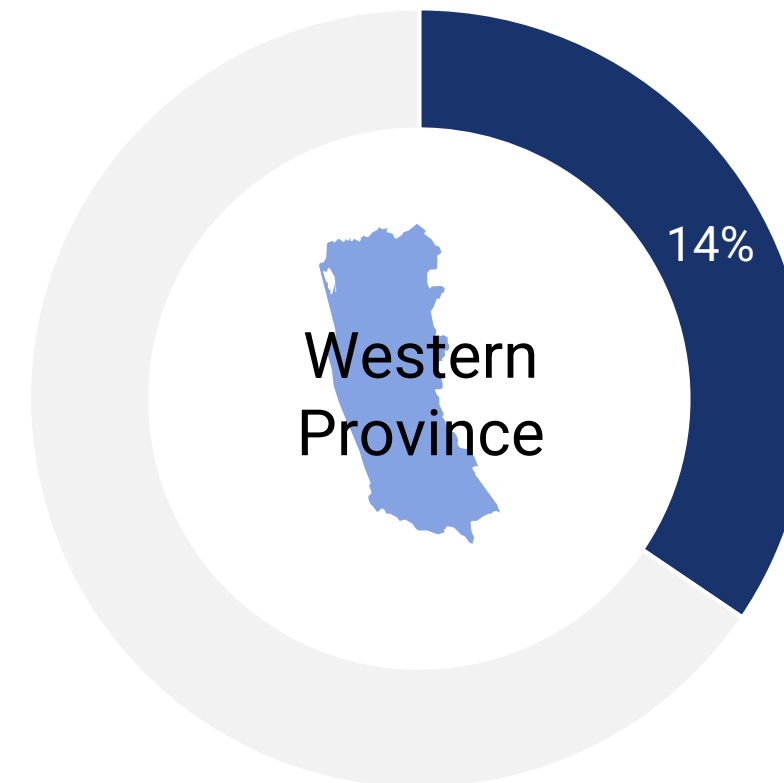
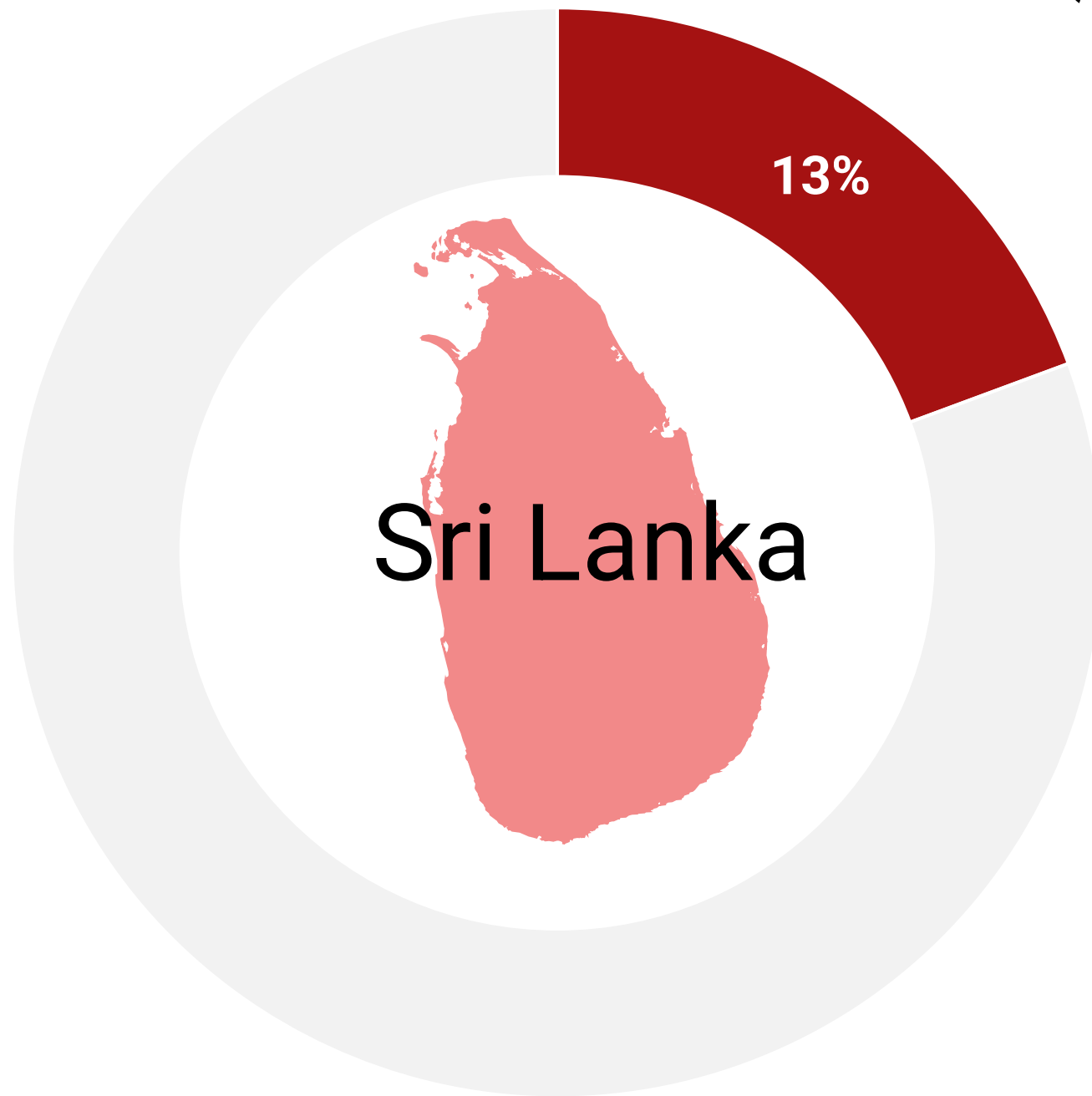




