

Kuwait's Digital Inequalities Report

A 'From Digital Skills to Tangible Outcomes' Project

Fahed Al-Sumait, Ellen J. Helsper, Cristina Navarro, Nouf Al-Saif, and Nilesh Raut

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Foreword

Recent scholarship suggests that societies where opportunities are more equally distributed, so that no one's human and economic potential is squandered, tend to be healthier, have less crime, and even grow faster. Such societies are also fairer and tend to be perceived as such. Since in today's world information and communication technologies are key conduits for opportunity – be it social, economic or political – understanding and combating digital inequalities should be a crucial component of every country's development strategy.

This is why this report – the first of its kind for a Middle Eastern country – is such an important contribution to Kuwaiti policymaking, and indeed for anyone interested in how the country can diversify its economy and promote more inclusive growth. The product of a collaboration between teams at the London School of Economics, the Gulf University for Science and Technology, and other partners, the report presents a comprehensive overview of the three levels of the digital divide in Kuwait: from access to ICT infrastructure, to ICT use, and to the outcomes that different people are able to generate from that use. Its careful analysis is particularly necessary in a country as demographically diverse as Kuwait, where almost two-thirds of the population are immigrants and where gender inequalities have long been a source of concern.

Despite the considerable challenges posed to data collection by the COVID-19 pandemic, the authors have clearly done their best to present an informative, representative, and actionable portrait of the digital inequality landscape in Kuwait. Commendably, the report is transparent about its sample structure and how it compares to the population, thus enhancing its usefulness to policymakers and other readers. It is essential reading for anyone interested in the digital landscape in Kuwait and, indeed, in the Middle East more generally.



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1. Executive summary

Information and communication technologies (ICTs) play a fundamental role in Kuwait's plan to transition away from its dependence on hydrocarbon exports and towards a knowledge-based economy. The nation has already made an impressive amount of progress in the realm of digital connectivity, and the advantages of this are clearly demonstrated by the significant role ICTs have played in sustaining social, economic, and educational activities during the global pandemic. However, as this report highlights, the human element of digital transformation is as fundamental to this success as its infrastructure-related counterpart. By ensuring equitable access, skills development, and the achievement of tangible outcomes that benefit diverse communities, Kuwait can further bolster the positive dividends of society's digital transformation.

This report presents findings from a national survey of adults that was conducted in Kuwait from October 2020 to February 2021 by researchers from GUST and the LSE. A quick summary of the findings from key topic areas are presented at the outset, while the in-depth details of the theoretical, methodological, and analytical elements of this investigation are explained in the body of the report. Taken together, the findings highlight the many considerations that should be taken into account when examining why different communities continue to derive different outcomes from their use of ICTs in Kuwait; likewise, they point to the possible actions that can be undertaken to improve the (e)quality of Kuwait's advancement toward a knowledge-based economy.

ACCESS, MOTIVES AND OBSTACLES

- Internet access and smartphone ownership are both nearly universal. However, for the lowest educated respondents, as well as sizable portions of the Asian community, their smartphone is their only form of access. The lowest-educated group also uses public hotspots least and have access to the fewest devices, thus limiting the activities they conduct and outcomes they can achieve.

- On average, women have access to a greater diversity of

internet-accessible devices than men, and the youngest respondents (19-25 years) have more device access than any other age group.

- Information seeking is the primary goal driving people to use ICTs, followed by the desire to stay connected with others, to seek entertainment, for occupational use, and finally to share original content.

- The strongest social pressures motivating ICT use are because such

technologies are already used by friends and family (93%), and they are important for work (79%).

- Expatriates are more likely to use ICTs to stay connected with loved ones. This same motivation to stay connected increases in general with age.
- Obstacles to greater ICT uptake include the widespread perception that digital technologies are addictive. Furthermore, men (76%) are more concerned than women (63%) that technologies contribute to declining social relations, while women are nearly twice as concerned with online harassment.

SKILLS AND CONFIDENCE

- Respondents are most confident about their digital social skills, followed by their operational, creative, and Information-navigation skills in descending order.
- A modest gender gap persists in technical, creative, and information-navigation skills, though women do evidence a slight advantage in their digital social skills.
- Those with the lowest education report significantly lower skills in all categories compared to those with more education.
- For all types of skills measured, youth between the ages of 18-25 score higher than all older groups, with twice the average for all skills combined compared to those 41 years and older.
- By occupation, the highest technical skills are found among students (57%),

the employed (54%), and, notably, the unemployed (53%).

