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# ASSESSING DIGITAL AND FINANCIAL LITERACY IN SAMOA

## A Survey on Knowledge, Skills and Access

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# Acknowledgements

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Dr. Adele Atkinson, Technical Consultant, UNCDF and Professor of Practice in Financial Literacy and Wellbeing, University of Birmingham led the design of the survey questionnaire and analysis guide and provided technical guidance throughout the implementation.

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# List of Acronyms and Designations

| Acronym/ Designated Labels | Description |
|---|---|
| **ATM** | Automated Teller Machine |
| **CATI** | Computer Assisted Telephone Interviewing |
| **CAPI** | Computer Assisted Personal Interviewing |
| **DFL** | Digital and Financial Literacy |
| **DFS** | Digital Financial Services |
| **Digicel and Vodafone** | Mobile networks operating in Samoa |
| **ILO** | International Labour Organization |
| **MSMEs** | Micro, Small, and Medium Enterprises |
| **PDEP** | Pacific Digital Economy Programme |
| **PPS** | Probability Proportional to Size |
| **SES** | Socioeconomic status |
| **UNCDF** | United Nations Capital Development Fund |
| **UNDESA** | DESA refers to the think tank of the UN |
| **UNDP** | United Nations Development Programme |
| **WST** | Samoan Tālā |

# Glossary of Terms

Some of the terms used in the DFL 2022 Survey Report are defined as follows:

**Samoans** and **Samoan adults** refer to individuals aged 15 to 74 years living in Samoa.

**Financial inclusion** refers to the concept that all working-age adults have effective access to banking, credit, savings, payments, and insurance services from formal service providers. Please note that while this definition refers to the whole of the concept of financial inclusion, this survey did not probe all dimensions of access.

**Adult population** refers to Samoans aged 15 to 74 years of age.

**Youths** refers to Samoans aged 15 to 24 years.

**Older Adults** refers to Samoans aged 45 to 74 years.

**High(est) income earners** refer to Samoans who say they and their partner have access to a combined income of 478 Samoan Tālā or greater fortnightly. Income categories are based on a percentage of GNI.

**Low(est) income earners** refer to Samoans with a combined fortnightly income (personal income plus income from a spouse/partner) of less than 95 Samoan Tālā.

**Formal employment** refers to individuals who indicate in the occupation question that they are working for another person or company, full time or part time, also known as wage earners. Includes those temporarily absent from work due to sickness or maternity/paternity leave.

**n=** The number of respondents in the entire sample or subsets of the sample that were asked specific survey questions or comprise a demographic or geographic subgroup discussed in the report.

# Note on Significance Testing

Shading indicates statistically significant differences between the sub-group (e.g., females) vs the total (average) result at the 95% confidence level. We have used a two-tailed Z-test, $p \leq 0.5$.

To further clarify, we say that a difference between two groups of people (e.g., older respondents vs. the average) is statistically significant if it is mathematically unlikely to have happened purely by chance. This means it is likely there is a genuine difference between the sub-group and the average.

A cell shaded green indicates a result that is significantly greater than the average, while a red shaded cell means the result is significantly less than the average.

Significantly greater than the average

Significantly less than the average

It should be noted that "statistically significant" does not mean "relevant", and not every statistically significant result is an important finding.

# Executive Summary

## Digital and Financial Literacy Index Scores

### Samoans possess moderate levels of digital and financial literacy with significant room for growth around the uptake of digital financial services (DFS)

Samoans achieved a moderate mean score of 22.41 points out of a possible 52 points in the Digital and Financial Literacy (DFL) Index scores, substantiating the need for comprehensive digital and financial literacy programs in Samoa.

### Digital and financial literacy in Samoa tracks closely with age, region, educational attainment, and socio-economic status

Samoans aged 25 to 44 years, residents of the 'Apia Urban' region, higher-educated, and higher-income Samoans perform better on a number (but not all) measures than their older and lower-SES counterparts or Samoans outside of the Apia region. Gender differences are modest with regards to digital and financial competencies. However, in the area of financial inclusion, particularly younger and rural women – remain excluded from the formal financial sector at higher rates than their male counterparts.

## Digital Integration

### Internet access and most digital transactions are conducted on smartphones

Internet access and most digital transactions are conducted on smartphones, with lower levels of Samoans having access to other digital devices. Four-in-five Samoan adults (79%) have access to a smartphone for personal or work use, either their own or belonging to someone else. Smartphones comprise the most accessible digital device by a wide margin, with other digital devices – smart TVs (42%), smart watches or speakers (35%), tablets or computers (30%), or Internet routers or modems (15%) – accessible to fewer, though still substantial numbers of, adults.

Access to digital devices other than smartphones is considerably lower outside of the Apia Urban area with the lowest rates of access to digital devices other than smartphones occurring in the 'Rest of Upolu' and Savai'i regions.

### Access to digital devices (smartphones) and available Internet connections outpace digital and financial proficiencies and levels of confidence engaging with digital tools

Despite most Samoans having access to a smartphone (79% access) and or having used the Internet (73% have gone online), 45% Samoans worry that technology is leaving them behind (45% agree, whereas 47% disagree, and 8% do not know).

### Participation in online activities, including finance-related activities, is limited beyond news and social media consumption

Two in five Samoan adults learned something from an online video or course (39%). Just 13% of Samoans bought something online; 11% completed or submitted a government form online; and 16% searched online for information about money matters. This exhibits the untapped potential of digitizing public service delivery and expansion of e-commerce in the country, which needs to be complemented by digital and financial literacy initiatives for the citizens.

## Financial Inclusion and Literacy

**Samoa's economy remains largely cash-based** despite some ownership, albeit limited, of traditional and digital payment services.

Three in ten Samoans overall (31%) do not have a bank account, electronic payment card, or digital financial service they can use to store money or make payments. Two in five Samoans have a current account (40%) – a majority of whom have a payment card associated with their current account (67% of current account owners[1]; 27% of the adult population), – and 24% have a digital wallet. Two in five Samoans (39%) have a payment card of any sort (not just one associated with a current account), including public transport card or debit card.

Samoans are near universal in their use of cash to pay for commonly accessed household items and services (defined for the purposes of the survey as groceries, paid meals out, or utility bill payments). Almost all Samoans report having used cash for their most recent grocery purchase (96%), meal out (97%), or utility bill payment (96%). Just 2% to 3% of Samoans at most, used a payment card to pay for any of the aforementioned transactions, and up to 1% paid with a digital or mobile wallet depending on the service.

### Gender gaps in current account ownership

While overall levels of *financial competency* are relatively similar with just some nuanced distinctions between Samoan men and women as they relate to financial management and know-how, levels of *financial inclusion* are not. Men (44%) are more likely than women (36%) to own a current account for conducting financial transactions. Amongst women, rural (33%) and younger women (aged 15 to 24 years) (28%) are the least likely to own a current account.

1 [n=485]

**Majority of Samoans participate in some level of budgeting and savings behaviour,** and roughly half save for emergencies (51%) or the longer-term (58%). That said, only a segment of Samoans uses digital tools to aid with financial management (17% use a banking app or online money management tool to monitor their spending and saving). Participation in savings activities varies along gender and generational lines, as well as between urban and rural residents. Younger women (aged 15 to 24 years) and rural women are somewhat less likely to engage in savings behaviours than their male, urban, and older counterparts. Savings behaviour also tracks closely with educational attainment and income. University-educated and higher-income earning Samoans are significantly more likely to save for emergencies and the long-term than other cohort groups.

# Perceptions about Digital Financial Services

### Considerable room for growth in awareness and comfort using digital financial services, digital management tools, and online financial resources in Samoa

Use of DFS to complete day-to-day financial transactions or for financial management purposes is currently limited, at this early stage of the DFS ecosystem. Common purchases – groceries, meals out, and the payment of utility bills – are near universally transacted in cash. With regards to the use of DFS in financial management, 17% of Samoans use banking apps or online money management tools to monitor their spending and saving. Among Samoans who own current accounts and access the Internet, 34% use banking apps to check account balances, withdraw, or deposit funds associated with their account, accounting for just 12% of the adult population.

### Samoans understand the inevitability of the use of digital financial services, as well as the potential benefits, while at the same time expressing concerns about their ability to navigate these services safely and effectively

Samoans understand the numerous benefits and inevitability of DFS, their use in business, government, and personal finance, while at the same time expressing some concern about their ability to navigate these services safely and effectively. Survey data indicates both lagging trust in digital financial tools and personal confidence using DFS. Two-thirds of Samoan adults (66%) believe DFS are risky for "ordinary people". The majority would not trust (58%) automated services such as an app or robot advisor to provide financial advice. In addition, Samoans have grown increasingly wary of financial scams and fraud (70%), not limited to DFS, over time. DFL interventions will need to promote the potential benefits of DFS usage, including cost savings, to address a potential DFS adoption challenge among more sceptical audiences.

# DFS Outcomes and Education

### Experience of using DFS is limited till date

A majority of Samoans (64%) have not completed a mobile or digital financial transaction to experience either the positive or negative outcomes of DFS use. Amongst the 36% of Samoans who have completed a financial transaction via a mobile phone or online, majorities have experienced positive outcomes through cost savings and an increased ease in managing their finances. Two-thirds have found it easier to manage their money without help from others (67%) or to keep track of what they are spending (68%). Half (50%) of DFS users have saved money on financial transactions by reducing fees or other costs. That said, sizeable numbers of DFS owners/users have experienced negative outcomes as well, substantiating the need for comprehensive DFL education. One in five DFS users report having lost money because of online scams or phishing attacks. [2]

### Leveraging online resources and channels are essential to deliver digital and financial literacy for Samoans

Financial literacy, including digital financial literacy, can be delivered online to a significant portion of the population, but face-to-face education is still required to support the full spectrum of Samoan society. Two in five Samoans (39%) learned something from an online video or course in the three months prior to completing the survey. Participation in online learning tools drops to 20% among Samoans with a middle school education or less and 19% among Samoans aged 45 to 74 years.

Safe and efficient uptake of DFS across Samoa will require access, education, and repeated use. There is a need to increase access to *and ownership of* digital devices such as smartphones; educate around safe online behaviours; and promote regulated and reliable DFS and online financial management tools. At a minimum, individuals who lack access to digital devices or do not use the Internet most likely require basic, foundational skills given their inability to engage with DFS at the present time. Even amongst Samoans who engage with DFS however, more information is required to ensure safe and efficient uptake of digital financial services as DFS become more widely available and used across the whole of Samoan society. Data clearly substantiates the need for comprehensive, multi-faceted digital and financial literacy programs in Samoa.

2 [DFS users, n=441] (the use of mobile or online banking includes checking a current account balance on a phone or via a bank app or owning a DFS such as a digital or mobile wallet)

# Background and Introduction

The growing availability of digital financial services (DFS) and emerging digital platforms in Samoa can provide unique capital-building tools and resources for accelerating financial inclusion and inclusive growth for the last mile. To realize this potential, strengthening digital and financial literacy (DFL) of all population segments, especially the marginalized and low-income groups is essential.

Improved financial and digital literacy can contribute to strengthened consumer protection and resilience to major financial shocks. The Government of Samoa recognizes the urgency of equipping the citizens with relevant digital and financial management and decision-making skills so they can harness DFS to the benefit of their financial health and well-being. So, the Samoa National Financial Inclusion Strategy (2022/23-2025/26) adopted 'Vibrant DFS Ecosystem' and 'Consumer Protection and Financial Capability' as key strategic pillars, complemented with efforts to strengthen digital and financial literacy across all population segments.

In this context, it is essential to assess the status of financial and digital literacy in Samoa to design and implement evidence backed interventions. To date however, efforts to improve digital and financial literacy and implement targeted interventions have been significantly challenged by a lack of updated DFL data in Samoa on which to base these efforts and track the progress. To address this gap, UNCDF conducted the Digital and Financial Literacy Survey in Samoa and six other Pacific Island countries (Papua New Guinea, Solomon Islands, Fiji, Vanuatu, Tonga and Timor-Leste) to assess the current state of digital and financial literacy within each country. The research explores experiences with traditional and digital financial services to-date, in addition to assessing basic competencies in the areas of digitization and finance.

The survey findings will be used to develop and implement targeted interventions for improving digital financial competencies among women, MSMEs, youth, migrant workers, and rural communities. The survey results are intended to serve as a baseline from which future changes in competencies, access, and usage can be measured by the regulators and development partners.

# Methodology

## Survey Methodology

UNCDF partnered with Tebbutt Research to roll out and conduct the Digital and Financial Literacy Survey in seven Pacific Island countries: Fiji, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, and Vanuatu in 2022. This report and the methodology that follows focuses on findings from Samoa.

**1,216**
**Samoans interviewed**
with individuals aged 15-74 years

**65%**
**Face-to-face interviews**
- Computer Assisted Personal Interviewing (CAPI)
- Proportional to Size (PPS) Methodology

**35%**
**via Mobile Telephones**
- Computer Assisted Telephone Interviewing (CATI)
- Random Digit Dialing (RDD) Methodology

The telephone portion of the field took place between 12 September and 27 September 2022. Face-to-face interviewing took place between 27 September and 18 October 2022. Average interview length was 20 minutes. Interviews were administered in Samoan and English.

Using the most recently available population data from the Samoan Bureau of Statistics, nested survey quotas by gender and by age within regions (defined by province) were loosely established (±10%) for the CATI portion of the sample prior to commencing fieldwork. Face-to-face interviewing was conducted according to a PPS methodology utilizing CAPI technology. A Kish grid was used to select respondents within households with only one respondent per household selected for a face-to-face interview. No quotas were applied to face-to-face interviews. Ultimately, there were oversampling in some groups over the course of the CAPI (in-person) survey field; **oversamples were weighted at the close of survey field to align with national population statistics for gender and age within province.**

The survey sample has a margin of error of +/-2.8% at the 95% confidence level. In interpreting survey results, all samples are subject to possible sampling error. The size of the sampling error depends upon both the total number of survey respondents and the percentage distribution of responses to a particular question. For example, if 50% of respondents in the survey answer "yes" to a particular question, we can be 95% confident that the true percentage will fall within 2.8 percentage points, or from 47.2% to 52.8%. The margin of error decreases the nearer percent distributions are to 0 and 100.

The following table details population statistics upon which telephone sample quotas and back-end weights were based:

| | Total | Apia Urban Area | Northwest Upolu | Rest of Upolu | Savai'i |
|---|---|---|---|---|---|
| Men 15-24 years | **19,217** | 3,444 | 7,252 | 4,445 | 4,076 |
| Men 25-34 years | **13,328** | 2,528 | 5,036 | 3,073 | 2,691 |
| Men 35-44 years | **12,068** | 1,985 | 4,635 | 2,778 | 2,670 |
| Men 45-54 years | **9,039** | 1,579 | 3,186 | 2,086 | 2,188 |
| Men 55+ years | **9,595** | 1,609 | 3,066 | 2,324 | 2,596 |
| Women 15-24 years | **17,571** | 3,449 | 6,765 | 3,725 | 3,632 |
| Women 25-34 years | **12,498** | 2,431 | 4,797 | 2,746 | 2,524 |
| Women 35-44 years | **10,578** | 1,903 | 3,929 | 2,319 | 2,427 |
| Women 45-54 years | **8,375** | 1,530 | 2,934 | 1,924 | 1,987 |
| Women 55+ years | **10,599** | 1,922 | 3,508 | 2,429 | 2,740 |

The survey conceived the multi modal methodology on the basis that:

- A minimum of 60% of interviews in each country including Samoa should be conducted face-to-face to ensure individuals without access to digital devices, including mobile phones, were accurately captured in the sample frame.
- The survey intended to incorporate technology into the final methodology in each country, through the inclusion of CATI in the methodological design. The ultimate proportion of CAPI to CATI interviews in each country was decided based on mobile penetration figures and the COVID situation in each country at the time of field data collection. Again, it was determined that a minimum of 60% of interviews were to be completed face-to-face in each country and it was further determined that a minimum of 25% of interviews would be completed via telephone. In Samoa and other higher mobile ownership countries the remaining 10 to 15% of interviews were completed by CATI (and by CAPI in lower mobile ownership countries). Mobile penetration is calculated at 73.9% in Samoa (DataReportal, 2022). Mobile ownership is calculated as the percentage of mobile phone subscribers amongst the general population and is not exclusive to the population of adults aged 15 to 74 years.

# Survey Questionnaire

The questionnaire was conceived and designed to serve as a template for similar interventions in other regions including Asia and Africa. Dr. Adele Atkinson designed the survey questionnaire with input from an advisory team at UNCDF and Tebbutt Research, particularly as the instrument required localisation for the Pacific Islands. The survey was designed through an iterative process with feedback from partner Central Banks in the Pacific region, partner UN agencies, and UN country representatives, with further review and amendments following pilot tests. The final survey questionnaire has been provided as an appendix to this report.

UNCDF also intends to conduct a follow-up survey in 2025. Findings from the baseline survey will be compared with those of a follow-up survey to assess the impact of digital and financial literacy programmes designed in response to baseline survey findings and ongoing changes in the market.

## Creation of a Digital and Financial Literacy Index

A scoring system was applied to the questionnaire for the purposes of analysis, both in terms of comparing levels of digital and financial competencies between geographic and demographic subgroups and measuring changes in levels of digital and financial literacy over time (by acting as a baseline survey, with a follow-up survey to be conducted in 2025). This includes measuring growth in positive outcomes associated with the usage of digital financial services *and* increased digital and financial literacy over time.

Survey respondents could achieve a maximum of 52 points for digital and financial literacy based on their responses to survey questions in four areas of content.[3] Access to mobile/digital devices contributes to the scoring framework and constitutes an important component of measuring digital-financial literacy. While the survey explores financial inclusion and access to electronic and digital financial products, inclusion questions do not factor into the scoring framework. These areas are however discussed in the detailed report that follows. Rather, attitudes, awareness, and online behaviours related to finances and financial management comprise the key inputs underpinning the DFL Index and in understanding levels of digital and financial literacy in Samoa.

Content areas that comprise the DFL index and scoring framework comprise:

### Digitalisation

**maximum achievable score of 18 points, with a focus on access to digital devices, digital activities performed, Internet access and online activities, awareness of and participation in safe digital/online practices;**

### Financial competencies

**maximum achievable score of 13 points, with a focus on engagement with financial safeguards (e.g., budgeting and savings behaviours) and financial knowledge (i.e., basic understanding of the concept of inflation, how borrowing impacts MSME profitability, etc.).**

### Digital financial competencies

**maximum achievable score of 9 points, with a focus on commonly-held beliefs about digital financial services and DFS behaviours (both practices for keeping financial information safe online and use of DFS for money management).**

### DFS outcomes

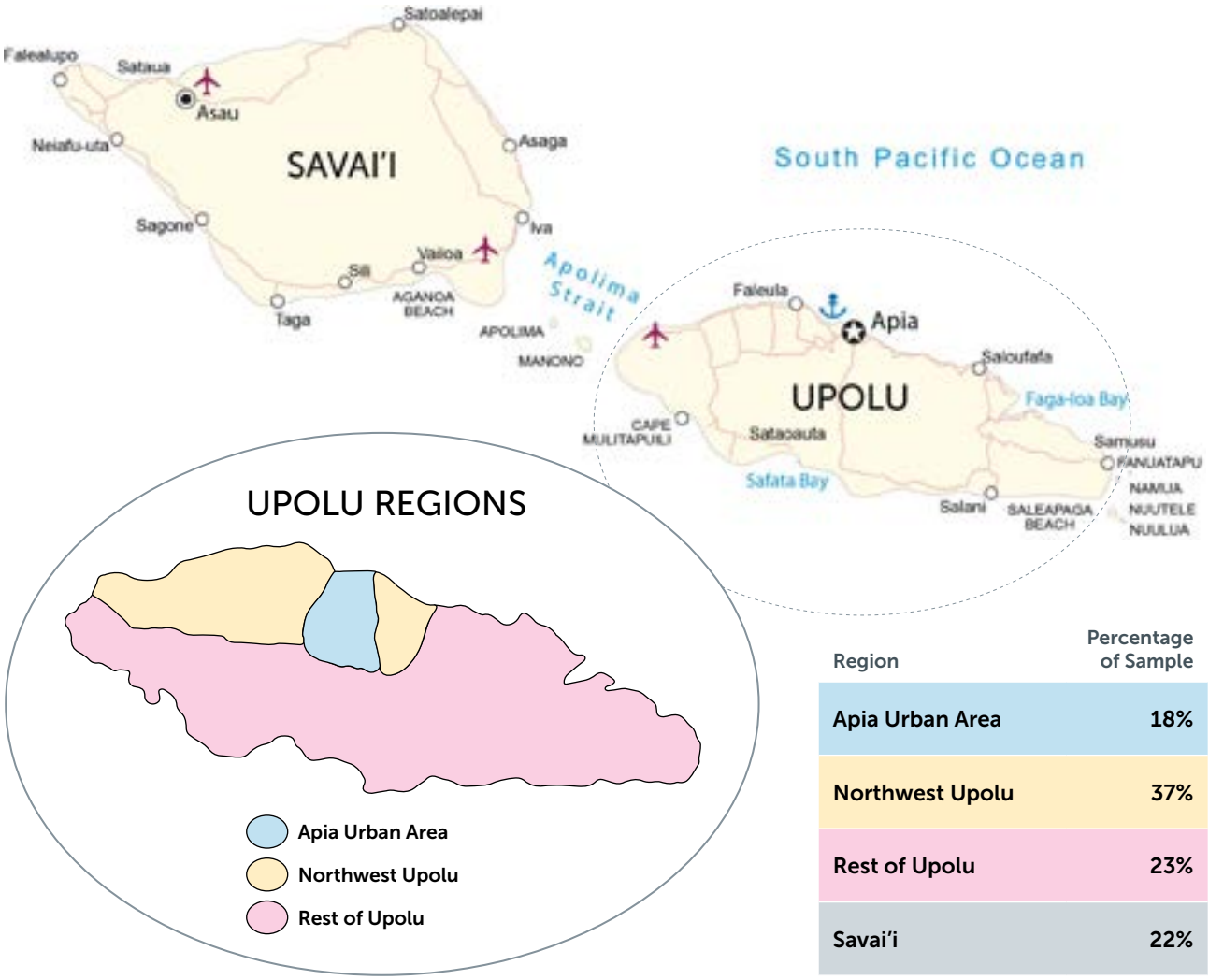
**maximum achievable score of 12 points, with a focus on positive and negative outcomes associated with use of mobile or online financial services, including current financial circumstances and the impact of DFS services on financial well-being.**

3 Not all questions asked in the survey were used in the scoring model. Responses to financial inclusion questions such as ownership and use of financial and digital financial products, experiences sending and receiving remittances, and preferences with regards to cash-based transactions do not contribute to DFL scores.