# Digital government

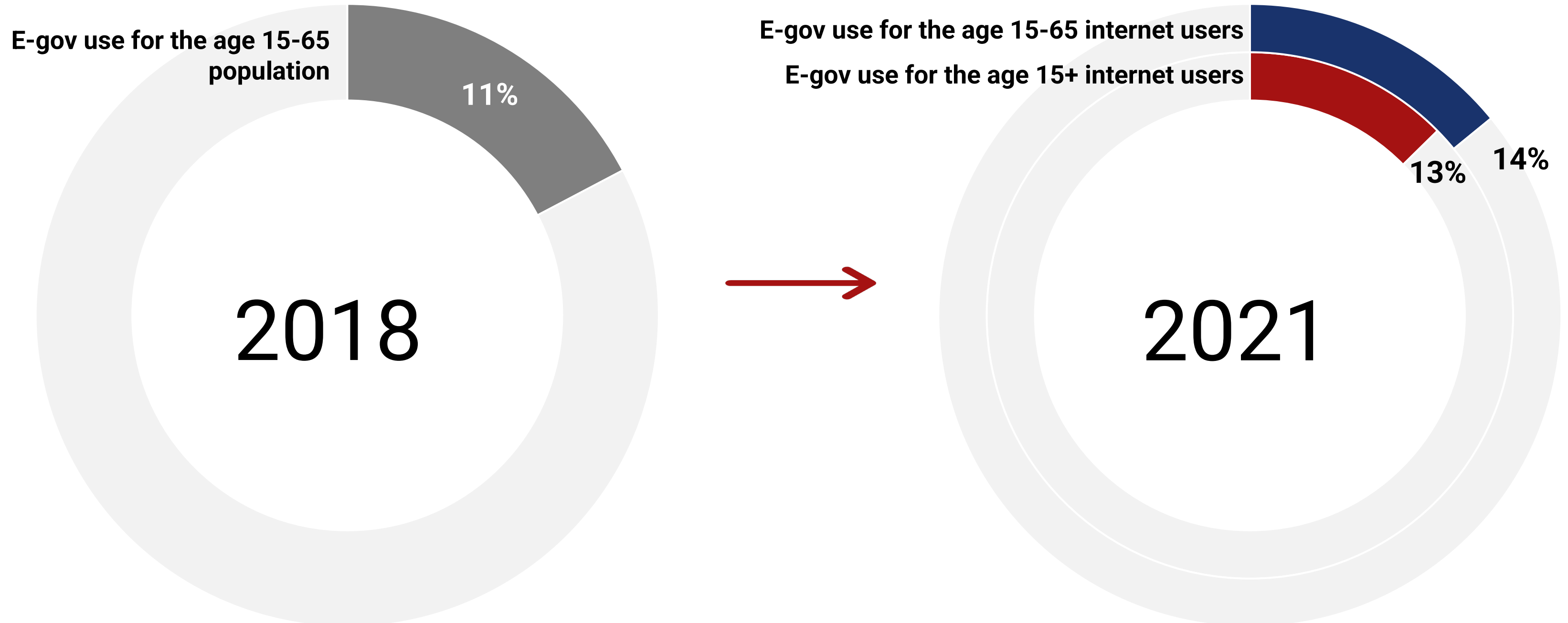
# 13% of the population accessed government websites