- By place of origin, Kuwaitis (35%) report the highest digital social skills and Filipinos (28%) the lowest, with Indians (33%), other Asian expatriates (32%), and Arab expatriates (30%) representing the other groups.

USES AND OUTCOMES

- The main uses of ICTs in Kuwait occur in the personal domain, under which the pursuit of leisure activities dominates all activities measured. Social uses constitute the second highest domain, under which informal socializing is the most frequent activity.
- People's satisfaction levels with their ICT outcomes are generally high, with an average of 73%, indicating nearly three-quarters of respondents are satisfied with the majority of the outcomes they get from using ICTs.
- Women's ICT uses and achievements concerning work-related activities are higher than men, but their reported skills in this area and satisfaction with the associated outcomes are both lower.
- By origin, Filipinos show the most extensive use of ICTs for personal activities as well as the highest uses for both leisure and healthcare activities, closely followed by Kuwaitis in both cases. Filipinos are also most likely to use ICTs for work, though their achievement scores in this area are the lowest of any nationality group.
- Kuwaitis report significantly lower

use of ICTs to buy and sell goods and services online, compared to Indians and Filipinos. Conversely, Kuwaitis demonstrate a higher level of other financial uses than expatriates.

- General economic outcomes range from the highest achievements in educational activities (68%) and the lowest for property (44%) with few significant differences between populations.
- Women use ICTs more than men with regard to identity-related issues, as well as for informal social activities. Differences in these two areas are also present according to a person's origin

between Filipinos, who are the heaviest consumers of cultural content, and Indians who are the lowest.

- According to origin, Kuwaitis (60%), Arab expatriates (57%), and Indians (54%), derive less cultural outcomes from ICT use than Filipinos (68%) and other Asian expatriates (68%). Kuwaitis and Arab expatriates are also less likely to achieve informal social (and personal) outcomes compared to all Asian expatriates.
- Intriguingly, the highest use of ICTs for cultural identity activities comes from those with the lowest levels of education.

RECOMMENDATIONS SUMMARY

ACCESS: There remains a need to improve conditions for the most marginalized communities by providing more diverse opportunities for public access, in terms of both internet connectivity and device availability.

SKILLS: Initiatives focused on media literacy education, ICT-skills, and content creation training can address existing problems in areas like information-seeking activities, with which the majority of people are already motivated to engage. Groups most in need of such skill development include older populations and those with the lowest levels of education.

USES AND OUTCOMES: Gaps between ICT uses and their associated outcomes are often disproportionately concentrated among women and expatriates. Actively encouraging their greater involvement in the planning and design of ICT services, platforms, and content can better ensure that their needs and expectations are being adequately addressed.

REGULATION: A safe and effective regulatory environment aligned with global best practices for data protection, privacy, and cybersecurity is critical for improving access and outcomes across society. Likewise, ICT regulators can also play a critical role in identifying and addressing ongoing inequalities by regularly monitoring and evaluating the status of Kuwait's digital divide among citizens and non-citizens alike.

2. Introduction

The brisk growth of ICTs has heralded what some refer to as the Fourth Industrial Revolution.¹ These technologies play an increasingly vital role in social, economic, civic, and personal domains, and this condition has only accelerated with the heightened reliance on digital technologies caused by the COVID-19 pandemic and its resultant restrictions on movement and social interaction. However, the availability and impact of ICTs are not equally distributed between or within countries—a situation that is starkly illustrated by conditions in the Arab Middle East where economic and technological inequalities are among the highest in the world.² Kuwait occupies a privileged position with regard to the availability of ICTs, which form the necessary backbone of the country's planned shift away from its reliance on oil and towards the development of a more knowledge-based economy.³ Nevertheless, the true picture of ICT-related benefits in Kuwait remains obscured by the limitations in existing data, especially regarding socio-digital inequalities.

This report provides the first academic evaluation of ICT access, skills, uses, and outcomes for residents across Kuwait.

The intention is to establish a preliminary understanding of these conditions for the benefit of policymakers, businesses, researchers, educators, and others with an interest in the social impacts of today's digital technologies.

The ensuing chapter outlines the conceptual and empirical framework guiding the “From Digital Skills to Tangible Outcomes” (DiSTO) global project. It is followed by an explanation in Section 4 of the socio-economic context in which the DiSTO-Kuwait project is applied. Section 5 explains the methodology and sample from the study before the remainder of the report, which starts in Section 6, elaborates on the findings in relation to the domains of access, motives, skills, uses, and outcomes (achievements and satisfaction levels). Finally, Section 9 concludes the report with a summary of the findings that are arranged according to the domains and the major demographic communities that took part in the survey. For more information about this or other DiSTO projects, please visit <https://www.lse.ac.uk/media-and-communications/research/research-projects/disto>.