# General Demographics

The following graphs and information provide a demographic snapshot of the final, weighted survey sample.

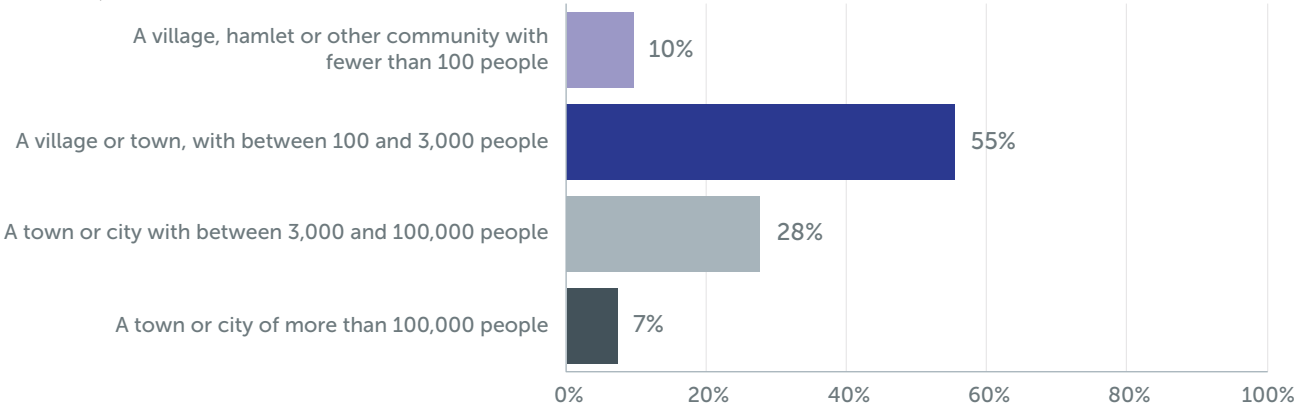
## Region and Density




| Region | Percentage of Sample |
|---|---|
| Apia Urban Area | 18% |
| Northwest Upolu | 37% |
| Rest of Upolu | 23% |
| Savai'i | 22% |

Graph 1: Town or Village[4]

*[Total sample, n=1,216]*




4 The most recent data available from the World Bank (2021) indicates that 82% of the Samoan population lives in a rural area: https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=WS. The World Bank qualifies its urban-rural classifications with the following note: "There is no universal standard for distinguishing rural from urban areas, and any urban-rural dichotomy is an oversimplification. The two distinct images – isolated farm, thriving metropolis – represent poles on a continuum. Life changes along a variety of dimensions, moving from the most remote forest outpost through fields and pastures, past tiny hamlets, through small towns with weekly farm markets, into intensively cultivated areas near large towns and small cities, eventually reaching the center of a megacity. Along the way access to infrastructure, social services, and nonfarm employment increase, and with them population density and income. A 2005 World Bank Policy Research Paper proposes an operational definition of rurality based on population density and distance to large cities (Chomitz, Buys, and Thomas 2005)."

Graph 2: Density[5]

*[Total sample, n=1,216]*


**68%**
of respondents live within one kilometre (1km) of a place to buy basic provisions such as bread, vegetables, bottled water, or soap.

**21%**
of respondents live within one kilometre (1km) of an ATM.

## Demographic Characteristics

Age Range of Respondents
15-74 years

**30%** Samoans aged 15-24 years

**21%** Samoans aged 25-34 years

**33%** Samoans aged 35-54 years

**16%** Samoans aged 55-74 years

**48% : 51%**
Women and men comprise roughly equal proportions of the effective sample

**1 in 5**
Samoans surveyed have a health condition or disability that limits their day-to-day activities

# 33% Samoans work outside the home

7% Self Employed

24% Formally Employed Outside the Home

**14%** Agriculture Sector

**11%** Public Sector

**9%** Toursim & Hospitality

5 For the reasons stated above, several measures were used to determine urban and rural designations in the administration of the survey. For greater accuracy in a local context, the survey analysis refers to urban-rural classifications derived in one of two ways depending on whether interviews were conducted face-to-face or via telephone. Interviewers recorded density for in-person interviews based on actual interview location. Telephone respondents were asked to self-identify whether they live in an urban or rural area with the understanding that not all respondents would be able to recall EA or ward information.

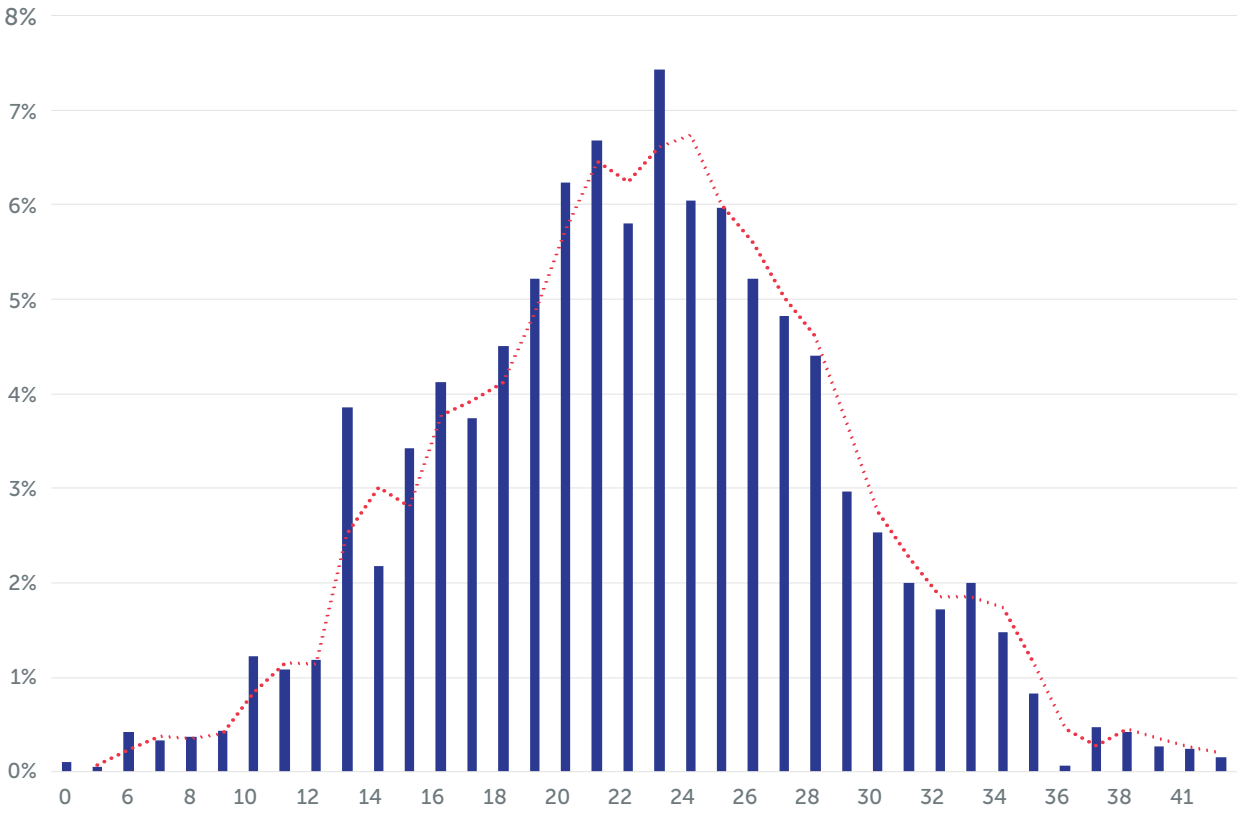
# Digital and Financial Literacy Index Scores

**Samoans possess moderate levels of digital and financial literacy** with significant room for growth in the uptake of digital financial services (DFS), along with familiarity and awareness of practical safeguards for DFS use. Assessments of digital and financial literacy – and the compilation of a digital and financial literacy (DFL) index – were made based on responses to measures in the following areas:


Out of a possible 52 points, Samoans achieve a mean score of 22.41 points. The majority (69%) achieve DFL (digital and financial literacy) scores which fall in the moderate category, achieving an overall score of between 13 and 26 points. A very small percentage of Samoans score on the low (5%) or the high end of the DFL index (1%). Low is defined as scoring between 0 and 12 points and high between 40 and 52 points. One-quarter (25%) achieve an above average score of between 27 and 39 points.

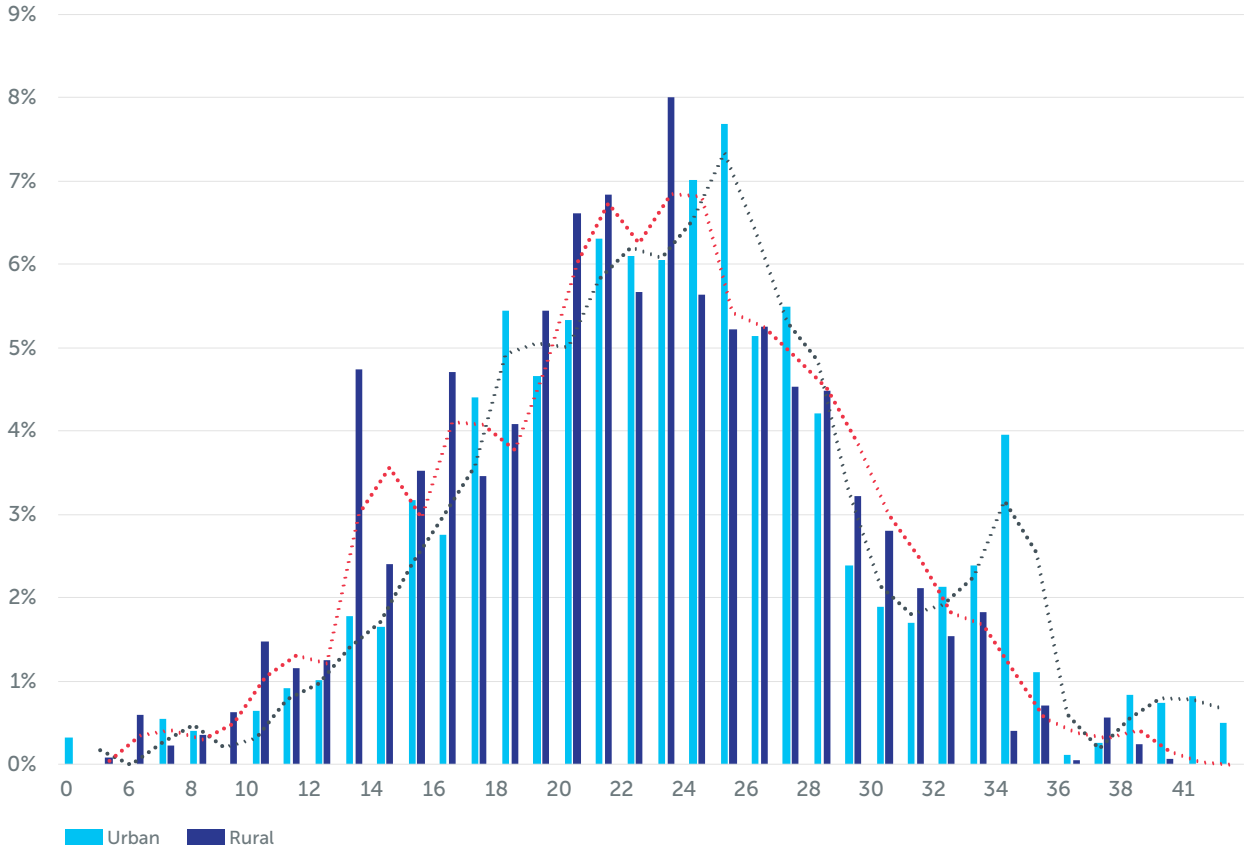

Graph 3: Scoring Distribution

*[Total sample, n=1,216]*



Graph 4: Scoring Distribution by Density

*[Total sample, n=1,216]*




**Digital and financial literacy in Samoa tracks closely with age, region, educational attainment, and socio-economic status.** Samoans aged 25 to 44 years, residents of the 'Apia Urban' region, higher-educated, and higher-income Samoans perform higher on a number (but not all) measures than their older and lower-SES counterparts or Samoans outside of the Apia region. Gender differences are modest with regards to digital and financial competencies. However, in the area of financial inclusion, particularly younger and rural women – remain excluded from the formal financial sector at higher rates than their male counterparts.

Samoans most likely to achieve above-average or high total DFL scores (26% of all adults) include Samoans with a university-level degree or higher (46%), from the highest income bracket (43%), and with formal employment (41%), men aged 25 to 44 years (36%), as well as Samoans living in the 'Apia Urban' area (34%).

**DFL index scores are largely similar between Samoan women and men.** Rural women tend to score lower than their male and urban counterparts, though differences are significantly larger at the levels of socio-economic status and educational attainment than gender. Furthermore, urban women score highest in comparison to men and rural women for both their overall DFL score and digital competencies score, specifically.

# DFL by Demographic and Geographic Subgroups

The tables in this section provide a detailed snapshot of DFL index performance by geographic and demographic subgroups, including self-employed Samoans and individuals living with disability.

**Table 1: DFL Index Score by Gender by Density**

*[Scores calculated of the total sample, n=1,216]*

| (Shading where p≤0.05) | Total | Urban Men | Rural Men | Urban Women | Rural Women |
|---|---|---|---|---|---|
| Total DFL Score (0-52) | 22.41 | 22.99 | 22.57 | 24.07 | 21.24 |
| 1. Digitalisation (0-18) | 6.95 | 7.48 | 6.89 | 8.01 | 6.33 |
| 2. Financial competencies (0-13) | 6.87 | 6.84 | 6.94 | 7.05 | 6.72 |
| 3. Digital financial competencies and DFS outcomes (0-21) | 8.59 | 8.68 | 8.74 | 9.00 | 8.19 |
| % Low (0-12 points) | 5 | 3 | 4 | 4 | 8 |
| % Moderate (13-26 points) | 69 | 69 | 68 | 64 | 73 |
| % Above Average (27-39 points) | 25 | 24 | 29 | 31 | 19 |
| % High (40-52 points) | 1 | 2 | 0 | 2 | 0 |

**Table 2: DFL Index Score by Region**

| (Shading where p≤0.05) | Total | Apia Urban | NW Upolu | Rest of Upolu | Savai'i |
|---|---|---|---|---|---|
| Total DFL Score (0-52) | 22.41 | 24.11 | 22.64 | 21.45 | 21.64 |
| 1. Digitalisation (0-18) | 6.95 | 8.06 | 7.04 | 6.24 | 6.64 |
| 2. Financial competencies (0-13) | 6.87 | 6.90 | 7.01 | 6.84 | 6.65 |
| 3. Digital financial competencies and DFS outcomes (0-21) | 8.59 | 9.15 | 8.58 | 8.38 | 8.36 |
| % Low (0-12 points) | 5 | 3 | 5 | 5 | 7 |
| % Moderate (13-26 points) | 69 | 63 | 66 | 79 | 69 |
| % Above Average (27-39 points) | 25 | 33 | 28 | 16 | 24 |
| % High (40-52 points) | 1 | 1 | 1 | 0 | 1 |

**Table 3: DFL Index Score by Gender by Age**

| (Shading where p≤0.05) | Total | Men 15-24 yrs. | Men 25-44 yrs. | Men 45-74 yrs. | Women 15-24 yrs. | Women 25-44 yrs. | Women 45-74 yrs. |
|---|---|---|---|---|---|---|---|
| Total DFL Score (0-52) | 22.41 | 22.41 | 24.40 | 20.66 | 22.08 | 23.37 | 20.65 |
| 1. Digitalisation (0-18) | 6.95 | 7.48 | 7.94 | 5.42 | 7.47 | 7.56 | 5.43 |
| 2. Financial competencies (0-13) | 6.87 | 6.32 | 7.36 | 6.91 | 6.36 | 7.12 | 6.89 |
| 3. Digital financial competencies and DFS outcomes (0-21) | 8.59 | 8.60 | 9.09 | 8.33 | 8.25 | 8.69 | 8.33 |
| % Low (0-12 points) | 5 | 2 | 1 | 8 | 8 | 5 | 8 |
| % Moderate (13-26 points) | 69 | 70 | 63 | 73 | 69 | 67 | 74 |
| % Above Average (27-39 points) | 25 | 28 | 34 | 19 | 23 | 26 | 18 |
| % High (40-52 points) | 1 | 0 | 2 | 0 | 0 | 1 | 0 |

Table 4: DFL Index Score by Educational Attainment and Work Status

| (Shading where p≤0.05) | Total | ≤ Middle School | Secondary School | University+ | Student | Self-Employed | Formally Employed |
|---|---|---|---|---|---|---|---|
| Total DFL Score (0-52) | 22.41 | 19.05 | 21.71 | 25.45 | 23.04 | 22.72 | 24.69 |
| 1. Digitalisation (0-18) | 6.95 | 5.11 | 6.34 | 9.26 | 8.63 | 6.50 | 8.25 |
| 2. Financial competencies (0-13) | 6.87 | 6.47 | 6.90 | 6.95 | 6.07 | 7.54 | 7.13 |
| 3. Digital financial competencies and DFS outcomes (0-21) | 8.59 | 7.47 | 8.48 | 9.24 | 8.34 | 8.68 | 9.31 |
| % Low (0-12 points) | 5 | 18 | 4 | 3 | 5 | 6 | 3 |
| % Moderate (13-26 points) | 69 | 64 | 76 | 51 | 67 | 67 | 56 |
| % Above Average (27-39 points) | 25 | 18 | 19 | 44 | 26 | 25 | 40 |
| % High (40-52 points) | 1 | 0 | 0 | 2 | 1 | 2 | 2 |

Table 5: DFL Index Score by Income and Disability Status

**Individuals living with a disability*

| (Shading where p≤0.05) | Total | ≤95WST | 96-286WST | 287-477WST | 478+WST | IWD* |
|---|---|---|---|---|---|---|
| Total DFL Score (0-52) | 22.41 | 20.27 | 22.24 | 22.22 | 25.29 | 21.72 |
| 1. Digitalisation (0-18) | 6.95 | 6.19 | 6.74 | 6.82 | 8.23 | 6.36 |
| 2. Financial competencies (0-13) | 6.87 | 6.46 | 6.86 | 6.71 | 7.62 | 6.98 |
| 3. Digital financial competencies and DFS outcomes (0-21) | 8.59 | 7.62 | 8.64 | 8.68 | 9.44 | 8.38 |
| % Low (0-12 points) | 5 | 11 | 5 | 4 | 0 | 8 |
| % Moderate (13-26 points) | 69 | 73 | 71 | 74 | 56 | 67 |
| % Above Average (27-39 points) | 25 | 16 | 24 | 22 | 42 | 25 |
| % High (40-52 points) | 1 | 0 | 1 | 0 | 1 | 0 |

# Detailed findings

## Section 1: Digital Access, Usage, and Literacy

### Access to digital devices:

Smartphones **79%**

Tablet, laptop or desktop computer **30%**

Smart TV **42%**

Router or Modem **15%**

Smartwatch **35%**

**45%** of Samoans feel that technology is leaving them behind

### Participation in digital and online activities:

**54%** learned something from an online video or course in the previous three months

**22%** searched online for information about money matters

**18%** bought something online

**15%** completed or submitted a government form online

**10%** placed an online bet or played an online game with monetary prizes

DIGITALISATION SCORES

**Samoans achieve a mean score of 6.95 out of 18 points**

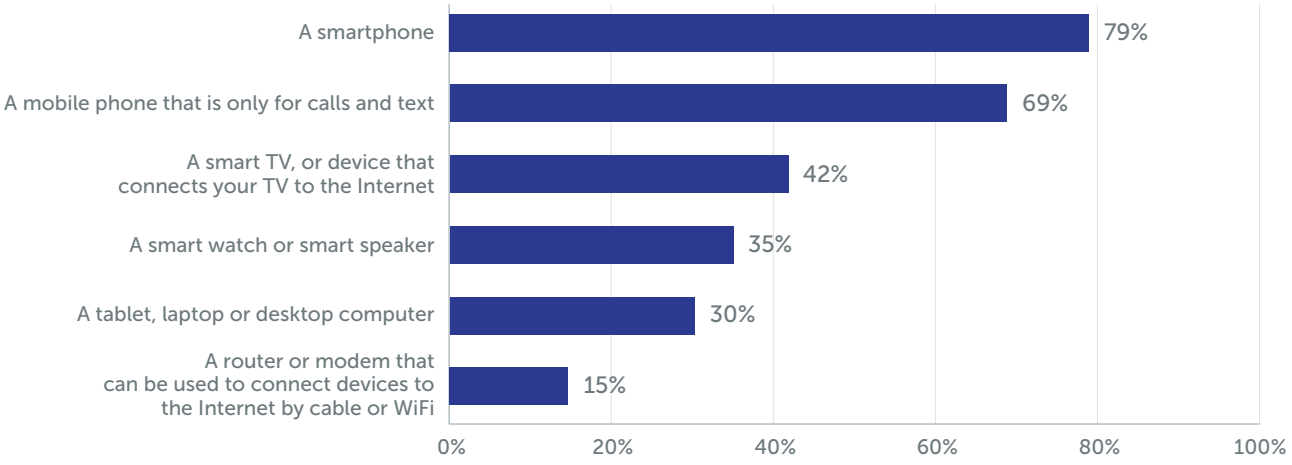
## Access to and usage of digital devices and the Internet

Four in five Samoan adults (79%) have access to a smartphone for personal or work use, either their own or belonging to someone else. Smartphones comprise the most accessible digital device by a wide margin, with other digital devices – smart TVs (42%), smart watches or speakers (35%), tablets or computers (30%), and Internet routers or modems (15%) – accessible to far fewer Samoans. Seven in ten (69%) Samoans also claim to have a mobile phone that is only for calls and text. Rather than owning or accessing two different types of mobile devices, it is likely that at least a portion of respondents are referring to how they primarily use devices rather than the type of device they use.