**Government website access**  
(% of age 15+ population)



Q: Do you use the internet to access government websites? ("government websites" may include central, provincial and local government institutions offices, ministerial, tax office, police office, state-owned health facilities, state-owned public facilities (such as the airports, toll-way, etc) and any other government-related institutions)

# Marginal growth in access to government websites since 2018

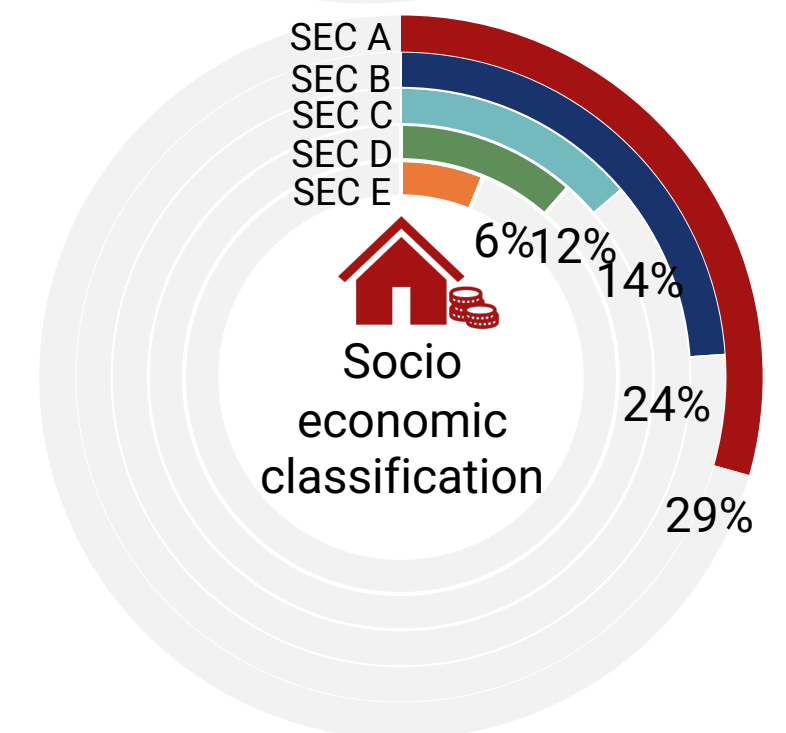
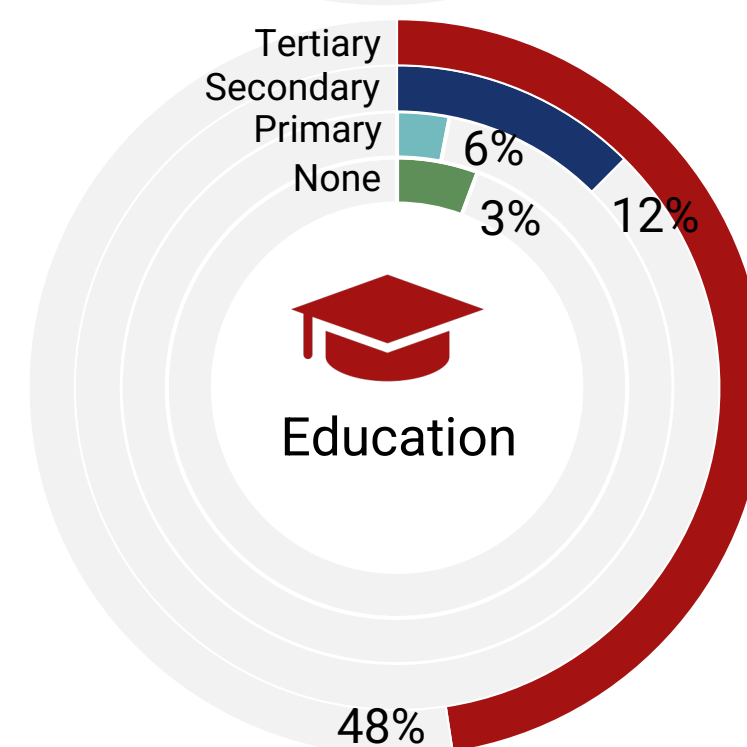
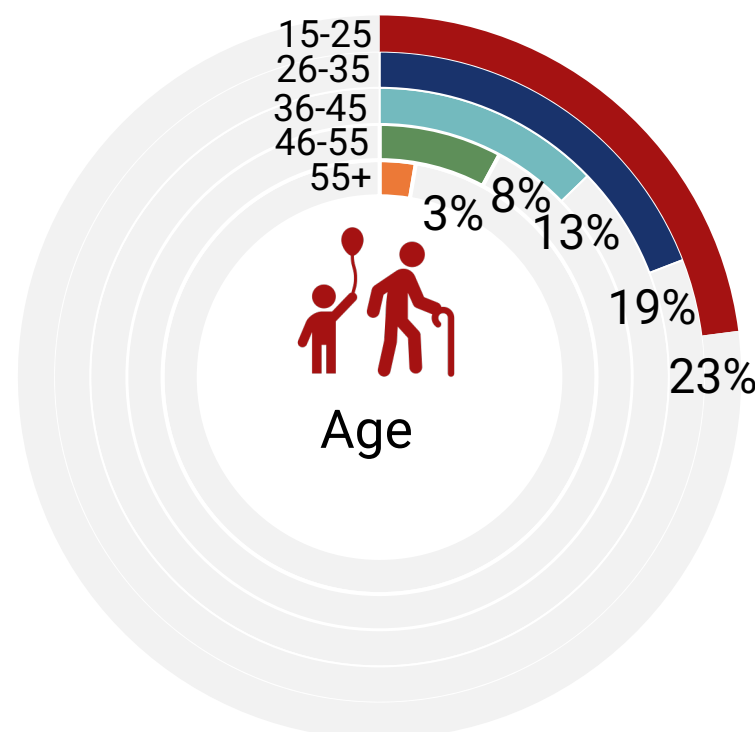
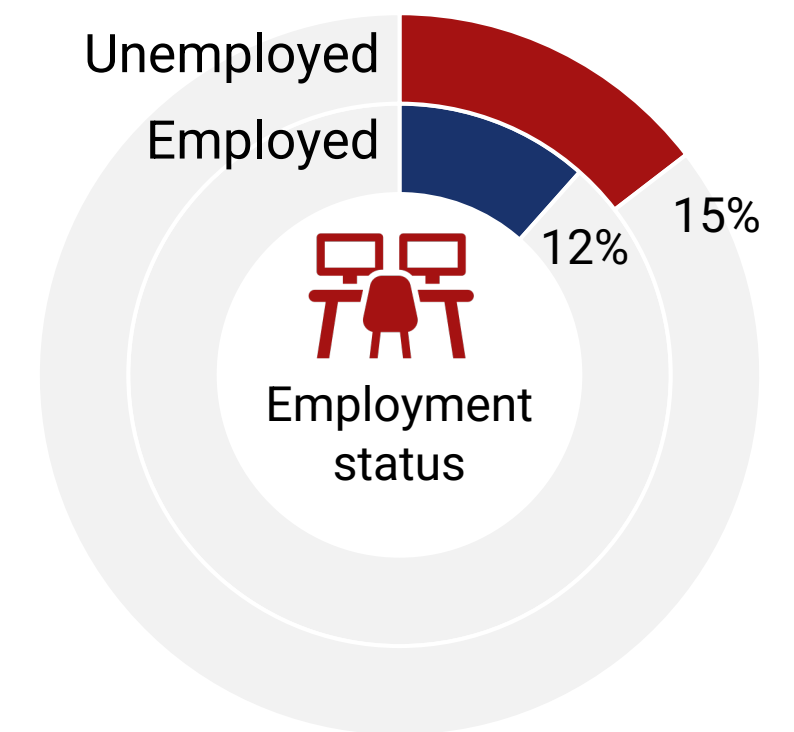
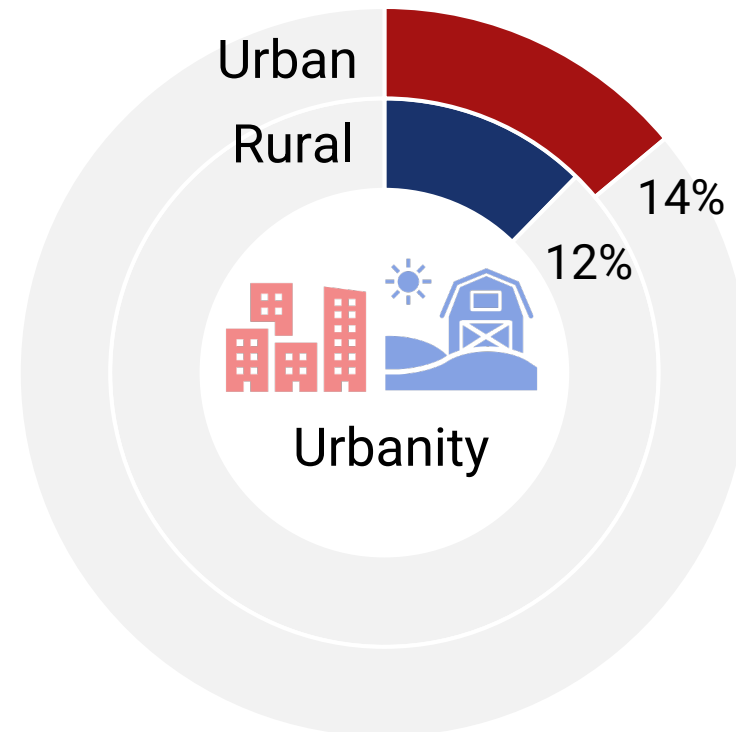
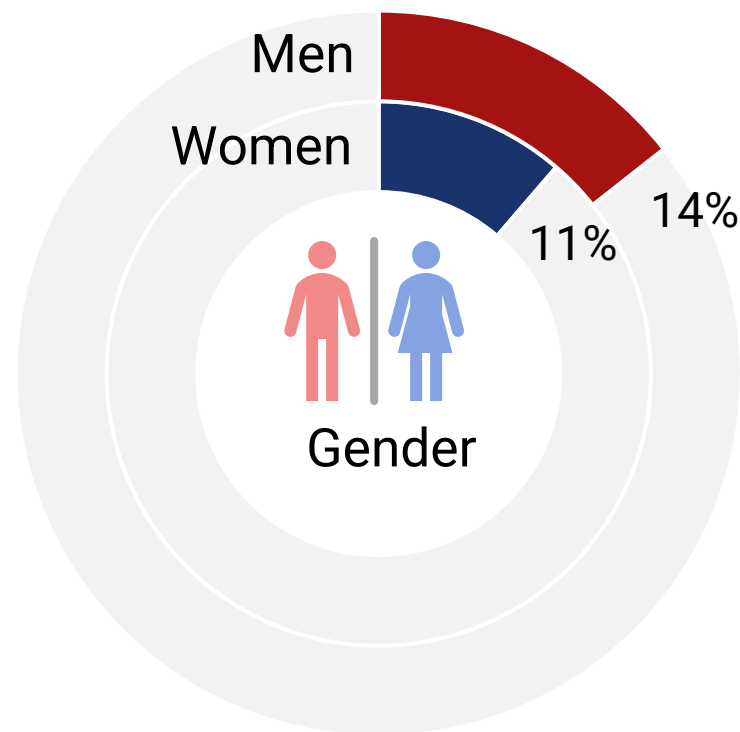