¹ With regard to the origin of the idea, see the book of the same name by the Founder and Executive Chairman of the World Economic Forum, Klaus Schwab, (2017). It has since become commonly used in policy circles to describe the contemporary era of productivity and growth ushered in by ICTs.

² According to data from the World Inequality Database, it has been concluded that the Middle East is, and probably has been for some time, the region with the highest level of

income inequality in the world. See Alvaredo et al. (2019) for more details. The latest indication from Arab Barometer, which maintains one of the largest sets of opinion-based data from the region, also highlights the extreme digital inequalities in the Middle East (see Raz, 2020).

³ The “New Kuwait” 2035 plan outlines the government's intention and overall strategy for this transition to occur. For a summary of the plan, see <https://www.mofa.gov.kw/en/kuwait-state/kuwait-vision-2035>

3. Understanding inequalities

The study presented in this report is part of the global “From Digital Skills to Tangible Outcomes” (DiSTO) project. This project has studied the relationship between social and digital inequalities in countries around the world. As an introduction to the report, a brief overview to the development of thinking and a presentation of the model that underlies the DiSTO project are first provided, followed by a description of the local context and methodology of this study.

The various instruments developed by this project are used by researchers, policymakers, the commercial, and third sectors in over 30 countries in the U.S., Latin America, Southern Africa, Asia, and Europe, but until now have not yet been developed and tested for use in the MENA region.

The global DiSTO projects focus on inequalities in the outcomes resulting from the increased digitization of society for people from different backgrounds. This is the latest developmental step in debates around digital inequalities. Research and policy on the topic started with describing the gap or divide between those who did and those who did not have access to ICTs. This is known as the first-level digital divide. Economic inequalities between countries and between groups of individuals within them were seen as the most important aspect for understanding this digital divide. Proposed solutions to first-level digital inequalities are, therefore, presumed to be improving and

subsidizing digital infrastructure in poorer regions (to remedy lack of market value for commercial providers) and lowering the costs of connections or providing free/low-cost devices on which to access the internet (to address poverty as a reason for exclusion).

Differences in use

It was quickly realized that solving such access-related issues was insufficient, since differences in use between different socio-economic and socio-cultural groups persisted even when access was relatively widely available. The culprits for a lack of engagement are thus sought in the inequalities of digital skill levels among people and much of the current research and policy focusses on how these lead to inequalities in how and for what purposes ICTs are used. These second-level digital divides include different levels of technical and operational skills—from knowing how to turn a device on or off, to high-level coding—but also critical ‘softer’ skills—from understanding the persuasive intentions of content producers, to understanding how to use ICTs for positive relationship building.

The Internet Skills Scale (ISS) and the youth Digital Skills Indicator (yDSI) developed by the DiSTO partners to measure these different aspects are now taken up around the world and were also applied in the DiSTO Kuwait study. Inequalities in digital literacy are strongly linked to historical inequalities in education, numeracy, and literacy

between different groups. Solutions to these second-level digital inequalities are, therefore, often seen in providing digital skills training and accreditation, as well as to integrate digital skills into the national curriculum. Further solutions at the second level to remedy inequalities in the use of different aspects of ICTs include ensuring that content, such as eGov, health, work, and cultural content, specific to the needs of traditionally disadvantaged groups is made available in accessible and understandable ways.

The final point of focus for the DiSTO project is on the systematic disparities between groups and countries in the outcomes that people obtain from engaging with ICTs. The implicit assumption until recently has been that the increased, broad uptake of ICTs leads to positive outcomes for all individuals and society as a whole. However, even in countries with exceptionally high levels of digital diffusion, such as Kuwait, there are important inequalities in the translation of ICT use in greater socio-economic, socio-cultural and personal well-being which cannot be fully explained by differences in skills or use. This third level of digital inequalities refers to how individuals from different backgrounds obtain different outcomes from doing similar things online. Such disparities in outcomes are of ever-increasing concern with societies' growing reliance on digital technologies following the outbreak of the SARS-CoV-2 pandemic.