Access to smartphones in Samoa is high across demographic and geographic groups though there are significant variation along generational and socio-economic lines. Samoans aged 15 to 24 (74% have access to a smartphone) and 45 to 74 years (73%) access smartphones at a lower rate than Samoans aged 25 to 44 years (87%). Smartphone access is also significantly lower among Samoans with a middle school education or less (66%) compared to higher-educated adults (88% among Samoans with a university – or degree-level education). Older men (69%) and Samoans with a middle school education or less (66%) have the lowest rates of smartphone access relative to other cohort groups. Nonetheless, access to smartphones is still high amongst these and other cohort groups. This includes 77% of individuals living with disability who have access to a smartphone.

**Graph 5: Access to Digital Devices**

*D1. Do you have access to any of the following, for personal use, whether or not you currently use them? This could be at home or at work. [Asked of the total sample; n=1,216]*




Access to digital devices *other than smartphones* also varies significantly by age, region of the country, population density, educational attainment, and socio-economic status. Individuals with a middle school education or less, rural inhabitants, low-SES and older Samoans (aged 45 to 74 years) are considerably less likely to have access to tablets/computers or smart devices other than a phone, than their urban, higher-educated, higher-SES, and younger counterparts. For the most part, the aforementioned demographics are greater determinants of access to digital devices than gender. In fact, urban women have some of the highest rates of access compared to other cohort groups, though differences between urban women and men are slight. Regionally, access to digital devices other than smartphones is considerably lower outside of the Apia Urban area with the lowest rates of access to digital devices other than smartphones occurring in the 'Rest of Upolu' and Savai'i regions. To see a further breakdown of the access to digital devices by density, region, gender and educational attainment, refer to Appendix A, Part 1.

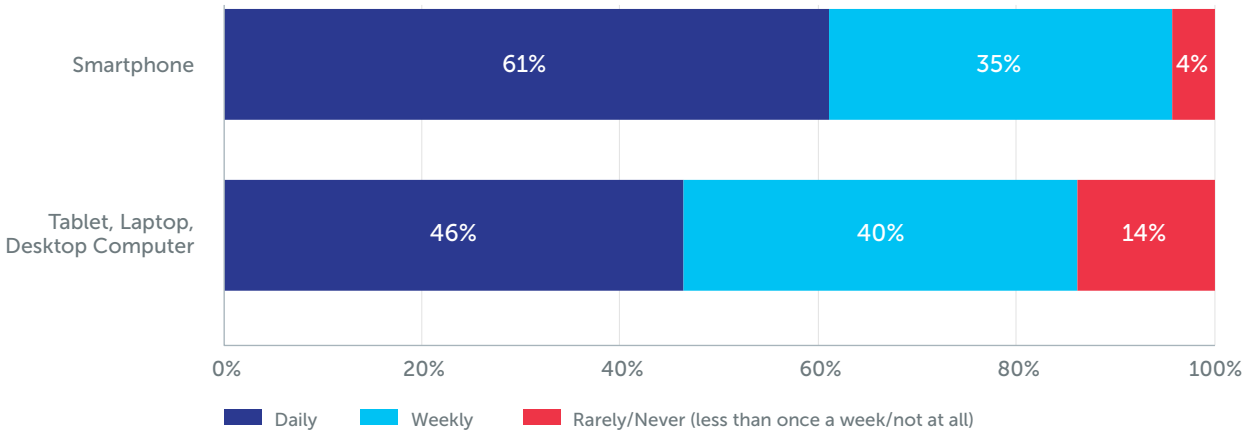
Whilst 79% Samoans have access to a smartphone, fewer may actually use these devices regularly. 48% Samoans use a smartphone daily, defined as individuals who use a smartphone multiple times or once a day; 27% use a smartphone weekly; 2% rarely use a smartphone; and 23% not at all (including 2% of Samoans who have access to a smartphone that they never use).[6] Graph 6 below illustrates frequency of use amongst individuals with access to a smartphone rather than out of the entire population. It can be inferred that individuals who use their devices multiple times a day, 56% of smartphone users (equivalent to 44% of the adult population), personally own the devices they use, while a significant segment of adults is accessing shared household devices which they may not personally own.

6 Calculated amongst all Samoans [n=1,216].

Usage of computers or tablets in Samoa (and elsewhere in the Pacific) is considerably less common than smartphone usage, with just three in ten Samoans (30%) accessing a computer or tablet for personal or professional use. Just 14% of Samoan adults use a tablet or computer daily; another 12% use a computer weekly (anywhere from once to several times a week). A full three-quarters use a computer rarely (just 1%) or never (73%).[7] Among tablet and computer users – 30% of the population – just under half (46%) use their computer or tablet daily, 40% weekly, and while they may have access, 14% use a tablet or computer less than once a week or never.

**Graph 6: Frequency of Device Usage**

*D1. Approximately how often have you used a tablet, laptop, or desktop computer/smartphone during the last three months? [Asked of individuals who report access to devices; n=960 smartphones and n=368 computers]*




Samoans living in the Apia Urban Area, urban dwellers more broadly (and urban women especially), Samoans with a university – or degree-level education, students, those with formal employment arrangements outside the home, and Samoans with fortnightly incomes exceeding WS$478 (the highest income bracket captured)[8] are most likely to access a tablet or computer and to use those devices on a regular basis compared to other cohort groups. For a more detailed snapshot of access to tablet or computer and frequency of use, refer to Appendix A, Part 1.

Internet use in Samoa is relatively high, with 73% of Samoans confirming they have (ever) used the Internet, half of whom (54%[9]) use the Internet daily. Another 41% *of Internet users* go online at least once to multiple times a week. Kepios, a data warehousing service providing global data on mobile, Internet, and social media usage, estimates there were 67,600 Internet users in Samoa in January 2022, which would account for more than half (55%) of the population aged 15 years or older.[10] With only 15% of Samoans aged 15 to 74 years reporting access to an Internet router or modem, it is likely that most Samoans access the Internet via a smartphone rather than some other digital device.

Similar to patterns around device ownership and access, Internet use varies significantly by region of the country, population density, age, educational attainment, and socio-economic status. Four in five men and women between the ages of 15 and 34 years (81%) use the Internet, whereas only half of adults between 45 and 74 years of age use the Internet (57%). Internet usage is more than one and a half times as high among university-educated Samoans (89%) than Samoans with a middle school education or less (53%; 69% among Samoans who attended secondary school). Samoans residing in the 'Rest of Upolu' (65%) report significantly lower levels of Internet use than residents of other regions.

For a more detailed snapshot of internet access and frequency of use by demographic and geographic subgroups, refer to Appendix A, Part 2.

Samoans face **substantial barriers to accessing the Internet on a regular basis, the most notable being the quality or availability of Internet and mobile data services in their area.** The availability of Internet and data services poses a barrier for 69% of Samoan adults. Cost (49%) and concerns about the security of available services (46%) are obstacles to use for almost half the adult population. Cost is most likely only reported as a barrier where Internet services are available. The study did not further elaborate on security concerns and whether privacy/surveillance and/or potential data breaches fuel concerns. The availability of Internet and data services is problematic in both urban and rural areas (70% and 68%, respectively), though cost seems to pose a slightly greater obstacle to use among urban dwellers (54% in urban areas and 47% in rural areas). Young males (aged 15 to 24 years) are most likely to cite cost as a limiting factor in Internet use (60%), whereas males aged 45 to 74 years are the least likely to (36%). The latter access the Internet at a lower rate than their younger counterparts and may not be responsible for paying for data usage in their respective households.

7 Calculated amongst all Samoans [n=1,216].
8 Income brackets were calculated as percentage of GNI and include combined personal and spousal income.
9 Calculated among Internet users [n=884]
10 https://datareportal.com/reports/digital-2022-samoa

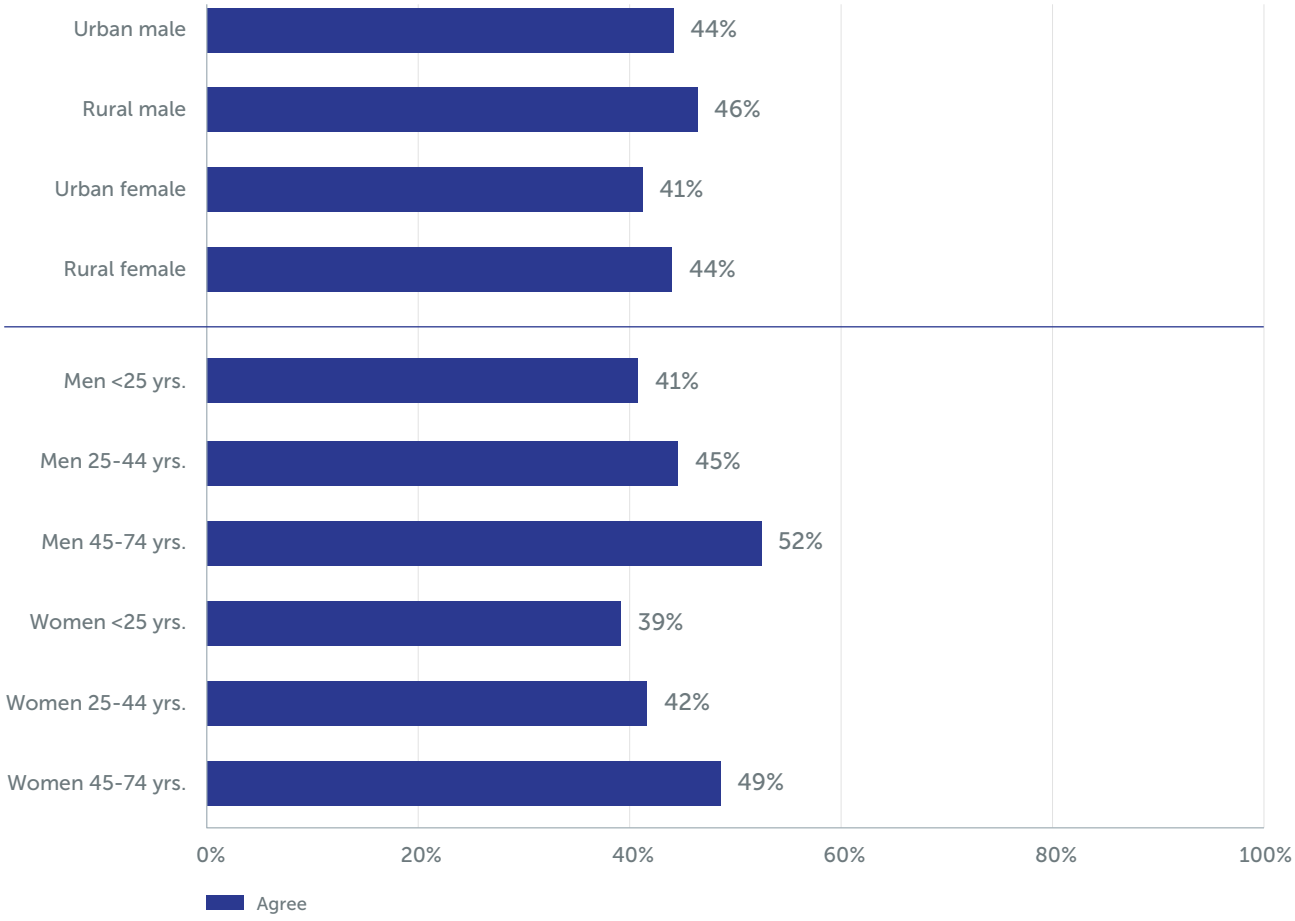
## Attitudes towards technology

Access to digital devices (smartphones) and available Internet connections may outpace digital proficiencies and levels of confidence engaging with digital tools amongst some segments of the population, including self-employed Samoans. Despite significant numbers of Samoans having access to a smartphone (79% access) and the Internet (39% use the Internet daily), almost half (45%) feel that technology is leaving them behind. An equal number refutes (47%) feeling concerned about their technological capabilities; 8% are not sure. For the most part, women express relatively similar levels of concern regarding their relationship to technology as their male counterparts.

Graph 7: Ability to Stay Apace of Technology

*D5_1. Do you agree or disagree with the following statement: I feel like technology is leaving me behind. [Total sample, n=1,216]*

**"I feel like technology is leaving me behind."**

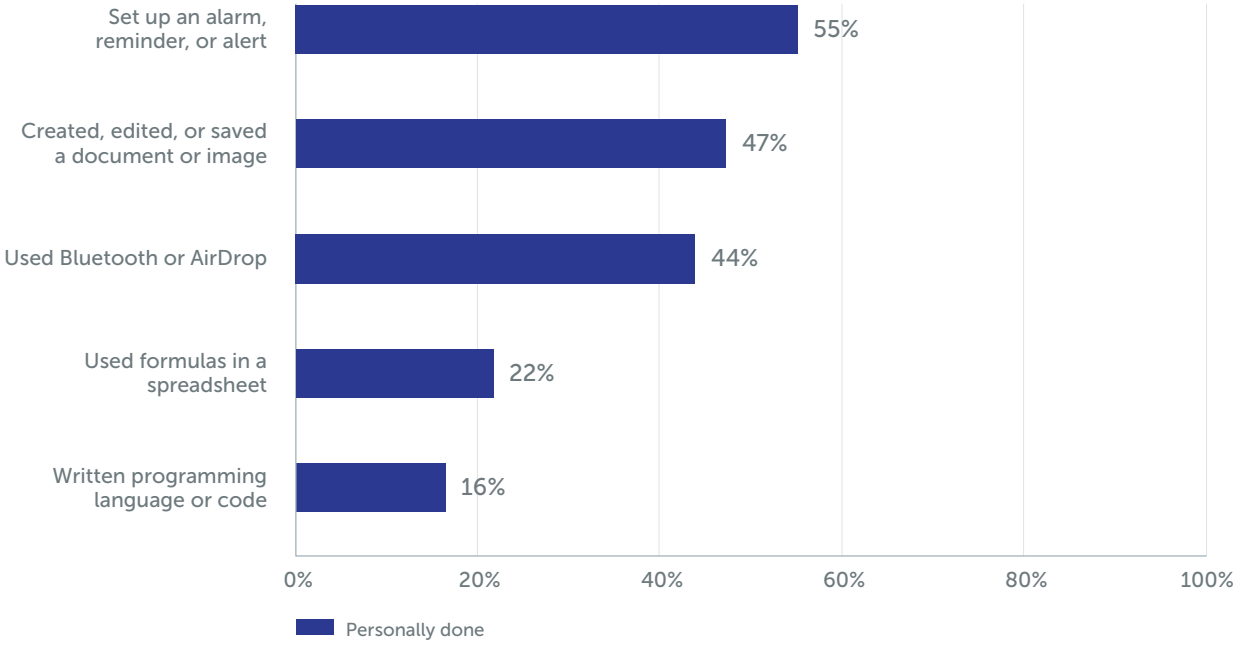


## Experience of various digital tasks and online activities

The survey explored participation in a limited set of digital activities (as distinguished from online activities): if the respondent used a digital device in the previous three months to set up an alarm, reminder, or alert; created, edited, or saved a document or image; used Bluetooth or Airdrop to send a document or image to a nearby device; used formulas in a spreadsheet to make a calculation; or wrote programming language or code. Samoans are most likely to engage in tasks that can be completed via handheld devices; far fewer have completed higher-complexity tasks that require a computer or similar device. Roughly half set up alarms, reminders, or alerts on a digital device (55%), created, edited, or saved a document or image (47%), or used Bluetooth or Airdrop to send a document or image to a nearby device (44%). Fewer, used formulas in spreadsheets to make a calculation (22%) or wrote programming language or code (16%).

Graph 8: Digital Activities

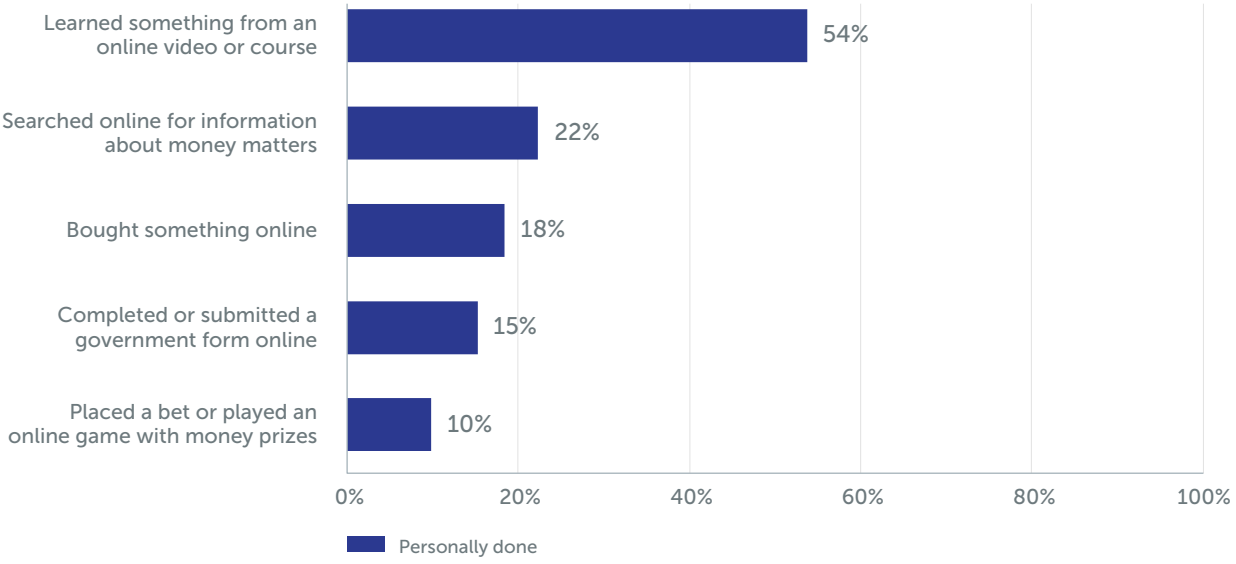
*D2. Still thinking about technology, please can you tell me if you have personally used a digital device or electronic gadget to do any of the following in the last three months, whether for yourself or someone else? [Total sample, n=1,216]*



Samoans were similarly probed regarding participation in a limited set of online behaviours: having learned something from an online video or course, completed or submitted a government form online, searched online for information about money matters, bought something online, or having placed a bet online or played an online game with money prizes. (The latter was intended to explore participation in an online activity and is not evaluated as a positive financial behaviour.) The survey did not explore social media habits and usage. Amongst the 73% of Samoans who have ever used the Internet[11], in the previous three months, 54% learned something from an online video or course in the previous three months (accounting for 39% of Samoan adults). Far fewer completed online activities beyond news/information consumption: 22% searched online for information about money matters (16% of all Samoans); 18% of Internet users bought something online (13% of all Samoans); 15% completed or submitted a government form online (11%); and 10% placed an online bet or played an online game with monetary prizes (7%). (Note, at present there are only online trivia and multi-player online games in market and prizes may pertain to household items rather than cash.) That said, one in five Internet users (22%) searched online for information about money matters, which speaks to an aptitude or willingness to do so again in the future if presented with the right tools.

**Graph 9: Online Activities**

*D4. I am now going to read out some more digital activities. Please could you tell me whether you have personally done any of these in the last 3 months? [Asked of individuals who use the Internet, n=884]*




**Like most measures evaluated in the survey, participation in digital and online activities tracks closely with population density, age, educational attainment, and socio-economic status.**

Urban dwellers, particularly urban women, are more likely to have completed both digital and online activities than their male and rural counterpart groups. It is important to keep in mind, that at a minimum, Samoans living in urban areas access the Internet in greater numbers than Samoans living in rural areas. In comparison with all other age groups, older Samoans are significantly less likely to have completed the more common digital and online activities assessed, such as having learned something from an online video.

Men and women aged 25 to 44 years are most likely to have engaged in e-commerce or in the case of men, to have submitted a government form online. Completion of digital activities also correlates with level of educational attainment, with university-educated Samoans significantly more likely to have completed the aforementioned activities in the previous three months. The results reaffirm that Samoans with higher levels of educational attainment (as well as income) are more likely to complete *some* digital and online activities when compared with their lower-educated and lower-income counterparts, such as learning something from an online video or course (68% among university-educated Samoans and 61% among individuals with combined incomes of 478 Samoan Tālā or greater fortnightly).

That said, educational attainment, more so than income status, influences likelihood to search online for information about money matters (22% of all Samoan Internet users, 29% of university-educated Internet users, and 24% of Internet users with combined incomes of 478 Samoan Tālā or greater fortnightly).