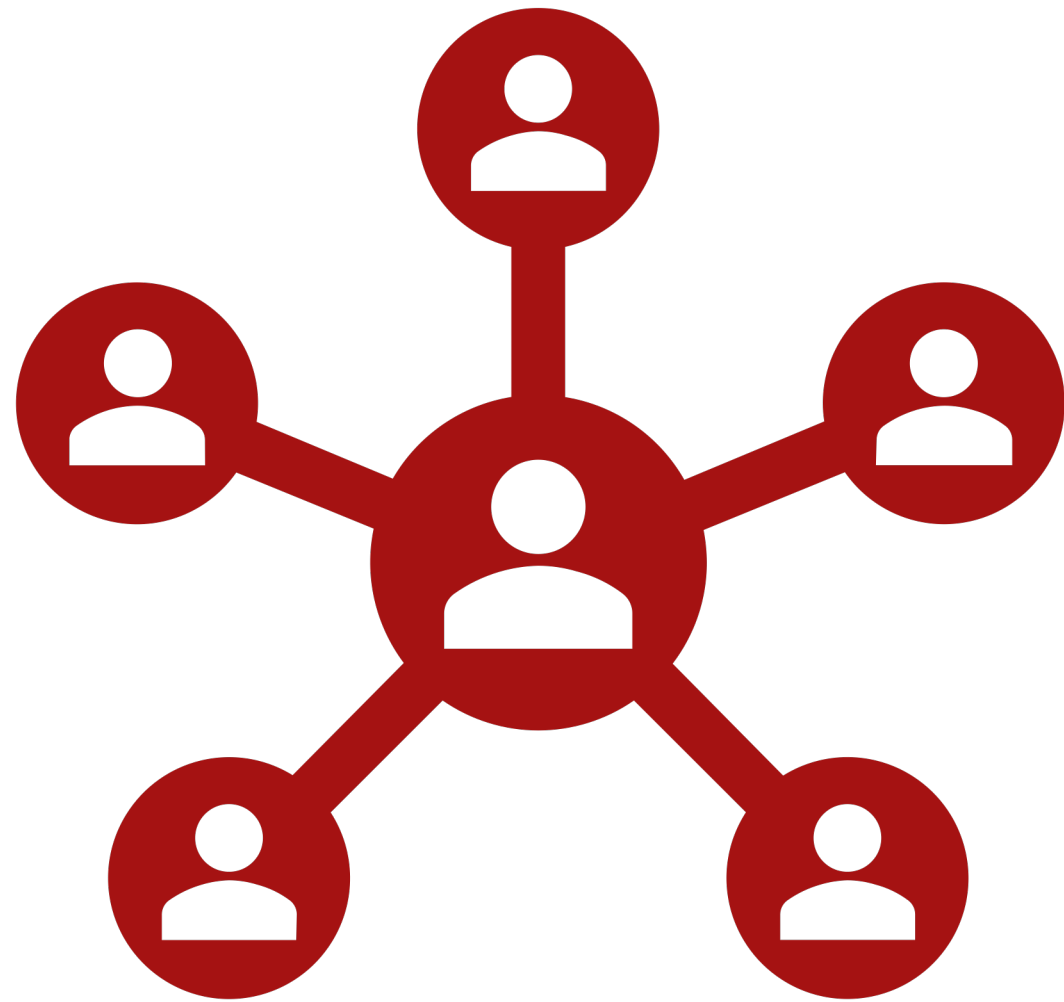
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Base: All respondents(2018: n=2,017)(2021, n=2,501)