Solutions for these types of third-level inequalities are more complex than those for the first- and second-level because they are entrenched in socio-cultural power dynamics such as sexism, racism,

ageism and other forms of discrimination. The ways in which technologies and the content about them are designed, whose content gets seen and liked, and the ways that people interact with others in digital spaces, are often driven by who has a voice and who is silenced in the wider society. Thus, groups who are historically disadvantaged are more likely than those who come from privileged positions to have negative outcomes and less likely to achieve positive outcomes across a variety of domains resulting from the digitization of our everyday lives.

Traditional vs. Digital

One important side note here is that the relationships between traditional inequalities and digital inequalities are not generalized; the strongest links between social and digital inequalities can be found for corresponding domains of inequalities. For example, if someone belongs to a group which historically has had low levels of economic resources (e.g. low education or poverty) but high levels of social resources (e.g. strong family bonds, extended community networks, etc.), they are likely to take up social digital opportunities (e.g. informal social networking, creating community resources) but unlikely to take up economic digital opportunities (e.g. finding jobs, informal learning online), even if these are available.

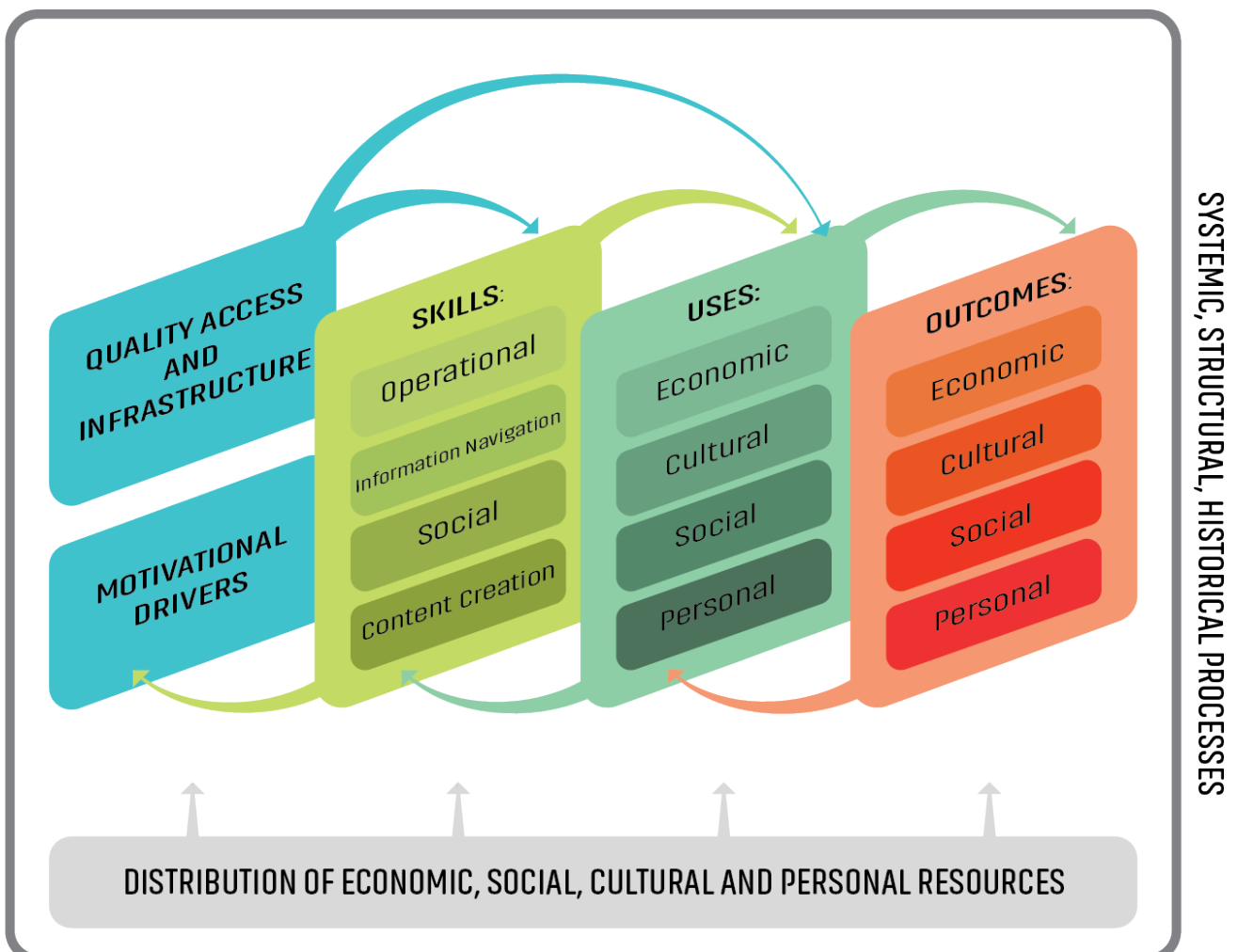
Solutions to such problems include making sure that content is created by representatives from diverse groups across society and that moderators also come from a broad cross section of the population. Such approaches can create greater awareness amongst ICT designers and users about how their