11 Online activities question asked only of individuals who use the Internet [n=884]

**Table 6: Digital and Online Activities by Gender by Age**

*D2 and D4. Please could you tell me whether you have personally done any of these in the last 3 months? [D2 asked of the total sample, n=1,216; D4 asked of individuals who use the Internet, n=884]*

| % Yes (Shading where p≤0.05) | Total | Men 15-24 yrs. | Men 25-44 yrs. | Men 45-74 yrs. | Women 15-24 yrs. | Women 25-44 yrs. | Women 45-74 yrs. |
|---|---|---|---|---|---|---|---|
| Set up an alarm, reminder, or alert | 55 | 60 | 66 | 42 | 55 | 65 | 37 |
| Created, edited, or saved a document or image | 47 | 50 | 55 | 35 | 49 | 55 | 34 |
| Used Bluetooth or AirDrop | 44 | 56 | 51 | 24 | 52 | 51 | 26 |
| Used formulas in a spreadsheet | 22 | 21 | 26 | 17 | 23 | 27 | 14 |
| Written programming language or code | 16 | 20 | 19 | 14 | 16 | 18 | 11 |
| Bought something online | 18 | 11 | 29 | 12 | 18 | 22 | 13 |
| Learned something from an online video | 54 | 54 | 63 | 33 | 64 | 59 | 35 |
| Placed a bet or played an online game with money prizes | 10 | 9 | 11 | 13 | 10 | 9 | 8 |
| Completed or submitted a government form online | 15 | 11 | 23 | 14 | 13 | 14 | 13 |
| Searched online for information about money matters | 22 | 19 | 27 | 24 | 18 | 26 | 18 |

**Table 7: Digital and Online Activities by Density and Educational Attainment**

| % Yes (Shading where p≤0.05) | Total | Urban Men | Rural Men | Urban Women | Rural Women | ≤ Middle School | Secondary | Uni+ |
|---|---|---|---|---|---|---|---|---|
| Set up an alarm, reminder, or alert | 55 | 59 | 56 | 58 | 51 | 42 | 52 | 68 |
| Created, edited, or saved a document or image | 47 | 51 | 47 | 57 | 42 | 32 | 42 | 67 |
| Used Bluetooth or AirDrop | 44 | 52 | 42 | 53 | 39 | 34 | 39 | 60 |
| Used formulas in a spreadsheet | 22 | 23 | 22 | 31 | 17 | 15 | 17 | 38 |
| Written programming language or code | 16 | 20 | 17 | 22 | 12 | 13 | 15 | 22 |
| Bought something online | 18 | 17 | 19 | 24 | 15 | 21 | 17 | 21 |
| Learned something from an online video | 54 | 55 | 52 | 61 | 51 | 38 | 49 | 68 |
| Placed a bet or played an online game with money prizes | 10 | 9 | 11 | 12 | 8 | 12 | 11 | 8 |
| Completed or submitted a government form online | 15 | 18 | 17 | 18 | 11 | 11 | 12 | 24 |
| Searched online for information about money matters | 22 | 24 | 23 | 27 | 18 | 25 | 19 | 29 |

## Digital and online security

Most Samoan Internet users[12] believe they are proactive in their approach to online safety and to *some* extent they are; 70% agree with the statement, "I take steps to keep my information safe when online". Upwards of two-thirds of Samoan Internet users across demographic and geographic subgroups describe themselves as taking necessary safety precautions online, with the exception of retirees. Notwithstanding assertions, uptake of specific digital security practices – on – or off-line – varies depending on the practice. The reuse of passwords across online accounts comprises one of the most obvious safety vulnerabilities evaluated, with virus protection and device locking features built-in to most in-market smartphones.

### Virus protection

Half (51%) of Samoans with access to a smartphone, tablet, or computer[13] say the devices they use do not have virus protection (though they may be unaware of in-built or pre-loaded protection on some products). Forty-five percent (45%) are aware of having virus protection on their devices; 4% are unsure. Among the smartphones used in market, several phones come pre-loaded with virus protection. This is to say that awareness and use of protections may be largely passive rather than active in nature, and many Samoans may be unfamiliar with the full extent of virus protection built-in or downloaded to the devices they use. (The question did not separate out virus protection on computers versus smartphones.)

### Password re-use

Almost half of Samoans who use the Internet[14] (46%) admit to reusing the same password across several online accounts or websites; 51% say they do not. This number rises to 63% among public sector employees. Samoans with a middle school education or less (54%) are also somewhat more likely to re-use passwords across online accounts than their higher-educated counterparts (46% among adults with a secondary school education and 45% among adults with a degree from a post-secondary institution).

### Device locking & deactivation

Digital device users[15] largely lock their devices when not in use (80%), the default setting on most smartphones. Far fewer (42% agree, 55% disagree, 3% don't know) know how to block or disactivate their smartphones if lost or stolen.

12 [n=884]
13 [n=1,011]
14 [n=884]
15 [n=1,011]

## Digitalisation scores

This section focuses on scoring levels with regards to digitalisation only; a sub-component of the Digital and Financial Literacy Index described at the outset of this report. Subsequent micro-analyses of financial and digital financial literacy scores can be found alongside their corresponding sections of the report. Levels of digitalisation were determined based on four different aspects of digital literacy:


Survey respondents could achieve a maximum score of 18 points for digitalisation and a minimum of 0 points if respondents did not have access to the Internet or digital devices to partake in selected activities.

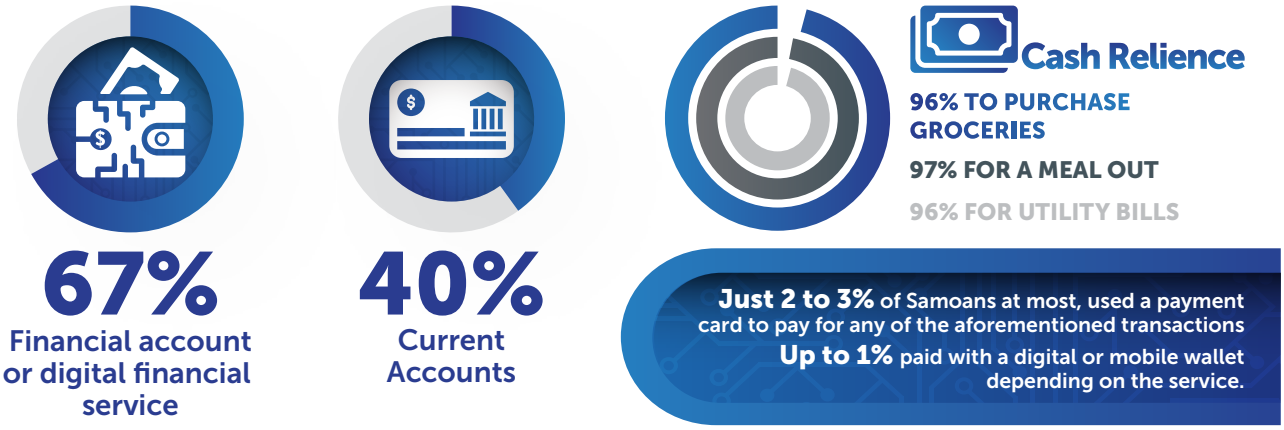
**Out of a possible digitalisation score of 18 points, Samoans achieve a mean score of 6.95 points.** Older adults (aged 45 to 74 years) (5.41 mean), adults with a middle school education or less (5.11), and self-employed Samoans (no employees) (5.67) have the lowest rates of digitalisation of any other demographic or geographic group analysed. Mean digitalisation scores are relatively similar between men and women with only slight differences when accounting for population density and age, as well as gender.

Notable differences in mean digitalisation scores between cohort groups are as follows: Digitalisation scores are highest in the Apia Urban Area (8.06 mean) and lowest in the 'Rest of Upolu' (6.24) and Savai'i (6.64).

1. Digitalisation scores are lower among adults living in rural areas (6.33 mean among rural women and 6.89 among rural men) than adults living in urban areas (8.01 among urban women and 7.48 among urban men); urban women achieve the highest digitalisation score.
2. Digitalisation scores are significantly lower among adults aged 45 to 74 years (5.41 mean) than younger cohort groups (7.48 among adults aged 15 to 24 years, 8.02 among adults aged 25 to 34 years, and 7.47 among adults aged 35 to 44 years) with no discernible differences by gender.
3. Digitalisation scores track with educational attainment. While Samoans with a middle school education or less achieve a mean digitalisation score of 5.11, Samoans with a secondary school education achieve a mean score of 6.34, and those with a university or degree-level education or higher achieve a mean score of 9.26. (Digitalisation similarly tracks and increases with income.)
4. Digitalisation scores among self-employed Samoans (6.50 mean) are in line with overall rates (6.95) but there are significant differences in digital competencies between self-employed, sole proprietors (5.67), who score significantly below average, and business owners with employees.[16]

16 Digitalisation rises significantly among self-employed individuals with employees (7.88). Given the small sample size for small business employers [n=33], results among this group are not considered statistically significant.

# Section 2: Financial Inclusion[17] and Literacy




## Access to payment products and services

The majority of Samoans (67%) have a financial account *or* digital financial service they can use to store money or make payments.[18] The survey measured access to and ownership of a range of financial products, traditional or digital, that can be used to store money or make payments for the purposes of understanding the use of digital services in financial transactions and financial management. Two in five Samoans have a current account (40%), including accounts held with a bank, credit union, or online provider, a majority whom have a payment card associated with their account (67% of current account owners[19]; 27% of the adult population). In addition to the more traditional current account, the survey also explored ownership of electronic and digital financial services. Two in five Samoans (39%) have a payment card of any sort, including a public transport card or debit card; and 24% have a digital or mobile wallet. Ownership and use of digital financial services specifically are explored in greater detail in Section 3 of the report.

Three in ten Samoans (31%) do not have a bank account, electronic payment card, or digital financial service they can use to store money or make payments. Cash-reliant Samoans (31% of Samoan adults) identify preference (90%) as the predominant reason for their lack of financial service products and reliance on cash-based financial transactions. Just 2% of the non-banked say they don't have the ID or proof of address needed for product ownership; 2% say someone else in their household handles non-cash transactions; 3% don't know how to use other payment methods. A scant 1% identify mistrust of financial providers as a barrier to product ownership or use.[20]

## Current Account Ownership and Usage

40% of Samoan adults have a current account they can use to store money and make payments. While levels of *financial competency* are similar between Samoan men and women as they relate to budgeting and savings behaviour and financial know-how, levels of *financial inclusion* are not. Men (43%) are more likely than women (36%) to own a current account for conducting financial transactions. Amongst women, rural (33%) and younger women (aged 15 to 24 years) (28%) are least likely to own a current account. Significant differences in rates of ownership exist at the generational, regional, and socio-economic levels in addition to gender. The youngest cohort group (32%) is least likely to own a current account, as are Samoans with a secondary school education or less (36%) and those who fall within the lowest income bracket (27%). Current account ownership is lower in the 'Rest of Upolu' (36%) and Savai'i (38%) than in the Apia Urban Area (46%) or Northwest Upolu (41%).

17 For the purposes of this report, financial inclusion refers to the concept that all working-age adults have effective access to banking, credit, savings, payments, and insurance services from formal service providers.
18 The survey includes multiple questions that measure ownership of a financial product or service. The 69% [n=819] figure referenced in the text above is derived from responses to F5_current account, F6_payment behaviour, and DF2_digital financial services and verified against DF5_cash-based check.
19 [n=485]
20 Question asked of individuals who do not own or use any of the financial products or services tested and who confirm they do not have a bank account or digital financial service they can use to store money or make payments [n=364].

**Table 8: Current Account by Gender by Age**

*F5. Do you have a current account? This could be with a bank or credit union, for example, or with an online provider. [Total sample, n=1,216]*

| (Shading where p≤0.05) | Yes (%) | No (%) |
|---|---|---|
| **Total** | **40** | **60** |
| Men 15-24 years | 35 | 65 |
| Men 25-44 years | 51 | 49 |
| Men 45-74 years | 43 | 57 |
| Women 15-24 years | 28 | 71 |
| Women 25-44 years | 40 | 60 |
| Women 45-74 years | 38 | 62 |

**Table 9: Current Account by Educational Attainment, Income, Employment and Disability Status**

| (Shading where p≤0.05) | Yes (%) | No (%) |
|---|---|---|
| **Total** | **40** | **60** |
| ≤ Middle school | 35 | 65 |
| Secondary school | 36 | 64 |
| University + | 52 | 47 |
| ≤95WST | 27 | 73 |
| 96-286WST | 37 | 62 |
| 287-477WST | 42 | 58 |
| 478+WST | 56 | 44 |
| Individuals living with a disability | 40 | 59 |
| Self-employed | 45 | 55 |

**Table 10: Current Account by Gender by Density and Region**

| (Shading where p≤0.05) | Yes (%) | No (%) |
|---|---|---|
| **Total** | **40** | **60** |
| Urban men | 43 | 56 |
| Rural men | 44 | 56 |
| Urban women | 42 | 58 |
| Rural women | 33 | 66 |
| Apia Urban Area | 46 | 54 |
| Northwest Upolu | 41 | 59 |
| Rest of Upolu | 36 | 64 |
| Savai'i | 38 | 62 |

While obstacles to financial inclusion exist, the data indicates at least some willingness to engage with digital tools to manage financial resources amongst those with access to financial products. Among those with current accounts, use of online banking services (27%) and banking apps (29%) is popular with a sizeable number of account-holders for the purposes of checking account balances, withdrawing, or depositing money.[21] Samoan current account holders are most likely to use in-branch services (62%) or ATMs (58%, 73% among Samoans who live within a kilometre of an ATM) for these purposes. A further 11% of Samoan current account owners execute transactions via an agent at a post office or local shop providing account access, 30% by mobile phone, and 18% via SMS.

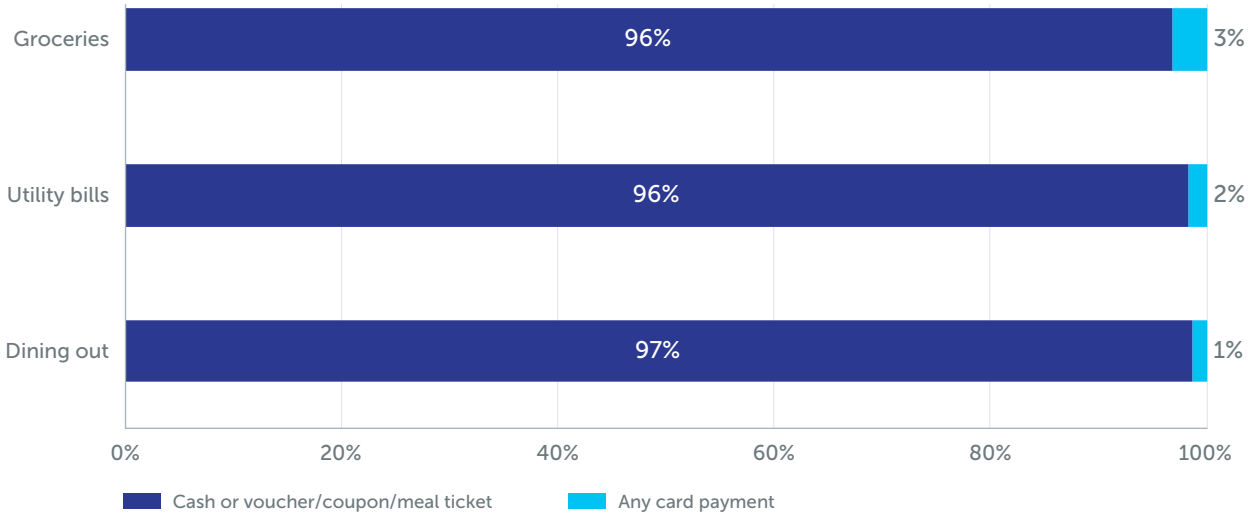
21 F5_beh Current account behaviour was asked only of individuals who have a current account [n=485], with app and online (not using an app) usage asked only of current account holders who ever use the Internet [n=418]. Responses recalculated amongst all current account holders [n=485].

## Cash-based economy and experiences with remittances

Samoa's economy remains largely cash-based despite some ownership, albeit limited, of traditional and digital payment services. Samoans are near universal in their use of cash to pay for commonly accessed household items and services (defined as groceries, paid meals out, or utility bill payments). Almost all Samoans report having used cash for their most recent grocery purchase (96%), meal out (97%), or utility bill payment (96%). Just 2 to 3% of Samoans at most, used a payment card to pay for any of the aforementioned transactions; up to 1% paid with a digital or mobile wallet depending on the service. While utility companies would be most likely to have the necessary infrastructure to support electronic or digital payments, Samoans continue to pay their utility bills in cash.[22] This is true for university-educated (95%) and higher-income Samoans (95%), as well as the overall population. Data suggests there is somewhat greater uptake of electronic, mobile, and digital payment forms amongst small business owners with employees, though uptake is still low at present; roughly one in five used a payment card or digital or mobile wallet to pay a recent utility bill.[23]

**Graph 10: Recent Payment Behaviour**

*F6_1. Thinking about the last time that you bought groceries, please could you tell me how you paid? [Total sample, n=1,216]*
*F6_2. And how did you pay your last household utility bill such as water or electricity? [n=1,216]*
*F6_3. And the last time you bought food or drink to eat in a restaurant or take-away – how did you pay? [n=1,216]*




Samoa (117,511 migrants as of 2017), in addition to Tonga (60,258) and Tuvalu (3,546), has the largest proportion of its population living overseas – either on a permanent or temporary basis – of the Pacific Islands countries.[24] New Zealand, Australia, and the US are home to the vast majority of Samoan migrants according to data from UNDESA and the ILO. Remittances comprise a significant source of income, and a commonly-used financial service, amongst Samoan adults. A majority of Samoan households (77%) received a remittance in the three months prior to being surveyed; one in five (18%) sent a remittance. Rural women (81%) and adults aged 45 to 74 years (regardless of gender) (87%) are among those most likely to have received remittances, as are higher income households (earning upwards of 478WST fortnightly) (87%), in the three months prior to having participated in the survey.

22 The survey did not probe whether households reside in locations with no formal utility provider. It is possible that responses also include preferred methods of payment for fuel, generators, et cetera.
23 Self-employed Samoans with employees comprise a small sample size [n=33]. Data amongst this group should be considered indicative rather than as absolute: 7% paid a recent utility bill with a contactless card, 8% with a card with chip and pin or swipe and sign, 3% from a digital/mobile/or electronic wallet, and 2% using Smartphone tap to pay.
24 https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms_712549.pdf

**Table 11: Remittances Received and Sent by Gender, Gender by Age, and Gender by Density**

*F4. Have you, personally, received money from abroad in the last three months? [Total sample, n=1,216]*
*F4. Have you, personally, sent money from one country to another in the last three months? [Total sample, n=1,216]*

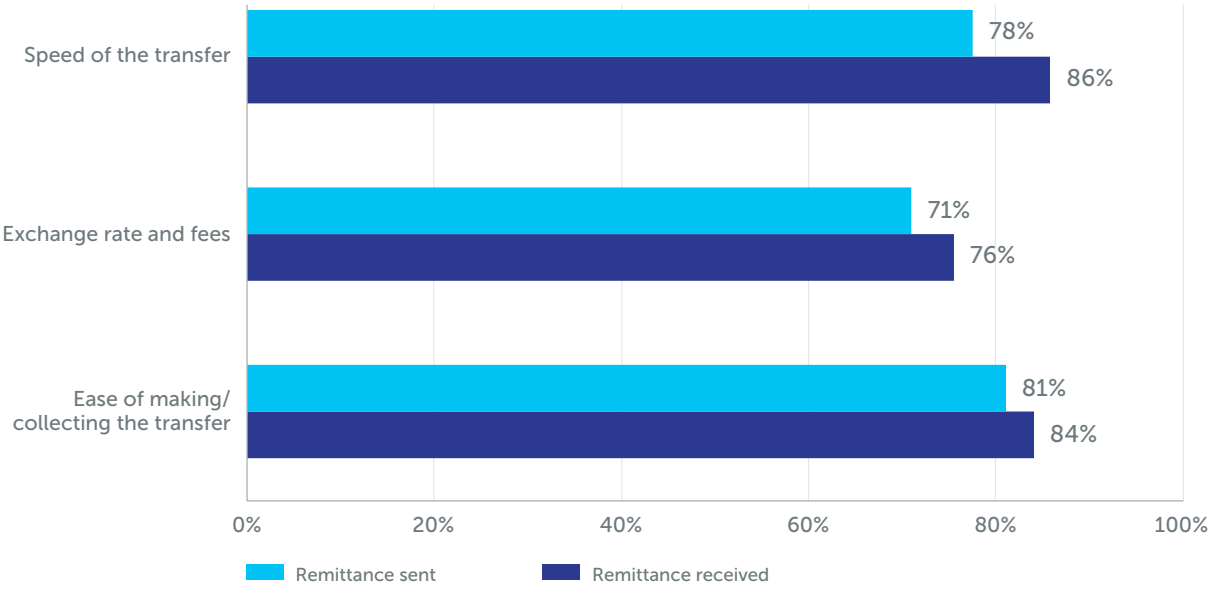
| (Shading where p≤0.05) | Yes – Received (%) | Yes – Sent (%) |
|---|---|---|
| **Total** | **77** | **18** |
| Men 15-24 years | 63 | 23 |
| Men 25-44 years | 78 | 25 |
| Men 45-74 years | 85 | 19 |
| Women 15-24 years | 67 | 14 |
| Women 25-44 years | 80 | 14 |
| Women 45-74 years | 88 | 12 |
| Urban men | 76 | 28 |
| Rural men | 75 | 20 |
| Urban women | 74 | 19 |
| Rural women | 81 | 11 |

Whether individuals sent or received remittances, the speed of transfers, ease of collecting transfers, and exchange rates and fees all played highly significant roles in the transaction process – both in terms of how individuals chose to send remittances and satisfaction with the process on the receiving end. Of note however, exchange rates and fees are slightly less important factors in the remittance process than speed and ease of use. The survey did not however, probe how individuals send and receive remittances and whether they use mobile solutions or continue to send and receive cash payments. That said, 77% of Samoan adults believe digital financial services are essential for sending remittances.