# Younger, more educated populations from higher socio-economic groups accessed government websites

Government website access  
(% of age 15+ population)



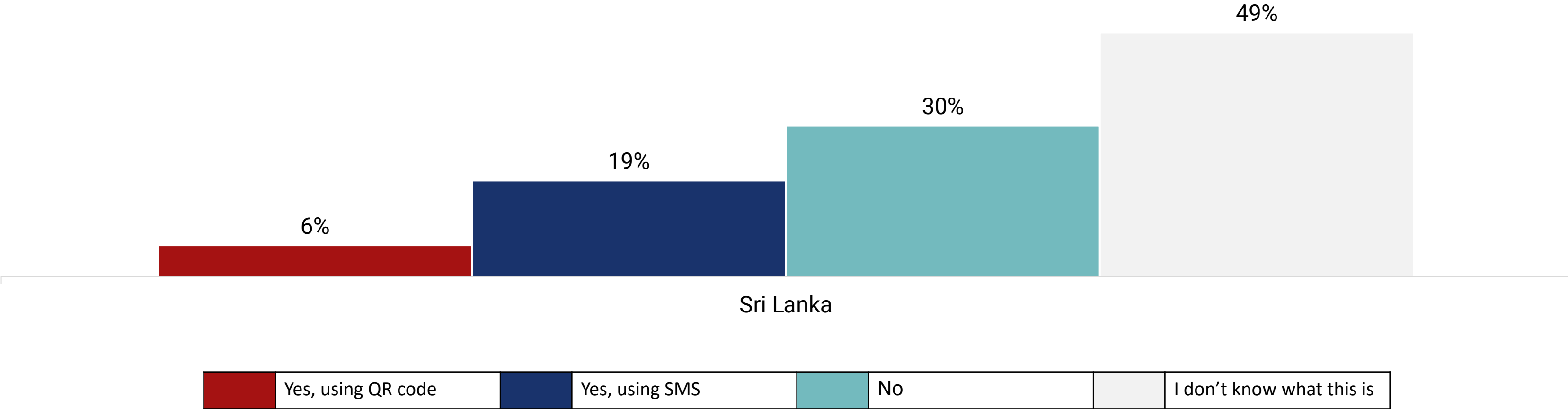


# Contact tracing



# 22% of mobile owners used mobile based check in systems; nearly 50% were lacked knowledge about such mechanisms

**Use of mobile phone-based contact tracing mechanisms**  
(% of age 15 + mobile phone owners )



For more information  
[www.lirneasia.net](http://www.lirneasia.net)