practices can exclude others if they only shape these around what is familiar and attractive to them. This also means that programmers and digital content providers need to be held to account if the ICTs and algorithms they create lead to outcomes that exacerbate inequalities because they are discriminatory in nature. Of course, such digital interventions must also be accompanied by changes in wider societal dynamics. It is especially at this third level of inequalities that multi-stakeholder involvement is necessary,

where government, commercial and the third-sector actors who work on attenuating socio-economic and socio-cultural inequalities can come together to examine approaches that create more equal opportunities within the digital environments to which they contribute.

Figure 1 illustrates the conceptual model behind the DiSTO methodology by showing the interrelationships between societal- and individual-level factors that contribute to inequalities in digital outcomes.

Figure 1:
Summary of the model underpinning the DiSTO projects



4. The case of Kuwait

Kuwait represents the first location to apply the DiSTO methodology in a Middle Eastern country. While it is one of the most financially and digitally affluent nations in the region, the distribution of these benefits within society remains unequal. To best situate the findings of this study, it is first useful to note characteristics that make Kuwait an illuminating example of the challenges to digital transformation in the MENA region. These include its macroeconomic, demographic, and digital environments, each of which are briefly discussed in turn.

4.1 MACROECONOMIC ENVIRONMENT

Kuwait's significant hydrocarbon resources provide the basis for its economic structure, accounting for the majority of its gross domestic product (GDP), 95% of its export revenues, and 90% of government income.⁴ Furthermore, its GDP per capita ranks fortieth in the world and second in the Middle East. In this regard, Kuwait is fairly illustrative of other countries in the Gulf Cooperation Council (GCC), which together represent the highest levels of GDP per capita in the region. In addition, Kuwait provides generous social provisions for its citizens while maintaining a tax-free environment.

Among the benefits for Kuwaiti citizens is the near guarantee of government employment, leading to a majority of Kuwaitis (about 85%) working in the public sector. Moreover, high government employment coupled with regulatory control over expatriate work visas contributes to low unemployment levels by international standards, which stood at about 2.2% in the

pre-pandemic era, according to the World Bank. Kuwait also ranks forty-sixth out of 141 countries in the Global Competitiveness Index (GCI) and thirty-seventh in terms of ICT adoption in the 2019 World Economic Forum report, having also significantly improved its rankings in terms of the pillars of health (twelfth) and the financial system (thirty-fourth) in recent years. However, relative to many other countries, such macroeconomic conditions produce national indicators, such as GDP per capita or unemployment figures, which can obscure the effective identification and measurement of socio-digital inequalities at the micro and meso levels.

Like many of the GCC states, Kuwait has launched an ambitious Vision 2035 plan, which partially aims to reorient the macroeconomic environment by diversifying the economy away from hydrocarbons, improving participation in the private sector, and streamlining government bureaucracy. This "New Kuwait" vision will require significant development of human capital, improvements to the business environment, and capitalizing on technology, which are all relevant to the questions surrounding socio-digital inequalities and the potential benefits that can be derived by minimizing them among citizens and non-citizens alike.