**Graph 11: Considerations when Sending and Receiving Remittances**

*F4_pay. Did you consider any of the following the last time you sent money from one country to another? You can just say yes or no for each one. [Asked of individuals who sent remittances in the previous three months; n=220]*

*F4_exp. Could you tell me whether you were happy with the following the last time you received money from abroad, please? You can just say yes or no for each one. [Asked of individuals who received remittances in the previous three months; n=938]*



## Financial well-being

Financial uncertainty pervades most Samoan households, and three in five Samoan adults (62%) worry their money will not last. However, most Samoans are optimistic that the future will bring greater financial security for their households; 71% agree that they will be financially secure in the future. Nonetheless, financial security (and economic precarity) is felt unevenly across Samoan society. Table 12 illustrates the responses to three agree/disagree statements:

1. "I am often worried that my money won't last."
2. "I have some money to spend on myself from time to time."
3. "Five years from now I will be financially secure."

Women, particularly rural women (72% agree), are less likely than Samoans overall (and particularly urban men – 85% agree) to have spending money left over after paying for household expenses or to express optimism about their future financial security (66% of women agree compared to 76% of men). Nonetheless, a majority still professes having both disposable income and a positive outlook for their financial futures.

Outlooks for the future and hopes of future financial security vary by educational attainment and socio-economic status with lower SES groups least likely to expect the future will bring greater financial security. The highest income earners (54% agree among adults with fortnightly incomes >478 WST) are significantly less likely than Samoans overall (62% agree) to worry their money won't last and significantly more likely to believe they will be financially secure in another five years (79% agree among adults with fortnightly incomes >478 WST and 71% among Samoans overall). Self-employed Samoans resemble the overall population in their responses to perceptual questions.

**Table 12: Financial Circumstances**

*F2. Do you agree or disagree with the following statements? [Agree as a percentage of total sample, n=1,216]*

| % Agree (Shading where p≤0.05) | Worried money won't last | Extra money to spend | Financially secure in 5 yrs. |
|---|---|---|---|
| **Total** | **62** | **78** | **71** |
| Men | 63 | 82 | 76 |
| Women | 61 | 74 | 66 |
| Men 15-24 years | 65 | 87 | 71 |
| Men 25-44 years | 58 | 83 | 81 |
| Men 45-74 years | 67 | 77 | 75 |
| Women 15-24 years | 62 | 77 | 63 |
| Women 25-44 years | 60 | 73 | 66 |
| Women 45-74 years | 60 | 74 | 70 |
| Urban men | 60 | 85 | 67 |
| Rural men | 64 | 81 | 80 |
| Urban women | 63 | 80 | 61 |
| Rural women | 60 | 72 | 69 |
| ≤ Middle school | 70 | 64 | 60 |
| Secondary school | 60 | 79 | 72 |
| University+ | 66 | 81 | 75 |
| ≤95WST | 60 | 78 | 64 |
| 96-286WST | 69 | 79 | 73 |
| 287-477WST | 64 | 79 | 69 |
| 478+WST | 54 | 78 | 79 |

## Financial management – budgeting and savings behaviours

The vast majority of Samoans (75%) insist they budget or make plans to manage their income and expenses. For the most part, planning includes keeping receipts or recording their spending (64%). Amongst those who are self-employed, record-keeping varies considerably between individuals who do or do not manage employees. Just half (49%) of self-employed Samoans who work independently keep records of their earnings and expenditures compared to four in five self-employed Samoans who manage employees.[25] Amongst all self-employed Samoans, self-employed women (59%) are equally likely to keep records of their employment earnings as their male counterparts (60%).

Young adults are least likely to engage in financial management activities. Samoans aged 15 to 24 years are more than twenty points less likely than older cohort groups to make a plan to manage their income and expenses (58%) or keep receipts or records of spending (52%). Income, rather than educational attainment, also correlates with financial management activities. Individuals who fall within the lowest income bracket manage (63%) and track (54%) their income and expenses at significantly lower rates than Samoan with higher fortnightly incomes. Use of loyalty cards to reduce costs or earn rewards in an effort to manage resources is limited to 16% of Samoan adults.

**Table 13: Budgeting and Savings Behaviour**

*F1. Do you do any of the following, either alone or with someone else? [Total sample, n=1,216; "keep records of self-employed earnings" asked to those who are self-employed, n=89]*

| % Yes (Shading where p≤0.05) | Make a plan to manage income and expenses | Keep receipts/ records of spending [n=1,216] | Keep records of self-employed earnings [n=89] | Use loyalty cards |
|---|---|---|---|---|
| **Total** | **75** | **64** | **60** | **16** |
| Men | 75 | 64 | 60 | 18 |
| Women | 75 | 63 | 59 | 14 |
| Men 15-24 years | 57 | 51 | 32* | 16 |
| Men 25-44 years | 85 | 73 | 72* | 20 |
| Men 45-74 years | 80 | 66 | 57* | 16 |
| Women 15-24 years | 59 | 52 | 35* | 14 |
| Women 25-44 years | 84 | 71 | 46* | 15 |
| Women 45-74 years | 80 | 63 | 84* | 13 |
| Urban men | 70 | 58 | 56* | 17 |
| Rural men | 77 | 67 | 64 | 18 |
| Urban women | 70 | 67 | 54* | 17 |
| Rural women | 78 | 61 | 63* | 13 |
| ≤ Middle school | 75 | 58 | 56* | 17 |
| Secondary school | 77 | 65 | 58 | 15 |
| University+ | 72 | 63 | 65* | 19 |
| ≤95 WST | 63 | 54 | 35 | 17 |
| 96-286 WST | 73 | 63 | 56* | 16 |
| 287-477 WST | 83 | 66 | 66* | 16 |
| 478+ WST | 84 | 75 | 87* | 16 |

*Indicates small sample size (n<30). Use caution when interpreting.

25 Self-employed Samoans with employees comprise a small sample size [n=33]; 78% keep records of earnings and expenditures.

Most Samoans self-describe as "savers" rather than "spenders". Four in five Samoans (83%) agree with the statement, "If I have money left over, I prefer to save it than spend it." Upwards of three-quarters of Samoans say they prefer to save rather than spend leftover monetary resources across demographic and geographic subgroups. Fewer however, though still a majority, currently save for the short – (51% put aside money for emergencies) or long-term (58%). One in five (21%) contribute to savings and loans clubs (either for the purposes of short – or long-term savings).

Participation in savings activities varies somewhat along gender and age, as well as between urban and rural residents; younger women (aged 15 to 24 years) and rural women are less likely to engage in savings behaviours than their male, urban, and older counterparts. Samoans aged 25 to 44 years, both men and women, are the most likely of generational groups to save for the longer-term. Savings behaviours (and ability to save) over the short – and long-term also track closely with educational attainment and income. Higher income earning Samoans are significantly more likely to save for emergencies and the long-term than other cohort groups.

**Table 14: Savings Behaviour**

*F1. Do you do any of the following, either alone or with someone else? [Total sample, n=1,216]*

| % Yes (Shading where p≤0.05) | Put money aside for emergencies | Contribute to a savings & loan club | Save or invest for the longer-term |
|---|---|---|---|
| **Total** | **51** | **21** | **58** |
| Men | 53 | 19 | 59 |
| Women | 48 | 22 | 58 |
| Men 15-24 years | 51 | 21 | 55 |
| Men 25-44 years | 58 | 20 | 66 |
| Men 45-74 years | 50 | 17 | 55 |
| Women 15-24 years | 49 | 18 | 48 |
| Women 25-44 years | 49 | 26 | 67 |
| Women 45-74 years | 45 | 21 | 55 |
| Urban men | 50 | 17 | 61 |
| Rural men | 55 | 21 | 59 |
| Urban women | 52 | 22 | 63 |
| Rural women | 45 | 22 | 55 |
| ≤ Middle school | 50 | 8 | 49 |
| Secondary school | 50 | 22 | 60 |
| University+ | 54 | 21 | 58 |
| ≤95 WST | 50 | 22 | 56 |
| 96-286 WST | 49 | 18 | 56 |
| 287-477 WST | 47 | 20 | 57 |
| 478+ WST | 61 | 24 | 68 |

One in five Samoans have purchased insurance products to protect themselves (22%) or their businesses (20% of self-employed Samoans[26]) from financial shocks. Samoans most likely to have purchased a personal insurance product include those in the Northwest Upolu region (27%), formally employed (36%), and individuals living with a disability (32%). Only slight differences exist between gender with regards to insurance ownership.

26 [n=89]

## Knowledge and skills related to money management

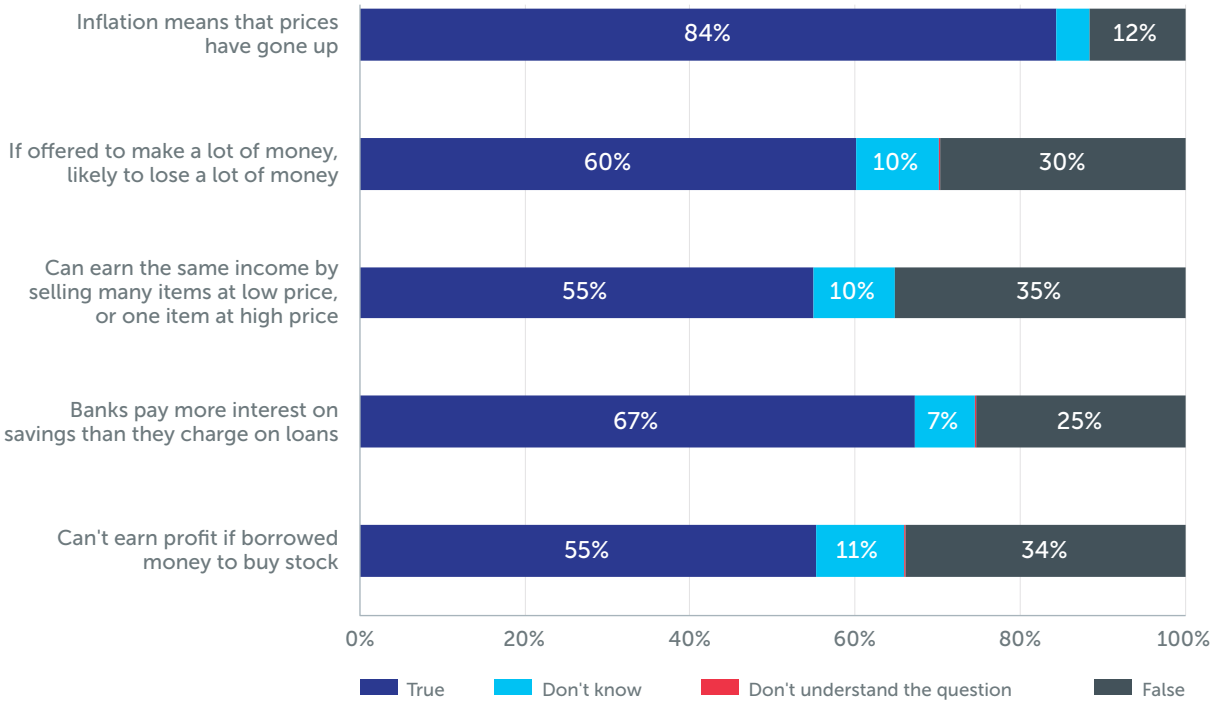
There is both significant need, and opportunities for, increasing foundational financial knowledge. Graph 12 illustrates perceptions towards five different true or false statements, and what Samoans believe to be true.

1. "When people talk about inflation, they mean that prices have gone up"
2. "Banks pay more interest on savings than they charge on loans"
3. "If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money"
4. "If a shopkeeper borrows money to stock her shelves, she cannot make a profit"
5. "It is possible to earn the same income by selling many items at a low price or selling one item at a high price"

The responses demonstrate that there are gaps in knowledge around basic economic and financial principles. On the most basic level, almost all Samoan adults understand inflation's impacts on the cost of living (84%). Most (60%) also tend to understand that "if someone offers you the chance to make a lot of money it is likely there is also a chance that you will lose a lot of money." There is greater confusion with regards to: differences in interest rates paid on savings versus those incurred on loans, the costs-benefits of borrowing to turn a profit, and small businesses and economies of scale.

**Graph 12: Financial Knowledge**

*F3. Could you tell me if you think the following are typically true or false? [Total sample, n=1,216]*




Financial education can be delivered online to a sizeable segment of the population, but face-to-face education or other educational tools are still required if increases in financial literacy are desired across the full spectrum of Samoan society. Half of Samoans who use the Internet[27] (54% of the internet users, accounting for 39% amongst the overall population) learned something from an online video or course in the three months prior to completing the survey. Just 22% of Internet users searched online for information about money matters, accounting for 16% of the adult population. However, 36% would trust an automated service to provide financial advice, including 45% of Samoans aged 35 to 44 years. Trust in AI tools is somewhat higher among men (40%) than women (33%). Refer to Appendix A, Part 2 for more reference.

27 [n=884]

## Financial Literacy Scores

Three areas of financial literacy were evaluated and used to determine levels of financial competency: (i) financial safeguards (e.g., budgeting behaviours and use of insurance products to protect against financial shocks), (ii) attitudes towards financial planning and saving, and (iii) knowledge related to financial transactions. Data related to financial inclusion and ownership of financial products while important, are not included in index scores. All but two of the questions[28] used in the scoring model are discussed in Section 2: Financial Inclusion and Literacy. Survey respondents could achieve a maximum score of 13 points for financial literacy and a minimum of 0 points.


Index scores for financial competencies (budgeting and savings behaviours and basic financial knowledge, not digital financial competencies) are somewhat higher than those for digital literacy. (Mean scores are relatively similar for both content areas despite the ability to achieve a greater total digitalisation than financial literacy score.) Access to and usage of formal financial products like current accounts and digital or mobile wallets is limited and the vast majority of Samoans continue to rely on cash for most of the financial transactions. Whilst financial competency scores did not take into account rates of financial inclusion, women – younger and rural women in particular – continue to access financial products at lower rates than men.

Again, financial inclusion aside, men (mean score of 6.91) and women (6.82) score relatively equally in the area of financial competencies overall, as do urban (6.95) and rural dwellers (6.84), despite variance in responses to specific measures. *Modest* differences in financial competency scores can be seen at the level of age (financial competencies increase with age) and SES, though it is clear that financial education is required across SES groups in conjunction with access to digital financial services:

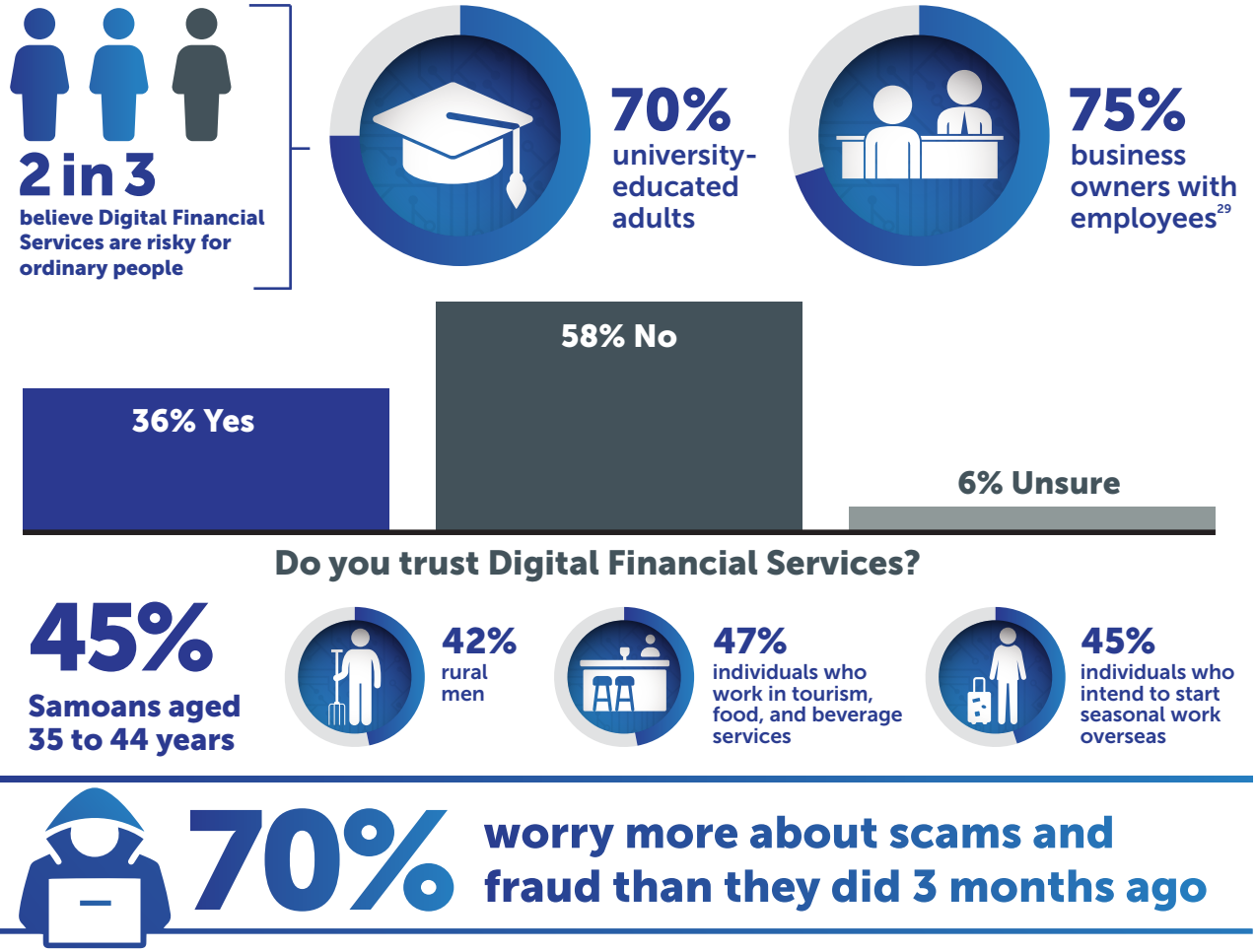
1. Samoans aged 25 to 44 years demonstrate overall higher levels of financial literacy than Samoans aged 15 to 24 years regardless of gender – mean score of 6.34 among Samoans aged 15 to 24 years, 7.25 among Samoans aged 25 to 34 years, 7.24 among Samoans aged 35 to 44 years, and 6.90 among Samoans aged 45 to 74 years.
2. Samoans with a fortnightly income less than 478WST (mean score ranging from 6.46 to 6.71) score lower for financial competencies than Samoans with higher earnings (7.62 among Samoans earning upwards of 478WST fortnightly).

28 Answers to the agree/disagree statements, "I tend to live for today and let tomorrow take care of itself," and "I am the kind of person who ignores the small print unless something goes wrong," contributed towards financial literacy scores but are not evaluated as distinct points in this report.

# Section 3: Digital Finance

## Perceptions About Digital Financial Services

Samoans understand numerous benefits and inevitability of digital financial services, their use in business, government, and personal finance, while at the same time expressing concern about their ability to navigate these services safely and effectively. Samoans generally worry about their ability to keep up with evolving technologies (45% agree with the statement "I feel like technology is leaving me behind"), as well as their ability to manage or mitigate risks associated with the use of digital financial tools. Survey data indicates both lagging trust in digital financial tools and personal confidence using DFS:







Nevertheless, there is acknowledgement that digital financial services are the 'way of the future'; and are both beneficial and essential to many Samoans, particularly small business owners, Samoans who send remittances, and Samoans receiving government payments. Half of Samoans (48%) agree digital financial services like mobile payments, online banking, and digital wallets will soon replace cash in Samoa; three-quarters (77%) agree digital financial services are essential for people sending remittances; and seven in ten (68%) acknowledge digital financial services make it easier to receive benefits payments from government.

Many Samoans also see the benefit of DFS to their long-term financial health in the form of potential savings, despite nervousness or hesitancy in using these services. Perceptually, 74% of Samoans agree that digital financial services can help to keep costs down for small businesses, including 61% of self-employed Samoans whose businesses have employees.[30] That number drops to 52% however, among self-employed Samoans who do not have employees (19% don't know).

Reflecting lower levels of familiarity with DFS services among the general population, a full 34% of Samoans believe DFS are designed for men more than women, and 13% are not sure. Half of Samoans (53% disagree overall, 54% among men and 51% among women) refute the notion that digital financial services are designed largely for men rather than also benefitting women.

29 Small sample size [n=33]
30 Small sample size [n=33]

## Access and Usage of Digital Financial Services

Ownership and/or use of digital financial products is limited to roughly one-third of Samoan adults (36%).[31] With regards to *ownership*, digital/mobile wallets (24%) comprise the most commonly owned digital financial product tested (29% among Samoans who intend to start seasonal work overseas), followed by an insurance policy taken out online or via an app (9%); 6% owned cryptocurrency at the time of survey field. While 11% of respondents claimed to own a parametric insurance policy at the time of survey field, parametric policies were not yet available in-market. Respondents may have confused policies with other available insurance products, including housing insurance with cyclone cover. Attitudes towards cryptocurrency were not explored anywhere else in the survey.

Banking apps and online money management tools for monitoring spending and saving are popular with 17% of Samoans using them. That number rises slightly to 23% of Samoan Internet users.[32] In addition, among Samoans who own current accounts, 34% use banking apps (12% of all Samoans) and 32% go online (not using an app) to check account balances, withdraw, or deposit funds associated with their account.[33] For more details on DFS products, please refer to Appendix A, Part 3.

## Safety Measures and Awareness Related to Safe and Efficient Use of DFS

Samoans need more information that would allow them to make smart choices about which digital financial services and providers to use as uptake of DFS grows. The majority of Samoan adults believe digital financial services are regulated like banks (48% agree) or are unsure (13%); Just under two in five (37%) recognize not all DFS are regulated like banks. The majority of Samoans are either mistaken in their impressions of or are not sure about the regulation of DFS as compared to banks, regardless of levels of educational attainment or income. Younger women (aged 15 to 24 years) however, are significantly more likely than other cohort groups to disagree that "DFS are all regulated like banks": 40% disagree among men aged 15 to 24 years, 34% among men aged 25 to 44 years, 30% among men aged 45 to 74 years, 47% among women aged 15 to 24 years, 34% among women aged 25 to 44 years, and 41% among women aged 45 to 74 years.

**Password protection** and **online banking security** also constitute important areas for DFS education moving forward. When it comes to pin numbers and passwords for financial services specifically, 55% of financial service users keep a record of pin numbers or passwords for their accounts compared to 43% who do not.[34] (The survey did not distinguish between the use of password managers and other forms of record-keeping.) Almost half of Samoans who are online[35] (46%) re-use the same password across several online accounts or websites. Women aged 15 to 24 years (38% agree) exercise the greatest level of caution in this area and are least likely to reuse the same password across online accounts. On the opposite end of the spectrum, 63% of public sector employees re-use the same password across several online accounts or websites.

Samoans need to know to **look for "https" in a website's URL** before providing secure information online, like payment information. Only a segment of Samoans aged 15 to 74 years shops online (13%), but amongst those that do, three in five (60%) fail to check websites are secure before entering payment details. One-third (36%) of online shoppers check that websites are secure before entering payment details when making an online purchase. Another 3% do not know or did not understand the question.

At present, the majority of Internet users are susceptible to online phishing scams. Samoans were provided a common scenario for bank customers and asked how a hypothetical consumer should respond:

> *Sera has just received an email message from her bank. She didn't even know that the bank had her email address! She reads the message carefully. It tells her that her account has been frozen because of suspicious activity. It apologises for the inconvenience and then says she should follow the link in the email as soon as possible to reactivate the account. Sera isn't sure whether to reply to the message, delete it or follow the link.*
>
> *Which of Sera's three ideas would be safest in this instance?*

In response, 42% say they would delete the email, while almost half would either follow the link (22%) or reply to the email (26%). Another 10% are unsure how they would respond, do not understand, or refuse to answer the question. Individuals living with a disability and those earning less than 95WST fortnightly are least likely to delete the email. Majorities of both groups would reply to the email or follow the link (54% and 64%, respectively) or are unsure as to what they would do (11% and 6%, respectively).

With just 13% of Samoans engaging in online shopping, very few have been subject to lending practices online in the form of Buy Now, Pay Later options (3% of Samoan adults). Of those who purchased something online in the previous three months, 22% used a Buy Now, Pay Later option. That said, as digital financial transactions become more popular or accessible over time, more Samoans may opt for deferred payment plans.

31 DFS ownership or use [n=441] calculated based on responses to F5_beh, F6_1/F6_2/F6_3, and DF2.
32 [n=884]
33 [n=418]
34 Question asked of individuals who own a financial service or product, including a current account, a payment card of any form, or a digital/electronic/mobile wallet [n=684].
35 [n=884]

## DFS Personal Outcomes – Positive and Negative

**Two thirds of Samoans (64%) have not completed a mobile or digital financial transaction to experience either the positive or negative outcomes of DFS use.** Amongst the 36% of Samoans who have completed a financial transaction via a mobile phone or online, majorities have experienced positive outcomes through cost savings and an increased ease in managing their finances.[36] Two-thirds have found it easier to manage their money without help from others (67%) or to keep track of what they are spending (68%). Half (50%) of DFS users have saved money on financial transactions by reducing fees or other costs. Men, urban men in particular, are more likely to have benefitted from cost savings associated with DFS usage, than their female and rural counterparts.

Table 15: DFS Outcomes

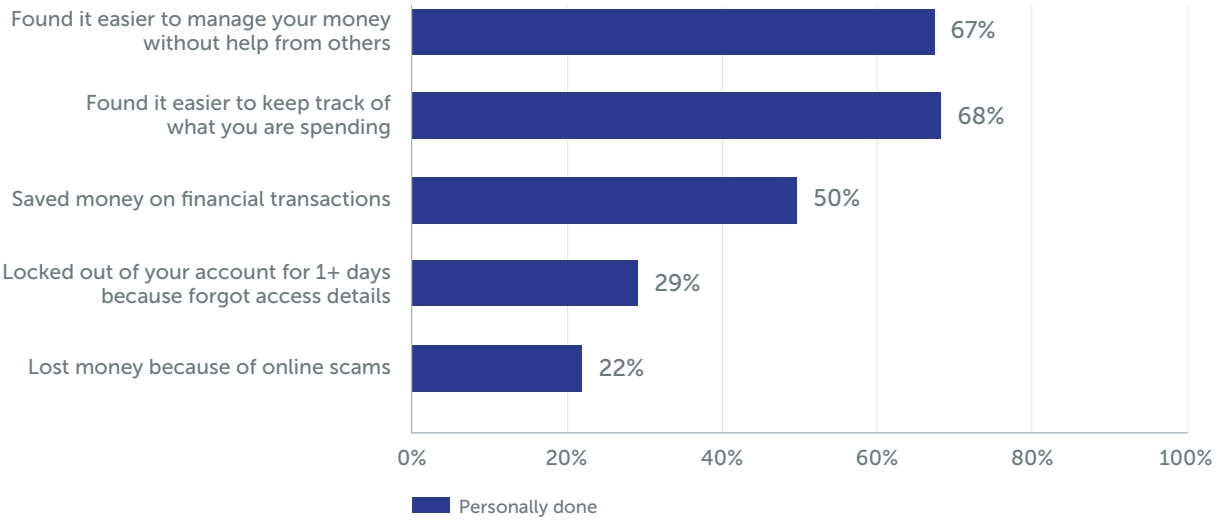
*DF4. And since accessing a financial service online or using your phone to make payments have you: [Asked of individuals who have used a mobile phone or digital financial product to make a financial transaction; n=441]*

| % Yes (Shading where p≤0.05) | Saved money on financial transactions | Found it easier to manage your money without help from others | Found it easier to keep track of your spending |
|---|---|---|---|
| **Total** | **50** | **67** | **68** |
| Men | 53 | 68 | 68 |
| Women | 46 | 67 | 69 |
| Urban Men | 58 | 65 | 72 |
| Rural Men | 51 | 69 | 66 |
| Urban Women | 47 | 65 | 72 |
| Rural Women | 46 | 68 | 67 |

That said, sizeable numbers of DFS owners/users[37] have experienced negative outcomes as well, with 29% saying they were locked out of a financial account for more than a day because they could not remember access details and **22% saying that they lost money because of online scams or phishing attacks.** Samoan men (26%) are much more likely than women (17%) to have lost money to an online scam or phishing attack.

Graph 13: DFS Outcomes

*DF4. And since accessing a financial service online or using your phone to make payments have you: [Asked of individuals who have used a mobile phone or digital financial product to make a financial transaction; n=441]*

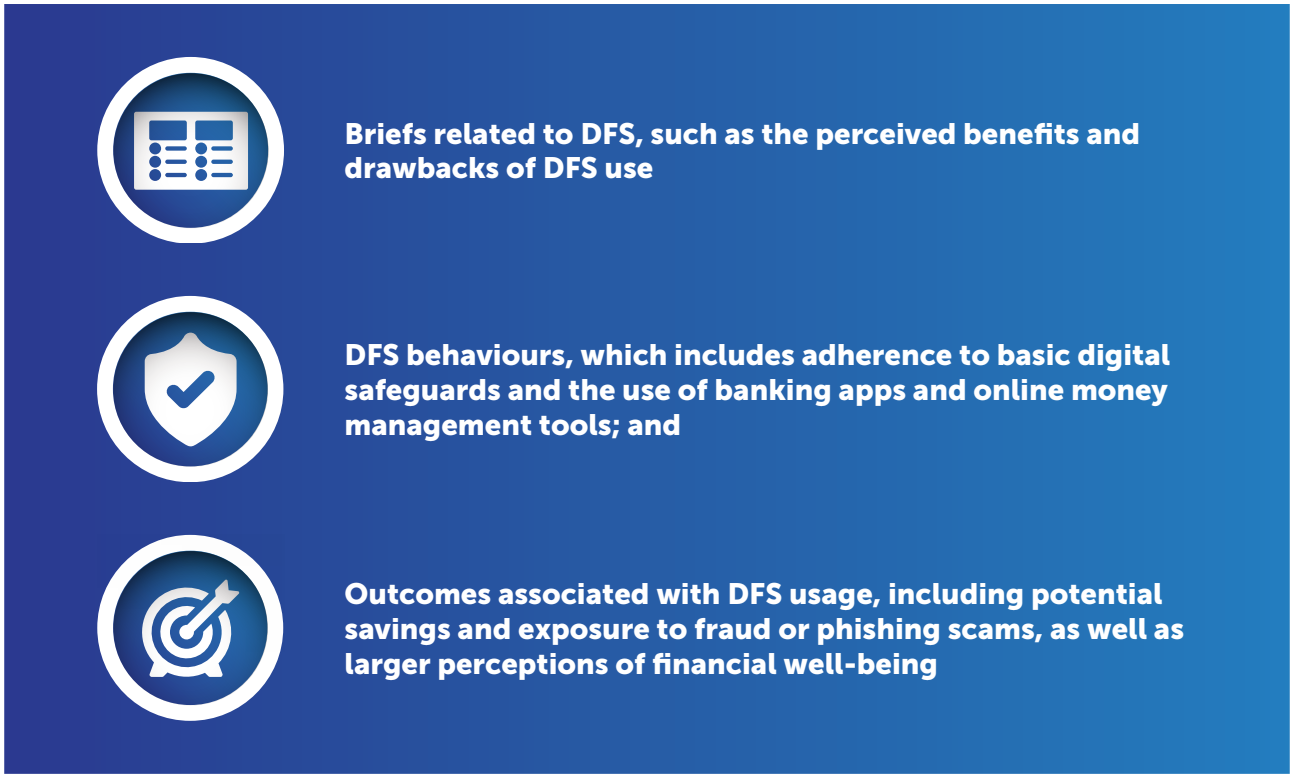



36 [n=441] (the use of mobile or online banking includes checking a current account balance on a phone or via a bank app or owning a DFS such as a digital or mobile wallet)
37 [n=441]

## DFS Competency and Outcomes Scores

DFS competency and outcome scores comprise the final subset of measures used to determine overall levels of digital and financial literacy. DFS competency and outcomes scores are based on:

1. beliefs related to DFS, such as the perceived benefits or drawbacks of DFS use;
2. DFS behaviours, which includes adherence to basic digital safeguards and the use of banking apps and online money management tools; and
3. outcomes associated with DFS usage, including potential savings and exposure to fraud or phishing scams, as well as larger perceptions of financial well-being.




Survey respondents could achieve a maximum score of 21 points for digital financial competencies and a minimum of 0 points.

Out of a possible **digital financial competency** score of 21 points, Samoans achieve a moderate mean score of **8.59 points**.[38] Differences in digital financial competencies and outcomes experienced from DFS usage are evident in relation to educational attainment and socio-economic status with higher-educated and higher-income Samoans scoring higher than lower-SES groups. Samoans with a middle school education or less achieve a mean score of 7.47, those with a secondary degree 8.48, and those with a university – or degree-level education a mean score of 9.24. Samoans with formal employment outside the home (9.31 mean) demonstrate greater levels of digital financial competencies than Samoans overall.

While there are statistically significant differences in mean scores between demographic and geographic groups, gaps are fairly modest between groups, including along generational and urban-rural lines. This speaks to the need for growth in digital financial competencies (as well as DFS usage) across demographic and geographic groups.

38 Low: 0-5 points; Moderate: 6-10 points; Above Average: 11-16 points; High: 17-21 points

# Summary and Recommendations

**Samoans have acquired moderate levels of digital and financial literacy** to date, achieving a mean of 22.27 points out of a possible 52 points on a DFL index devised for the purposes of this study. The index was designed with the intent of comparing DFL levels across the Pacific and tracking growth in access and skills over time. Moderate levels of DFL are in large part a result of more limited uptake of digital financial services (DFS) thus far, as well as familiarity and engagement with practical safeguards for DFS use. Access to smartphones and in turn, Internet usage is fairly high in Samoa, but cash remains the preferred and most often used method of payment in day-to-day transactions.

**DFL interventions are required across geographic and demographic subgroups**. Though most necessary among **low – SES groups and among the youngest and oldest cohort groups,** efforts are required among **higher-educated and upper-income Samoans, as well within and outside the 'Apia Urban' area**. Higher-educated and upper-income Samoans are considerably more likely to have access to digital and financial tools and resources. These groups are just as vulnerable, if not more, to the potential risks (as well as benefits) of DFS use simply because their financial means may provide greater exposure to DFS over time. Lower-SES groups require increased access to digital tools and foundational knowledge with regards to services available and their potential benefits to gain positive outcomes associated with DFS.

**Access to digital devices (smartphones) and Internet is relatively high in Samoa but quality, availability and cost of data services still pose a barrier to Internet access.** Survey questions probed access to digital devices and whether individuals used the Internet more broadly. The availability and quality of Internet and data services is considered as a limiting factor in both urban and rural areas (70% and 68%, respectively), while cost is perceived as a limiting factor among urban dwellers (54% in urban areas and 47% in rural areas). Service providers and regulators need to address these factors for enhanced participation of citizens in the digital economy.

**Regional disparities in access to smartphones and the Internet and amongst vulnerable groups contributes to significantly lower DFL amongst some groups.** Digitalisation scores, which are *in part* a measure of access to digital devices and the Internet, are lowest among adults aged 45 to 74 years, Samoans outside of the 'Apia Urban' area, Samoans with a secondary school education or less, and the lowest income earners. While designing digital and financial literacy interventions, these groups need to be prioritized with targeted initiatives.

The DFS ecosystem, especially uptake and diverse usage of mobile money is at its early stage in Samoa. Digital and financial literacy interventions and education efforts could potentially be used to **raise awareness *and* make a clear case for the positive benefits of DFS usage** – i.e. potential cost savings, efficient and lower-cost option for sending and receiving remittances, greater control, security, and management of financial resources.

In addition to building confidence in Samoans' ability to use DFS to their economic benefit, education efforts should **build awareness of and trust in verified or regulated service providers**. Interventions should address potential scepticism of DFS providers (other than traditional banks), alongside efforts to build specific skills or grow awareness in specific areas. **Password protection and online banking security**, identifying and responding to **phishing attempts**, identifying **verified, secure websites** for the purposes of online financial transactions, and the use of **virus protection** and **device-locking services** are additional areas for potential education.

**For younger adults aged 15 to 24 years and current students, DFL interventions will need to focus on building basic financial competencies and increasing access to financial and capital-building products.** Younger men and women score significantly lower than older cohort groups in the area of financial competencies, while scoring higher in the area of digitalisation. Young adults have access to and are using digital tools but lack the financial competencies to harness DFS to their benefit, as evidenced in the survey. Education should begin in, and include, financial education within secondary and post-secondary education institutions. Rates of financial inclusion (in the formal sector) are also lower among younger adults compared to other cohort groups, particularly younger women, and just 28% of women aged 15 to 24 years own a current account. Financial institutions should also promote access to savings and other financial products among the youngest cohort of adults (and women more broadly).

**Harness the reach of mobile money providers in market to roll out DFL interventions and promote existing services like mobile money/wallets.** Given the high rates of participation in labour mobility schemes and **reliance on remittances**, promotion of mobile wallets constitutes an obvious opportunity ("low-hanging fruit") to introduce greater swaths of the Samoan population to DFS and provide cost-savings. Mobile wallets can be harnessed as a first step in promoting greater uptake of digital financial transactions as long as commercial vendors, small businesses in particular, are similarly equipped to support their use in local communities. **It also follows that education efforts should include a focus on and information around the remittance process** and safe, cost-savings measures that utilize the use of DFS (possibly mobile wallets) as last mile disbursement channels.

**Online resources and channels can be leveraged to deliver digital financial education to Samoans adults,** but face-to-face education is still required to reach a broad part of the population, particularly in the area of financial literacy.

**There are significant scopes of digitizing government service delivery and related payments for the citizens in Samoa**, which will drive uptake and diversify use cases of digital financial services. 96% Samoans use cash to make utility bill payments, which can be largely digitized through mobile wallets and other digital financial services. Digitization of utility bill payments and other public service delivery processes will enhance efficiency, improve transparency, and save significant amount of time and costs for both the government agencies and the citizens. Successful digitization of public service delivery and government payments will require awareness raising and targeted digital and financial literacy campaigns to enable the users to effectively utilize these services.

**Digital financial service providers should diversify use cases and product offerings, prioritizing merchant payments.** Almost all Samoans report having used cash for their most recent grocery purchase (96%) and meal out (97%). It shows the untapped opportunity of further promoting digital payments for day-to-day transactions, to reduce heavy reliance on cash. Targeted products for retail merchants can drive uptake and usage of digital payments in this case.

Survey findings suggest that targeted digital and financial literacy initiatives are required to enhance capacities of Samoans to realize the potential of the emerging digital economy. UNCDF plans to conduct the next DFL survey in 2025 to monitor changes in DFL index scores between survey rounds as well as track progress on specific measures related to financial well-being, trust in financial service providers, money management and savings behaviours, and outcomes from DFS use.

# Appendix A

## Part 1

**Table 1: Access to Digital Devices by Gender by Age**

*D1. Do you have access to any of the following, for personal use, whether or not you currently use them? This could be at home or at work. [Asked of the total sample; n=1,216]*

| % Yes (Shading where p≤0.05) | Total | Men 15-24 yrs. | Men 25-44 yrs. | Men 45-74 yrs. | Women 15-24 yrs. | Women 25-44 yrs. | Women 45-74 yrs. |
|---|---|---|---|---|---|---|---|
| Smartphone | 79 | 76 | 85 | 69 | 73 | 89 | 78 |
| Mobile phone, only for calls or texts | 69 | 70 | 74 | 64 | 71 | 69 | 64 |
| Tablet, laptop, desktop computer | 30 | 31 | 33 | 21 | 37 | 34 | 23 |
| Router or modem | 15 | 20 | 16 | 7 | 19 | 13 | 14 |
| Smart watch or speaker | 35 | 36 | 38 | 30 | 34 | 37 | 33 |
| Smart TV | 42 | 37 | 42 | 43 | 45 | 38 | 47 |

**Table 2: Access to Digital Devices by Density and Region**

| % Yes (Shading where p≤0.05) | Total | Urban | Rural | Urban Women | Apia Urban | NW Upolu | Rest of Upolu | Savai'i |
|---|---|---|---|---|---|---|---|---|
| Smartphone | 79 | 77 | 80 | 81 | 79 | 79 | 77 | 81 |
| Mobile phone, only for calls or texts | 69 | 73 | 67 | 73 | 76 | 68 | 66 | 68 |
| Tablet, laptop, desktop computer | 30 | 39 | 27 | 41 | 43 | 32 | 23 | 24 |
| Router or modem | 15 | 19 | 13 | 20 | 18 | 18 | 9 | 12 |
| Smart watch or speaker | 35 | 39 | 33 | 37 | 42 | 37 | 29 | 31 |
| Smart TV | 42 | 42 | 42 | 48 | 47 | 47 | 34 | 37 |

**Table 3: Access to Digital Devices by Educational Attainment**

| % Yes (Shading where p≤0.05) | Total | ≤ Middle School | Secondary School | University+ |
|---|---|---|---|---|
| Smartphone | 79 | 66 | 77 | 88 |
| Mobile phone, only for calls or texts | 69 | 58 | 69 | 73 |
| Tablet, laptop, desktop computer | 30 | 18 | 23 | 56 |
| Router or modem | 15 | 10 | 11 | 26 |
| Smart watch or speaker | 35 | 33 | 33 | 41 |
| Smart TV | 42 | 43 | 38 | 52 |

**Table 4: Access to Tablet or Computer and Frequency of Use**

*D1_3. Do you have access to [a tablet, laptop, or desktop computer], for personal use, whether or not you currently use them? This could be at home or at work. [Total sample, n=1,216]*

*D1_comp Frequency using computer. Approximately how often have you used a tablet, laptop, or desktop computer during the last three months? [Asked of those with computer/tablet access; n=368]*

| % Yes (Shading where p≤0.05) | Total | University+ | Student | Formal Employment | Higher Income (478+WST) |
|---|---|---|---|---|---|
| **Total access to a tablet, laptop, or desktop computer** | **30** | **56** | **66** | **44** | **41** |
| Several times a day | 42 | 53 | 64 | 39 | 58 |
| Once a day | 4 | 1 | 2 | 2 | 0 |
| NET Daily | **46** | **53** | **65** | **42** | **58** |
| Several times a week | 31 | 30 | 21 | 39 | 26 |
| No more than twice per week | 8 | 9 | 5 | 7 | 8 |
| Less than once a week | 4 | 4 | 1 | 5 | 3 |
| Not at all | 9 | 4 | 8 | 7 | 5 |

# Part 2

**Table 5: Internet Access and Frequency of Use by Demographic and Geographic Subgroups**

*D3. Can I just check, do you ever use the Internet? For example, do you check email or social media, stream radio or videos, look things up, use apps to send messages or make calls, or work remotely? [Total sample, n=1,216]*

*D3_time. Approximately how often have you used the Internet or been online for any reason at all over the last three months. You may have been <checking email or social media, streaming radio or videos, looking things up, using apps or working remotely>? [only asked of individuals who use the Internet; n=884]*

| (Shading where p≤0.05) | Ever use the Internet (%) | Daily* (%) [n=884] |
|---|---|---|
| **Total** | **73** | **54** |
| Men 15-24 years | 82 | 57 |
| Men 25-44 years | 77 | 57 |
| Men 45-74 years | 57 | 43 |
| Women 15-24 years | 82 | 57 |
| Women 25-44 years | 78 | 56 |
| Women 45-74 years | 58 | 52 |
| ≤ Middle school | 53 | 46 |
| Secondary school | 69 | 51 |
| University+ | 89 | 63 |
| Urban men | 77 | 55 |
| Rural men | 71 | 53 |
| Urban women | 81 | 54 |
| Rural women | 69 | 56 |
| Apia Urban Area | 81 | 50 |
| Northwest Upolu | 72 | 49 |
| Rest of Upolu | 65 | 71 |
| Savai'i | 74 | 52 |

*Daily is defined as individuals who use the Internet several times to once a day.