4.2 DEMOGRAPHIC ENVIRONMENT

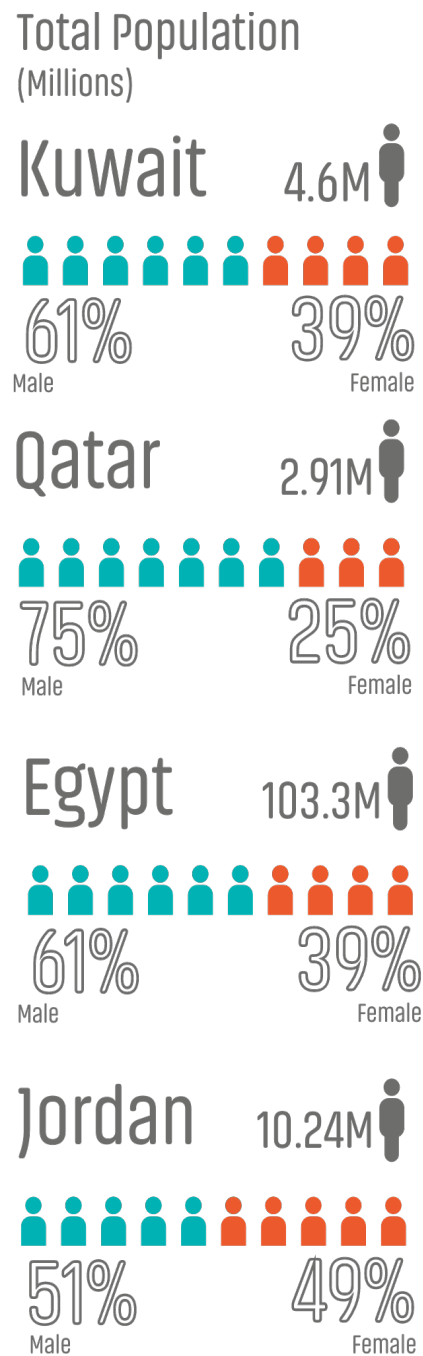
Among the relevant consequences of the macroeconomic conditions with regard to ICT development is the country's relatively unique demographic composition. Due to the limited number of Kuwaitis working in

the private sector coupled with the available financial resources to attract large-scale foreign labor, the nation has become what can be termed as an expatriate-majority state. According to 2021 data from the Central Statistical Bureau, Kuwaitis make up about a third of the population, with the remaining two-thirds comprised of expatriates from countries around the world who speak a multitude of languages/dialects and work at all skill levels across society. Expatriates can be found in most organizations as well as many households given the popularity of employing live-in domestic workers.

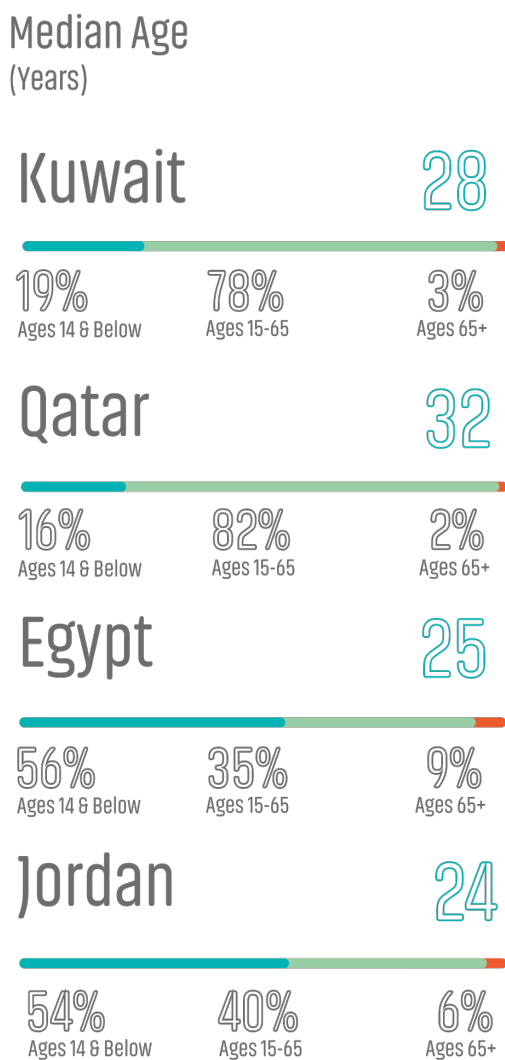
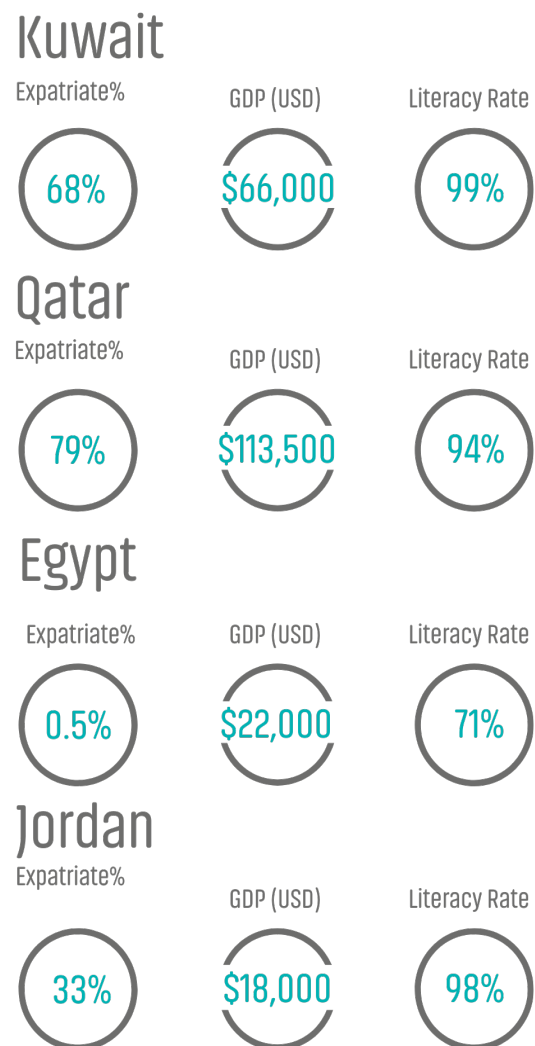
High demand for ICTs