**Table 6: Financial Knowledge**

*F3. Could you tell me if you think the following are typically true or false? [Total sample, n=1,216]*

| % (Shading where p≤0.05) | Banks pay more interest on savings than they charge on loans | | | If offered to make a lot of money, likely to lose a lot of money | | | Can't earn profit if borrowed money to buy stock | | |
|---|---|---|---|---|---|---|---|---|---|
| | True | False | DK[39] | True | False | DK | True | False | DK |
| **Total** | **67** | **25** | **7** | **60** | **30** | **10** | **55** | **34** | **11** |
| Men | 68 | 24 | 7 | 60 | 30 | 10 | 57 | 32 | 11 |
| Women | 66 | 26 | 7 | 61 | 29 | 10 | 54 | 35 | 11 |
| Men 15-24 years | 73 | 16 | 11 | 58 | 33 | 9 | 61 | 29 | 10 |
| Men 25-44 years | 68 | 27 | 4 | 63 | 28 | 9 | 56 | 38 | 6 |
| Men 45-74 years | 64 | 28 | 8 | 57 | 29 | 14 | 53 | 29 | 18 |
| Women 15-24 years | 66 | 28 | 6 | 58 | 32 | 9 | 50 | 43 | 6 |
| Women 25-44 years | 68 | 24 | 8 | 64 | 27 | 8 | 59 | 29 | 12 |
| Women 45-74 years | 64 | 28 | 8 | 59 | 28 | 12 | 51 | 36 | 13 |
| Urban men | 64 | 28 | 7 | 62 | 30 | 8 | 61 | 30 | 10 |
| Rural men | 70 | 23 | 8 | 59 | 30 | 12 | 55 | 33 | 11 |
| Urban women | 69 | 23 | 7 | 69 | 25 | 6 | 60 | 33 | 7 |
| Rural women | 65 | 28 | 7 | 57 | 31 | 11 | 51 | 36 | 12 |

39 DK= Don't know

# Part 3

**Table 7: DFS Products**

*DF2. And do you, personally, have any of the following? [Data for digital/electronic/mobile wallets and payment cards re-calculated out of the overall sample, n=1,216]*

| % Yes (Shading where p≤0.05) | Payment card | Other insurance | Digital/Mobile wallet | Crypto-currency |
|---|---|---|---|---|
| **Total** | **39** | **9** | **24** | **6** |
| Men | 44 | 11 | 24 | 7 |
| Women | 34 | 8 | 23 | 5 |
| Men 15-24 years | 40 | 9 | 26 | 5 |
| Men 25-44 years | 51 | 12 | 27 | 7 |
| Men 45-74 years | 39 | 11 | 17 | 9 |
| Women 15-24 years | 31 | 8 | 23 | 2 |
| Women 25-44 years | 40 | 8 | 27 | 7 |
| Women 45-74 years | 30 | 7 | 20 | 4 |
| Urban men | 44 | 7 | 20 | 6 |
| Rural men | 44 | 13 | 25 | 7 |
| Urban women | 45 | 9 | 30 | 7 |
| Rural women | 29 | 7 | 21 | 3 |
| ≤ Middle school | 30 | 8 | 12 | 8 |
| Secondary school | 35 | 9 | 22 | 5 |
| University+ | 53 | 12 | 31 | 7 |
| ≤95 WST | 37 | 13 | 20 | 9 |
| 96-286 WST | 35 | 8 | 25 | 6 |
| 287-477 WST | 39 | 9 | 22 | 5 |
| 478+ WST | 49 | 9 | 28 | 4 |
| Self-employed | 45 | 3 | 22 | 3 |
| Individual living with a disability | 42 | 13 | 26 | 10 |

# Appendix B: Digital and Financial Literacy Questionnaire

## Introduction

*We would like to find out more about your experiences with technology and money these days. Would you be willing for us to spend around 20 minutes talking about this?* ***Your answers will be confidential, and you can stop at any time.***

*This questionnaire is about you, and all your experiences. If you run a business, please also think about your experiences as a business owner. Please don't tell us about things that other people in your household do, though – this is an opportunity to focus on you!*

### Section 1 Background demographics

*Thank you for agreeing to take part in this survey. I am going to start by asking some general questions. This helps us to make sure we have spoken to a cross section of the population.*

#### A1 Method

Automatic entry, or interviewer to record data collection method

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| No | Face-to-face | A1 | 1 | |
| | Telephone | | 2 | |
| | Other | | 3 | Please record and inform us if any other method is used |

#### A2 Timestamp at start

Automatic entry, or interviewer to record date and start-time of survey

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | | A2 | Day/Month/Year<br>HH:MM |

#### B1 Language of interview

Interviewer to record primary language of interview

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| No | English | B1 | 1 | |
| | Samoan | | 2 | |

#### B2_classify Urban or rural

For CAPI, interviewer to record based on sample. For CATI, ask: *Do you live in an urban or rural area?*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Urban | B2_classify | 1 |
| | Rural | | 2 |

### B2 Town or village

*For classification purposes, we would like to know what kind of area you live in. Do you live in a city, a town, or a village/ settlement?*

[If city, probe]: *Is it a city with more than 100,000 people* (code 1), *or is it a smaller city* (code 2)?

[If town, probe]: *Is it a town with more than 3,000 people* (code 2), *or is it a smaller town* (code 3)?

[If village/settlement]: *Is it a village with more than 100 people* (code 3), *or less than 100 people* (code 4)?

| Filter? | Options | Variable label | Values | Notes |
|---|---|---|---|---|
| No | A town or city of more than 100,000 people | B2 | 1 | |
| | A town or city with between 3,000 and 100,000 people | | 2 | |
| | A village or town, with between 100 and 3,000 people | | 3 | |
| | A village, hamlet or other community with fewer than 100 people | | 4 | |

### B2_local Local access

Interviewer to record local access to services, or ask:

*Do you live within 1km of...?*

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| Ask if B2=3 or 4 | A neighbour | B2_local_1 | No=0; Yes=1 | A different household. Mark Yes without asking if the answer is obvious. |
| No | A place to buy basic provisions such as <bread, vegetables, bottled water or soap> | B2_local_2 | No=0; Yes=1 | This could be a market, shop or café. Use local examples |
| | An <ATM> | B2_local_3 | No=0; Yes=1 | Use local terminology for an automated teller machine or cashpoint |

### B3 Gender

Interviewer to record gender

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Male | B3 | 0 |
| | Female | | 1 |
| | Other response/other gender | | 2 |

Refused=-99

### B4 Age

*Please could you tell me how old you were at your last birthday?*

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| No | [Do not read out: Whole years: 0-110] | B4 | [Whole numbers] | If respondent is under 15 or over 74 years of age, terminate interview |
| | Refused | | -99 | Continue to next question |

### B4_cat Age

*Instead, please could you tell me which of the following age categories you are in?*

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| Ask if B4 = – 99 | 0-14 | B4_cat | 14 | Terminate interview |
| | 15-24 | | 24 | |
| | 25-34 | | 34 | |
| | 35-44 | | 44 | |
| | 45-54 | | 54 | |
| | 55-64 | | 64 | |
| | 65-74 | | 74 | |
| | 75+ | | 75 | Terminate interview |
| | Refused | | -99 | Terminate interview |

### B5 Household composition

*Do you live...?* [Read each one in turn unless lives entirely alone, and record all responses - provide examples if needed]

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| No | Entirely alone | B5_1 | No=0; Yes=1 | Alternative wording can be used to clarify, such as 'Is there only you living here'. |
| Ask if B5_1=0 | With a partner/ spouse | B5_2 | No=0; Yes=1 | Including partners who are currently working overseas |
| | With the family that brought you up | B5_3 | No=0; Yes=1 | i.e. are they still living parents, grandparents, etc. |
| | With children that you are raising | B5_4 | No=0; Yes=1 | e.g. your children, step-children, foster children |
| | With other relatives or in-laws | B5_5 | No=0; Yes=1 | e.g. aunt, cousin, brother-in-law etc. |
| | With friends or colleagues | B5_6 | No=0; Yes=1 | |

Refused=-99

### B6 Occupation

*Which of these **best** describes your main occupation?* [Read each one in turn, and record 1 response – provide examples if needed; if the respondent feels that they have two or more 'main' occupations, choose the first one in the list]. Other employment options can be added.

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| No | Self-employed, without employees | B6 | 1 | Includes working on own account or contributing to family business. This can be formal or informal work, e.g. market stall holder, taxi driver, factory owner, IT company. Includes those temporarily absent from work due to sickness or maternity/paternity leave. Probe as necessary to find out about employees |
| | Self-employed or company owner, with employees | | 2 | |
| | Employed | | 3 | Working for another person or company, full time or part time. Includes those temporarily absent from work due to sickness or maternity/paternity leave |
| | A regular <overseas> worker | | 4 | To be edited in countries to use local terminology, and where abroad is not overseas, or where seasonal work is not undertaken abroad. |
| | Unemployed and seeking work | | 5 | |
| | Unable to work due to sickness or disability | | 6 | |
| | Student | | 7 | |
| | Caring for children or other family members | | 8 | |
| | Retired | | 9 | |
| | Other | | 10 | e.g. not working and not looking for work |

Refused=-99

### B6_sector Employment sector

*In the last year, have you worked in any of the following sectors?*

| Filter? | Options | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| Ask all | Agriculture, farming or fishing or forestry | | No=0; Yes=1 | Directly responsible for raising crops or animals or fishing; or work related to the infrastructure around food production, farming etc. including manufacturing animal fodder, packaging, storage, haulage |
| | Finance | | No=0; Yes=1 | e.g. Work relating to banking, credit, insurance, accountancy |
| | Public sector including military | | No=0; Yes=1 | e.g. Policy maker, teacher, police, fire crew, refuse collector, higher education |
| | Technology | | No=0; Yes=1 | e.g. Developing software, maintaining IT equipment, creating websites |
| | Tourism, food and beverages and related services | | No=0; Yes=1 | e.g. Work related to travel; accommodation, preparing and serving food, tourist trips and activities |

Refused=-99

### B7_education Highest level of education

*What is the highest level of education you have completed?* [Read out if necessary and record 1 response].

| Filter? | | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | | B7_education | | Formal education or training includes school, college and university, as well as medical school, professional training, military college etc. |
| | Postgraduate | | 1 | e.g., master's degree, PhD or advanced professional training |
| | University/degree-level education | | 2 | e.g., first degree or equivalent vocational training |
| | Upper secondary/high school | | 3 | |
| | Lower secondary/middle school | | 4 | |
| | Primary school | | 5 | |
| | No formal education | | 6 | |

Not relevant/didn't attend school – 96; Don't know=-97; Refused=-99

### B8 Income

*Thinking now about all the different sources of income that you [*add *and your <partner> if* B5_2=1*] have access to, would you say that it is usually...*

| Filter? | Statements | Variable label | Values | Note to interviewer/agency |
|---|---|---|---|---|
| No | No income | B8 | 0 | Income may include pay from work, government support, retirement benefits etc.<br>If asked, please state that this is before tax is deducted. |
| | Less than $95 per fortnight but not 0 | | 1 | |
| | Between $96 and $191 per fortnight | | 2 | |
| | Between $192 and $286 per fortnight | | 3 | |
| | Between $287 and $382 per fortnight | | 4 | |
| | Between $383 and $477 per fortnight | | 5 | |
| | More than $478 per fortnight | | 6 | |

Don't know=-97; Refused=-99

*Thank you. I have a few more background questions.*

### B9 General characteristics

*Please could you tell me if any of the following statements apply to you? You can just say yes or no to each one.* [Read each one in turn and record all responses]

| Filter? | Statements | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | I enjoy learning new skills | B9_1 | No=0; Yes=1 | Record negative responses such as 'Not really' as No. Record positive responses such as *Sometimes*, or *a little bit* as Yes. |
| | I am comfortable doing sums in my head, such as calculating change | B9_2 | No=0; Yes=1 | |
| | I have a health condition or disability that limits my day-to-day activities | B9_3 | No=0; Yes=1 | |
| | I find it easy to memorise things like phone numbers, birthdays, or passwords | B9_4 | No=0; Yes=1 | |
| | I receive most of my income from family members <overseas> | B9_5 | No=0; Yes=1 | |
| Ask if B6 NOT= 4 | I intend to start temporary or seasonal work <overseas> | B9_6 | No=0; Yes=1 | |
| No | I intend to move <overseas> permanently | B9_7 | No=0; Yes=1 | |

Don't know=-97; Refused=-99

*Thank you.*

*The next section of the questionnaire looks at various sorts of technology. There are no right and wrong answers, and it doesn't matter if you never use technology – the important thing is that your answers reflect your actual thoughts, experiences or behaviours. Remember that we want to know about you!*

## Section 2 Digital integration

### D1 Digital devices

*Do you have access to any of the following, **for personal use**, whether or not you currently use them [**if B6=1,2,3 or 4** **add** This could be at home or at work]* [Read each one in turn and record all responses].

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | A smartphone | D1_1 | No=0; Yes=1; | 'Access' should be interpreted broadly, to include living in a household where somebody else has such a device |
| | A mobile phone that is only for calls and text | D1_2 | No=0; Yes=1; | |
| | A tablet, laptop or desktop computer | D1_3 | No=0; Yes=1; | |
| | A router or modem that can be used to connect devices to the Internet by cable or WiFi | D1_4 | No=0; Yes=1; | |
| | A smart watch or smart speaker | D1_5 | No=0; Yes=1; | |
| | A smart TV, or device that connects your TV to the Internet | D1_6 | No=0; Yes=1; | |

Don't understand the question =-98; Refused=-99

- A **mobile (cellular) telephone** refers to a portable telephone subscribing to a public mobile telephone service using cellular technology, which provides access to the PSTN.
- A **smart telephone (or smartphone)** refers to a mobile handset with smart capabilities, including Internet-based services, and performs many of the functions of a computer, including having an operating system capable of downloading and running applications, also those created by third-party developers.
- **Tablet (or similar handheld computer):** a tablet is a computer that is integrated into a flat touch screen, operated by touching the screen rather than (or as well as) using a physical keyboard.
- **Computer** refers to either
  - **Laptop** (portable) computer: a computer that is small enough to carry and usually enables the same tasks as a desktop computer; it includes notebooks and netbooks but does not include tablets and similar handheld computers. It may have a touchscreen.
  - **Desktop**: a computer that usually remains fixed in one place, and typically has a separate screen and keyboard.
- A **portable modem**, (MiFi, mobile hotspot, dongle), connects devices to the Internet via a mobile network.
- A **fixed router or modem** provides cabled or wireless connection to the Internet in buildings such as homes or offices via a fixed-line cable.
- A **smart watch** is a wearable device with similar features to a smartphone, including access to the Internet.
- A **smart speaker** is a voice-controlled device that can access the Internet and may be used to connect and control other smart devices such as smart lightbulbs or robot cleaners.
- A **smart TV** (digital TV) is a TV with access to the Internet [a specific TV 'box' can be used for the same purpose].

### D1_comp Frequency using computer

*Approximately how often have you used a tablet, laptop or desktop computer during the last three months?* [Read each one in turn and record 1 response; use can be personal or work-related]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if D1_3=1 | Not at all | D1_comp | 0 |
| | Less than once a week | | 1 |
| | No more than twice a week | | 2 |
| | Several times a week, but not every day | | 3 |
| | Once a day | | 4 |
| | Several times a day | | 5 |

Don't know=-97; Refused=-99

### D1_phone Frequency using smartphone

*Approximately how often have you used a smartphone during the last three months?* [Read each one in turn and record 1 response; use can be personal or work-related]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if D1_1=1 | Not at all | D1_phone | 0 |
| | Less than once a week | | 1 |
| | No more than twice a week | | 2 |
| | Several times a week, but not every day | | 3 |
| | Once a day | | 4 |
| | Several times a day | | 5 |

Don't know=-97; Refused=-99

### D2 Digital activities

*Still thinking about technology, please can you tell me if you have personally used a digital device or electronic gadget to do any of the following in the last three months, whether for yourself or someone else?*) ...[Read each one in turn and record all responses; can be personal or work-related. If necessary, specify that a digital device could be a computer, tablet, laptop, smartphone or some other tool]

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | Set up an alarm, reminder or alert | D2_1 | No=0; Yes=1 | |
| | Created, edited or saved a document or image | D2_2 | No=0; Yes=1 | |
| | Used Bluetooth or Airdrop to send a document or image to a nearby device | D2_3 | No=0; Yes=1 | |
| | Used formulas in a spreadsheet to make a calculation | D2_4 | No=0; Yes=1 | |
| | Written programming language or code | D2_5 | No=0; Yes=1 | Any type of programming – e.g. Java, Python, C++ |

Don't know=-97; Don't understand the question=-98; Refused=-99

### D3_internet Accessing the Internet

*Can I just check, do you ever use the Internet? For example, do you check email or social media, stream radio or videos, look things up, use apps to send messages or make calls, or work remotely?*

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| No | No | D3_internet | 0 | See notes below. Add examples if needed |
| | Yes | | 1 | |

Refused=-99

- The **Internet** is a worldwide public computer network. It provides access to communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer – it may also be by smartphone, tablet, games console, smart TV etc.).
- Access can be via a fixed or mobile network.

### D3_limit Limits to personal connectivity

*Do any of the following limit your Internet use or prevent you from using it?* [Read each one in turn and record response]

| Filter? | Options | Variable label | Values | Note to agency/interviewer |
|---|---|---|---|---|
| No | The cost of connecting to the Internet or using mobile data services | D3_limit_1 | No=0; Yes=1 | |
| | The quality or availability of Internet and mobile data services in your area | D3_limit _2 | No=0; Yes=1 | |
| | Concerns about the security of the services available | D3_limit _3 | No=0; Yes=1 | |

Don't understand the question =-98; Refused =-99

### D3_time Frequency accessing the Internet

*Approximately how often have you used the Internet or been online for any reason at all over the last three months. You may have been < checking email or social media, streaming radio or videos, looking things up, using apps or working remotely>?* [Read each one in turn and record 1 response]

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| Ask if D3_ internet=1 | Less than once a week | D3_time | 1 | Provide alternative examples of Internet use if needed |
| | No more than twice a week | | 2 | |
| | Several times a week, but not every day | | 3 | |
| | Once a day | | 4 | |
| | Several times a day | | 5 | |

Don't know=-97; Refused=-99

### D4 Online activities

*I am now going to read out some more digital activities. Please could you tell me whether you have personally done any of these in the last 3 months?* [Read each one in turn and record all responses]

| Filter? | Options | Variable label | Values | Note to agency/interviewer |
|---|---|---|---|---|
| Ask if D3_ internet=1 | Bought something online | D4_1 | No=0; Yes=1 | Examples can be provided |
| | Learned something from an online video or course | D4_2 | No=0; Yes=1 | |
| | Placed a bet online or played an online game with money prizes | D4_3 | No=0; Yes=1 | |
| | Completed or submitted a government form online, such as a tax return, benefit claim or application for national identification documents | D4_4 | No=0; Yes=1 | |
| | Searched online for information about money matters | D4_5 | No=0; Yes=1 | |

Don't know=-97; Don't understand the question =-98; Refused=-99

### D5 Digital landscape

*Please could you tell me if you agree or disagree with the following statements?* [Read each one in turn and record all responses]

| Filter? | Statements | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | I feel like technology is leaving me behind | D5_1 | Disagree=0; Agree=1 | |
| | I would trust an automated service, such as an app or robot-advisor to provide financial advice | D5_2 | Disagree=0; Agree=1 | |
| Ask if D3_ internet=1 | I take steps to keep my information safe when online | D5_3 | Disagree=0; Agree=1 | |
| | I use the same password across several online accounts or websites | D5_4 | Disagree=0; Agree=1 | |
| Ask if D1_1=1 or D1_3=1 | My devices (e.g., smartphone, computer) are always locked when not in use | D5_5 | Disagree=0; Agree=1 | If respondent locks 'some' devices, mark as agree |
| | I have virus protection on my devices | D5_6 | Disagree=0; Agree=1 | If respondent has virus protection on 'some' devices, mark as agree |
| Ask if D1_1=1 | I know how to block or disactivate my smartphone if it gets lost or stolen | D5_7 | Disagree=0; Agree=1 | |

Don't know=-97; Don't understand the question=-98; Refused=-99

## Section 3 Financial literacy

*These questions are more focused on money matters, but some also discuss the role of technology*

### F1 Budgeting behaviour

*Do you do any of the following, either alone or with someone else?* [Read each one in turn and record all responses]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Make a plan to manage your income and expenses | F1_1 | No=0; Yes=1 |
| | Keep receipts, or record your spending | F1_2 | No=0; Yes=1 |
| | Buy insurance to protect yourself from financial shocks | F1_3 | No=0; Yes=1 |
| Ask if B6=1 or 2 | Keep records of your self-employed earnings and expenditure | F1_4 | No=0; Yes=1 |
| | Buy insurance to protect your business from financial shocks | F1_5 | No=0; Yes=1 |

Not relevant – 96; Refused=-99

### F1_sav Savings behaviour

*And do you do any of the following, either alone or with someone else?* [Read each one in turn and record all responses]

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| No | Put money aside for emergencies | F1_sav_1 | No=0; Yes=1 | |
| | Use <loyalty cards> to reduce the cost of your shopping or earn <vouchers/coupons/cash back> | F1_sav_2 | No=0; Yes=1 | Use local term |
| | Contribute to a <savings and loans> club | F1_sav_3 | No=0; Yes=1 | |
| | Save or invest for the longer-term | F1_sav_4 | No=0; Yes=1 | Any kind of savings or investment, it does not have to be through a financial service provider |

Not relevant – 96; Refused=-99

### F2 Financial circumstances

*Do you agree or disagree with the following statements?* [Read each one in turn and record all responses]

| Filter? | Statements | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | I tend to live for today and let tomorrow take care of itself | F2_1 | Disagree=0; Agree=1 | |
| | I am often worried that my money won't last | F2_2 | Disagree=0; Agree=1 | |
| | I have some money to spend on myself from time to time | F2_3 | Disagree=0; Agree=1 | |
| | I am the kind of person who ignores the small print unless something goes wrong | F2_4 | Disagree=0; Agree=1 | 'small print' refers to the Terms and Conditions (T&C). |
| | 5 years from now I will be financially secure | F2_5 | Disagree=0; Agree=1 | |
| | If I have money left over, I prefer to save it than spend it | F2_6 | Disagree=0; Agree=1 | |

Not relevant – 96; Refused=-99

### F2_change Recent changes

*And thinking about the last three months, do you agree or disagree with the following* [Read each one in turn and record all responses]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | I am managing my money better now than I was three months ago | F2_change_1 | Disagree=0; Agree=1 |
| | I worry more about scams and fraud than I did three months ago | F2_change_2 | Disagree=0; Agree=1 |
| | I borrow more money now than three months ago | F2_change_3 | Disagree=0; Agree=1 |
| | I trust financial service providers more than I did three months ago | F2_change_4 | Disagree=0; Agree=1 |

Don't know=-97; Refused=-99

### F3 Financial knowledge

*Could you tell me if you think the following are typically true or false*? [Read each one in turn and record all responses. Each statement can be read twice if required. Do not elaborate or define any words]

| Filter? | Statements | Variable label | Values |
|---|---|---|---|
| No | When people talk about inflation, they mean that prices have gone up | F3_1 | False=0; True=1 |
| | Banks pay more interest on savings than they charge on loans | F3_2 | False=0; True=1 |
| | If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money | F3_3 | False=0; True=1 |
| | If a shopkeeper borrows money to stock her shelves, she cannot make a profit | F3_4 | False=0; True=1 |
| | It is possible to earn the same income by selling many items at a low price or selling one item at a high price | F3_5 | False=0; True=1 |

Don't know=-97; Don't understand the question=-98; Refused=-99

### F4_sent Remittance sent

*The next question is about remittances. Have you, personally, sent money from one country to another in the last three months?*

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | No | F4_sent | 0 | Includes sending money home whilst working abroad |
| | Yes | | 1 | |

Refused=-99

### F4_pay Remittance payment

*Did you consider any of the following the last time you sent money from one country to another? You can just say yes or no for each one.*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if F4_sent=1 | The speed of the transfer | F4_pay_1 | No=0; Yes=1 |
| | The exchange rate and fees | F4_ pay _2 | No=0; Yes=1 |
| | The ease of making the transfer | F4_ pay _3 | No=0; Yes=1 |

Don't know=-97; Don't understand the question=-98; Refused=-99

### F4_rec Remittance received

*Have you, personally, received money from abroad in the last three months?*

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| | No | F4_rec | 0 | |
| | Yes | | 1 | |

Refused=-99

### F4_exp Remittance experience

*Could you tell me whether you were happy with the following the last time you received money from abroad, please? You can just say yes or no for each one.*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if F4_rec=1 | The speed of the transfer | F4_exp_1 | No=0; Yes=1 |
| | The exchange rate and fees | F4_ exp _2 | No=0; Yes=1 |
| | The ease of collecting the transfer | F4_ exp _3 | No=0; Yes=1 |

Don't know=-97; Don't understand the question=-98; Refused=-99

### F5 Current account

*And could you tell me, do you have a <current account>? This could be with a bank or credit union, for example, or with an online provider.*

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | No | F5 | 0 | This question refers to an account with a financial institution. Do not include accounts such as Digi Money or M-Tala. |
| | Yes | | 1 | |

Refused=-99

### F5_card Payment card

*Do you have a <payment card> with this account? That is a card that you can use instead of cash to make payments in person or remotely.*

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| Ask if F5=1 | No | F5_card | 0 | Do not include a card that can only be used to withdraw cash, such as an ATM card |
| | Yes | | 1 | |

Don't know=-97; Refused=-99

### F5_beh Current account behaviour

*In the last 3 months, have you checked the balance of your <current> account, or made deposits or withdrawals in any of these ways*: (mark all that apply).

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if F5=1 | In a branch | F5_beh_1 | No=0; Yes=1 |
| | At an ATM | F5_beh_2 | No=0; Yes=1 |
| | Via an agent (e.g. post office, local shop providing access to your account) | F5_beh_3 | No=0; Yes=1 |
| | By SMS | F5_beh_4 | No=0; Yes=1 |
| | By phone | F5_beh_5 | No=0; Yes=1 |
| Ask if F5=1 and D3_ internet =1 | With an app | F5_beh_6 | No=0; Yes=1 |
| | Online (not using an app) | F5_beh_7 | No=0; Yes=1 |

Refused=-99

### F6_1 Paying for groceries

*Thinking about the last time that you bought groceries, please could you tell me how you paid?* [Listen carefully to response and prompt as required. Record one response]:

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Cash or <voucher/coupon/meal ticket> | F6_1 | 1 |
| | <Contactless> card (credit, debt, pre-paid) | | 2 |
| | Card payment with <chip and pin or swipe and sign> (credit, debit, pre-paid) | | 3 |
| Include if D3_ internet=1 | Online card payment (credit, debit, pre-paid, virtual card) | | 4 |
| No | Payment from a <digital/mobile/electronic> wallet | | 5 |
| | Store credit/arranged to pay later | | 6 |
| Include if D1_1=1 or D1_2=1 | Payment using <airtime/phone credit> from a mobile phone | | 7 |
| No | Smartphone tap to pay (e.g. Samsung Pay, Apple Pay) or contactless sticker (e.g. Beep and Go). | | 8 |
| | QR code payment | | 9 |
| | Cryptocurrency | | 10 |
| Include if F5=1 | Automatic bill payment from your <bank> account (e.g. Direct Debit, Standing Order) | | 11 |
| No | Paid in kind or by bartered food or goods | | 12 |
| Include if D1_1=1 or D1_2=1 | SMS payment | | 13 |
| No | Sent money to a friend's phone or account for them to pay | | 14 |
| | Something else | | 111 |

Not relevant/has never shopped for groceries – 96; Refused=-99

### F6_2 Paying utility bills

*And how did you pay your last household utility bill such as water or electricity*:

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Cash | F6_2 | 1 |
| | <Contactless> card (credit, debt, pre-paid) | | 2 |
| | Card payment with <chip and pin or swipe and sign> (credit, debt, pre-paid) | | 3 |
| Include if D3_ internet=1 | Online card payment (credit, debit, pre-paid) | | 4 |
| No | Payment from a <digital/mobile/electronic> wallet | | 5 |
| | Could not pay/requested a delayed payment | | 6 |
| Include if D1_1=1 or D1_2=1 | Payment using <airtime/phone credit> from a mobile phone | | 7 |
| No | Smartphone tap-to-pay (e.g. Samsung Pay, Apple Pay) or contactless sticker (e.g. Beep and Go). | | 8 |
| | QR code payment | | 9 |
| | Cryptocurrency | | 10 |
| Include if F5=1 | Automatic bill payment from your <bank> account (e.g. Direct Debit, Standing Order) | | 11 |
| Include if D1_1=1 or D1_2=1 | SMS payment | | 13 |
| No | Sent money to a friend's phone or account for them to pay | | 14 |
| | Something else | | 111 |

Not relevant/has never paid a utility bill – 96; Refused=-99

### F6_3 Paying to eat out

*And the last time you bought food or drink to eat in a restaurant or take-away - how did you pay?*:

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Cash or <voucher/coupon/meal ticket> | F6_3 | 1 |
| | <Contactless> card (credit, debt, pre-paid) | | 2 |
| | Card payment with <chip and pin or swipe and sign> (credit, debt, pre-paid) | | 3 |
| Include if D3_ internet=1 | Online card payment (credit, debt, pre-paid) | | 4 |
| No | Payment from a <digital/mobile/electronic> wallet | | 5 |
| | Store credit/arranged to pay later | | 6 |
| Include if D1_1=1 or D1_2=1 | Payment using <airtime/phone credit> from a mobile phone | | 7 |
| No | Smartphone tap to pay (e.g. Samsung Pay, Apple Pay) or contactless sticker (e.g. Beep and Go). | | 8 |
| | QR code payment | | 9 |
| | Cryptocurrency | | 10 |
| Include if D1_1=1 or D1_2=1 | SMS payment | | 13 |
| No | Sent money to a friend's phone or account for them to pay | | 14 |
| | Something else | | 111 |

Not relevant/has never bought food or drink to eat in or take away – 96; Refused=-99

## Section 4 Digital finance

### DF1 DFS beliefs

*This next question is about digital financial services, things like mobile payments, online banking or <digital/mobile/electronic> wallets. Please let me know your opinion, even if you don't use any of those services yourself.*

| Filter? | Statements | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| No | Keep costs down for small businesses | DF1_1 | Disagree=0; Agree=1 | Costs here refers to the cost of financial services/banking |
| | Are risky for ordinary people | DF1_2 | Disagree=0; Agree=1 | |
| | Are designed for men more than women | DF1_3 | Disagree=0; Agree=1 | |
| | Will soon replace cash in this country | DF1_4 | Disagree=0; Agree=1 | |
| | Are all regulated like banks | DF1_5 | Disagree=0; Agree=1 | |
| | Make it easier to receive Government payments | DF1_6 | Disagree=0; Agree=1 | |
| | Are essential for people sending remittances | DF1_7 | Disagree=0; Agree=1 | |

*Do you agree or disagree that digital financial services:* [Read each one in turn and record all responses]

Don't know=-97; Don't understand the question=-98; Refused=-99

### DF2 Digital financial services

*And do you, personally, have any of the following?* [Read each one in turn and record all responses]

| Filter? | Options | Variable label | Values | Note to agency |
|---|---|---|---|---|
| Ask unless F5_card=1 Or any F6_1; F6_2; F6_3=2,3,4 | A payment card of any sort, including public transport card, cash card or debit card for example. | DF2_1 | No=0; Yes=1 | Add examples if needed |
| | A <parametric> insurance policy that makes automatic payments to people affected by cyclones or other climate disasters | DF2_2 | No=0; Yes=1 | |
| | Any other kind of insurance policy that you took out online or via an app | DF2_3 | No=0; Yes=1 | |
| Ask unless any F6_1; F6_2; F6_3=5 | A <digital, mobile or electronic> wallet (e.g. Digi Money and M-Tala) | DF2_4 | No=0; Yes=1 | |
| Ask unless any F6_1; F6_2; F6_3=10 | Any kind of cryptocurrency, such as Bitcoin or Chainlink | DF2_5 | No=0; Yes=1 | |

Don't know=-97; Don't understand the question=-98; Refused=-99

- A **cryptocurrency** is a currency that only exists virtually, and uses innovative technology to provide secure transactions.

### DF3 DFS behaviours

*Still thinking about digital financial services and money management, please could you tell me if you do any of the following?* [Read each one in turn and record all responses] *Do you..*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if F5=1 or any DF2=1 | Keep a record of pin numbers or passwords for financial services | DF3_1 | No=0; Yes=1 |
| Ask if D3_internet=1 | Use a banking app or online money management tool to monitor your spending and saving | DF3_2 | No=0; Yes=1 |
| Ask if D4_1=1 | Check that a website is secure before entering payment details | DF3_3 | No=0; Yes=1 |
| | Buy things using a Buy Now, Pay Later option | DF3_4 | No=0; Yes=1 |

Don't know=-97; not applicable=-98, refused=-99

### DF4 DFS outcomes

*And since accessing a financial service online or using your phone to make payments have you:* [Read each one in turn and record all responses]

| Filter? | Statements | Variable label | Values |
|---|---|---|---|
| Ask if F5_beh_5=1 or F5_beh_6=1 or any F6_1; F6_2; F6_3=4,5,8,9, 10 or any DF2_2 to _5=1 | Been locked out of your account for more than a day because you couldn't remember your access details (e.g., username, password, pin number) | DF4_1 | No=0; Yes=1 |
| | Lost money because of online scams, phishing attacks or similar | DF4_2 | No=0; Yes=1 |
| | Saved money on your financial transactions by reducing fees or other costs | DF4_3 | No=0; Yes=1 |
| | Found it easier to manage your money without help from others | DF4_4 | No=0; Yes=1 |
| | Found it easier to keep track of what you are spending | DF4_5 | No=0; Yes=1 |

Don't know=-97; refused=-99

### DF4_safety Email safety

*In this next question I am going to describe a common scenario for bank customers. I would like to know your opinion at the end, please.*

*Sera has just received an email message from her bank. She didn't even know that the bank had her email address! She reads the message carefully. It tells her that her account has been frozen because of suspicious activity. It apologises for the inconvenience and then says she should follow the link in the email as soon as possible to reactivate the account. Sera isn't sure whether to reply to the message, delete it or follow the link.*

*Which of Sera's three ideas would be safest in this instance?* [Read each option again if necessary and record response]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | Reply to the email | DF4_safety | 1 |
| | Delete the email | | 2 |
| | Follow the link | | 3 |

Don't know=-97; Don't understand the question=-98; Refused=-99

### DF5 Cash-based check

*If I understand correctly, you don't have a bank account or digital financial service that you can use to store money or make payments. Can I check please, does this mean that you only use cash?*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if F5=0 and F6_1 =1 and F6_2 =1 and F6_3 =1 and DF2_1; DF2_4 and DF2_5=0 | No | DF5 | 0 |
| | Yes, just cash | | 1 |
| | No money use of any kind, including cash | | 2 |

Don't know=-97; refused=-99

### DF5_other Other payments

*Could you tell me what other payment methods you use besides cash, please?*

| Filter? | Options | Variable label | Values | Note to agency/ interviewer |
|---|---|---|---|---|
| Ask if DF5=0 | Open ended (MAX 40 characters) | DF5_other | {TEXT} | Do not provide examples. |

Don't know=-97; refused=-99

### DF5_why Cash-based reason

*Do any of the following statements explain why you, personally, only use cash? Please choose the option that is most relevant to you.* [Record or read each one in turn and record primary reason]

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| Ask if DF5=1 | You prefer to use cash | DF5_why | 1 |
| | You don't have ID or proof of address | | 2 |
| | Someone else handles non-cash transactions in your household | | 3 |
| | You don't know how to use other payment methods | | 4 |
| | You don't trust financial service providers | | 5 |
| | Another reason | | 6 |

Don't know=-97; refused=-99

### A3 Follow-up

*Would you be happy for us to contact you in 3 or 4 years to find out how things have changed?*

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | No | A3 | 0 |
| | Yes | | 1 |

### A3_contact Contact details

*Thank you. Please could you let me know the best way to contact you to invite you to take part in the next survey?*

| Filter? | Options | Variable label | Values | Note to interviewer |
|---|---|---|---|---|
| Ask if yes at A3 | | A3_contact | <open text> | Please ask for a phone number or email address. Read these details back to the respondent |

### A4 Timestamp at end

Automatic entry, or interviewer to record date and end-time of survey

| Filter? | Options | Variable label | Values |
|---|---|---|---|
| No | | A4 | Day/Month/Year HH:MM |

*This is the end of the survey. Thank you for your participation. Do you have any questions?*

# Appendix C: Scoring Guide

| Section | Subsection | Question | Points awarded |
|---|---|---|---|
| **Digitalisation** (0-18 points) | Access to Digital Devices (0-5) | QD1_1. Do you have access to any of the following, for personal use, whether or not you currently use them? | Awarded 1 point for every type of device owned:<br>Smartphone/mobile phone<br>Computer/laptop or tablet<br>Router or modem to connect devices to the internet<br>Smart watch or smart speaker<br>Smart TV |
| | Digital Activities (0-5) | QD2. Still thinking about technology, please can you tell me if you have personally used a digital device or electronic gadget to do any of the following in the last three months, whether for yourself or someone else? | Awarded 1 point for every action taken:<br>Set up an alarm, reminder or alert<br>Created, edited or saved a document or image<br>Used Bluetooth or Airdrop<br>Used formulas in a spreadsheet to make calculations<br>Written programming language or code |
| | Online Activities (0-3) | QD4. I am now going to read out some more digital activities. Please could you tell me whether you have personally done any of these in the last 3 months? | Awarded 1 point for every action taken:<br>Bought something online by shopping or gaming<br>Sought information or guidance online<br>Completed a government form online |
| | Digital Safety (0-5) | QD5. Please could you tell me if you agree or disagree with the following statements? | Awarded 1 point for every action taken:<br>I take steps to keep my information safe when online<br>My devices are locked when not in use<br>I have virus protection on my devices<br>I know how to block/disactivate smartphone if lost/stolen<br>I don't use the same password across several accounts |
| **Financial competencies** (0-13 points) | Financial safeguards (0-5) | QF1/QF1_sav. Do you do any of the following, either alone or with someone else? | Awarded 1 point for every action taken:<br>Make a plan to manage income and expenses<br>Keep receipts or records of spending<br>Buy insurance as a protection from financial shocks<br>Put money aside for emergencies or contribute to a savings club<br>Save or invest for the longer-term |
| | Financial attitudes (0-3) | QF2. Do you agree or disagree with the following statements? | Awarded 1 point for every action taken:<br>Disagree with I tend to live for today and let tomorrow take care of itself<br>Disagree with I am the kind of person who ignores the small print unless something goes wrong<br>Agree that if I have money left over, I prefer to save it than spend it |
| | Financial knowledge (0-5) | QF3. Could you tell me if you think the following are typically true or false? | Awarded 1 point for each of the following:<br>*True:* when people talk about inflation, they mean that prices have gone up<br>*True:* if there's a chance to make a lot of money, it is likely that you could also lose a lot of money<br>*True:* it is possible to earn the same income by selling many items at a low price or selling one at a high price<br>*False:* banks pay more interest on savings than they charge on loans<br>*False:* if a shopkeeper borrows money to stock shelves, they cannot make a profit |

| Section | Subsection | Question | Points awarded |
|---|---|---|---|
| **Digital financial competencies** (0-9 points) | DFS behaviour (0-3) | DF3. Still thinking about digital financial services and money management, please could you tell me if you do any of the following? | Awarded 1 point for every action taken:<br>Don't keep records of pin numbers/passwords for financial services<br>Use a banking app/online money management tool to monitor spending and saving<br>Check that a website is secure before entering payment details |
| | DFS attitudes (0-4) | DF1. Please let me know your opinion, even if you don't use any of those services yourself. Do you agree or disagree that digital financial services: | Awarded 1 point for each of the following:<br>Agree that DFS keep costs down for small businesses<br>Agree that DFS make it easier to receive government payments<br>Disagree that DFS are risky for ordinary people<br>Disagree that DFS are designed for men more than women |
| | DFS knowledge (0-2) | DF1. Do you agree or disagree that digital financial services:<br>DF4. Which of <Sera's> three ideas would be safest in this instance? | Awarded 1 point for each of the following:<br>Disagree that DFS are all regulated like banks<br>Agree that Sera deleting the email would be the safest option |
| **Desired outcomes** (0-12 points) | Financial wellbeing (0-3) | QF2. Do you agree or disagree with the following statements? | Awarded 1 point for each of the following:<br>Not often worried that my money won't last<br>Has some money to spend on myself from time to time<br>Agree that in 5 years I will be financially stable |
| | Improved outcomes (0-4) | QF2_change. And thinking about the last three months, do you agree or disagree with the following? | Awarded 1 point for each of the following:<br>Managing money better now than three months ago<br>Trust financial service providers more than three months ago<br>Don't worry more about scams and fraud than three months ago<br>Don't borrow more money now than three months ago |
| | DFS contribution to wellbeing (0-5) | QDF4. And since accessing a financial service online or using your phone to make payments have you: | Awarded 1 point for every action taken:<br>Saved money on financial transactions by reducing fees/ costs<br>Found it easier to manage your money without help from others<br>Found it easier to keep track of spending<br>Haven't been locked out of account for more than a day due to forgetting access details<br>Haven't lost money because of online scams |

# About UNCDF

The United Nations Capital Development Fund (UNCDF) is the United Nations' flagship catalytic financing entity for the world's 46 least developed countries (LDCs). With its unique capital mandate and focus on the LDCs, UNCDF works to invest and catalyse capital to support these countries in achieving the sustainable growth and inclusiveness envisioned by the 2030 Agenda for Sustainable Development and the Doha Programme of Action for the Least Developed Countries, 2022–2031. UNCDF builds partnerships with other UN organizations, as well as private and public sector actors, to achieve greater impact in development; specifically by unlocking additional resources and strengthening financing mechanisms and systems contributing to transformation pathways, focusing on such development themes as green economy, digitalisation, urbanization, inclusive economies, gender equality and women's economic empowerment. A hybrid development finance institution and development agency, UNCDF uses a combination of capital instruments (deployment, financial and business advisory, and catalysation) and development instruments (technical assistance, capacity development, policy advice, advocacy, thought leadership, and market analysis and scoping), which are applied across five priority areas: inclusive digital economies, local transformative finance, women's economic empowerment, climate, energy and biodiversity finance, and sustainable food systems finance.

UNCDF's flagship inclusive digital economy initiatives in the region are the **Pacific Digital Economy Programme (PDEP)** and the **Digital Finance for Resilience Programme (DFS4Res).** These programmes aim to support the development of inclusive digital economies in the Pacific that allow rural communities, women and MSMEs, as well as labour mobility workers to enhance market participation, resulting in poverty reduction, improved livelihoods and economic growth.

# About Tebbutt Research

Tebbutt Research has partnered with UNCDF in its efforts to design and implement the digital and financial literacy survey in seven Pacific Island Countries. Tebbutt Research specializes in conducting market and social research in Pacific Island countries and Timor-Leste. Its social research portfolio includes work in digital and financial inclusion. UNCDF has provided a grant to Tebbutt Research to undertake the data collection, analysis, and reporting for this survey.