As is the case in countries like Qatar and the United Arab Emirates (UAE), which are also composed of expatriate majorities, Kuwait derives both benefits and challenges from this situation that are of relevance to socio-digital development. Among the benefits are the availability of diverse skillsets, technological competencies, and innovative uses for digital media that are provided by workers from abroad, which hold the potential to diffuse additional capabilities throughout society more broadly. The high demand for ICTs among citizens and expatriates alike alongside a competitive telecommunication market and robust investments in ICT infrastructure have also created a highly accessible digital marketplace in which internet access and usage appear to be almost universal. However, an expatriate-majority state also faces significant challenges, such as a lack of incentives for labor-based competition among locals, large wage gaps/economically marginalized expatriate communities, lower overall levels of education in society, extreme language and cultural barriers, and

Graphic 1: Population size and gender composition



An expatriate-majority state also faces significant challenges that complicate both the social distribution of digital outcomes as well as the ability to measure them.

Graphic 2: Age distributions**Graphic 3: Comparative demographics**





other conditions that complicate both the social distribution of digital outcomes as well as the ability to effectively measure them.

The graphics in this section⁵ highlight key demographic features of Kuwait that

are relevant to the issue of socio-digital inequalities. As a point of comparison within the region, the figures are shown relative to Qatar, Egypt, and Jordan, which represent national examples from the Gulf, North Africa, and the Levant.

⁵ Sources: Hootsuite & We Are Social 2021 country reports; CISCO 2019 Digital Readiness Index; the GSMA's 2020 Mobile Connectivity Index; The Portulans Institute's 2021 Network Readiness Index; UNDP's 2019 Human Development Indicators, CITRA 2019 Brief Report; International Telecommunication Union country ICT Data, World Bank 2020-2021 Data.

Table 1: Income share, unemployment, and HDI

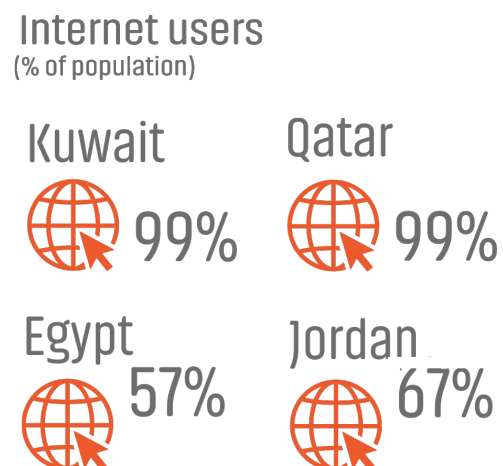
	 Kuwait	 Qatar	 Egypt	 Jordan
Income share held by richest 10%	54%	57%	50%	50%
Unemployment (% of labor force)	2,2%	0,1%	10,8%	14,7%
Human Development Index rank (of 190 countries)	64	45	116	102

4.3 DIGITAL ENVIRONMENT

Based on the available data, Kuwait appears to have made significant strides toward integrating ICTs into society relative to the majority of Middle Eastern countries. Among the notable features are its nearly universal internet usage rates (99%) and active social media users (99%), high mobile phone connections (averaging between 1.6 to 1.8 phones per person), and its extensive 5G mobile coverage.

According to the latest government data from the Communication and Information Technology Regulatory Authority (CITRA), in 2019 mobile phone and internet usage had become nearly universal, with daily usage rates at about 98% of the population for the internet and 95% for social media accounts. While more recent data is still forthcoming, it is assumed that ICT usage has increased in the time since, especially following the mobility restrictions caused by the COVID-19 pandemic.

Among the notable recent developments in Kuwait's ICT environment has been the roll out of 5G technology, for which Kuwait currently ranks among the top 10 in the world for mobile speeds. The 2021 Hootsuite and We Are Social Report concludes that the year-on-year change evidenced a 138% increase in the average mobile internet speeds.

Graphic 4: Internet users

Graphic 5: Subscriptions per person

Mobile Phone Connections
(Subscriptions per person)

Kuwait



Qatar



Egypt



Jordan



Graphic 6: Households with computers

Households with computers
(% of households)

Kuwait 84%



Qatar 87%



Egypt 64%



Jordan 43%



Graphic 7: Fixed broadband subscriptions

Fixed Broadband
Subscriptions *
(per 100 people)

Kuwait



Egypt



Qatar



Jordan



Graphic 8: Active social media users

Active Social
Media Users
(% of population)

Kuwait



Egypt



Qatar







Jordan



* The World Bank Data on this measure refers to fixed subscriptions to high-speed access to the Internet at speeds equal to, or greater than, 256 kbit/s per 100 people. This includes cable modem, DSL, fiber-to-the-home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband.

Table 2: Comparison of ICT indicators

				
	Kuwait	Qatar	Egypt	Jordan
Mobile Connectivity Index score†	70,35	75,72	55,71	60,4
Mobile device and service affordability score	68,4	83,6	47,7	52,71
Digital readiness index††	13,36	15,1	10,24	12,14
Network Readiness Index Rank	55	42	77	72

Note: Most figures are rounded for ease of comparison.

† The 2020 GSMA Mobile Connectivity Index 2020 Scores are ranked from 0-100 with higher scores representing stronger performance.

†† The 2019 CISCO Digital Readiness Index scores are ranked on a 25-point scale, with higher numbers indicating higher degrees of readiness. As points of comparison outside of the region, in the 2019 data, the highest global score is Singapore at 20.26 and the lowest Chad at 4.32, with the global average at 11.90.

As above, the graphics for this section shows important indicators of Kuwait's ICT environment relative to the selected Arab countries. Of note are the similarities between Qatar and Kuwait and the contrast between these affluent Gulf states and their Arab counterparts in North Africa and the Levant. This "digital divide" between Arab countries adds another layer of consideration to the social and economic inequalities that are traditionally studied in the region, and which have led the World Bank to describe the existence of a large "Arab inequality puzzle". However, such comparative analyses between countries

can sometimes obscure an understanding of inequalities that exist within individual countries, especially those like Kuwait or Qatar for which national indicators appear to show near-universal levels of access.

This report on Kuwait's digital inequalities is the first to highlight additional facets of ICT development beyond the topics of access and use to also include the critical elements of motivations, skills, and outcomes. The next section outlines the methodology used for this assessment and is followed by the detailed findings of the research.

5. Measuring socio-digital inequalities in Kuwait

This project aimed to collect a nationally representative sample of Kuwait's local and expatriate residents to explore the relationships between people's offline conditions and online outcomes. The local research team was comprised of faculty members from the Gulf University for Science and Technology, staff from the World of Opinions research firm, and a team of 17 specially trained interviewers, all of whom worked in concert with a research team at the London School of Economics and Political Science, which was led by the DiSTO's Global Project Leader, Dr. Ellen Helsper.

To adapt the international DiSTO measures to the local context, it was necessary to use rigorous translation techniques, face-to-face conceptual validations, and pilot testing procedures. After the selection of the optimal items for evaluating local conditions that maintained comparability with DiSTO projects worldwide, the scales were subjected to multiple independent translations from English to Arabic.

5.1 DATA COLLECTION

The final sample consisted of 746 observations that exhibited both a completion rate greater than 80% and an appropriate completion time. Meanwhile, the data was collected between October 2020 and January 2021 and contained detailed information about various populations in Kuwait who use the Internet to perform day-to-day activities as well

as important demographical information relating to participants, such as their age, gender, educational level, country of origin, and occupation. The demographic categorizations of the population used within this report are designed to match those used by the Kuwaiti government in national figures, as shown in Box 1 (p. 21).

Limitations

While every effort was made to approximate a nationally representative sample of the population, it should be noted that due to language barriers, the use of internet-mediated/social-media-based recruitment methods, online data-collection techniques due to the pandemic outbreak, and other factors inherent to survey research, the findings of this report should be seen as a baseline assessment of digital inequalities in Kuwait rather than a definitive evaluation. Additional research is required, which can be utilized to compare with the data herein and confirm the validity of our findings.

5.2 MEASURES

Internet skills were calibrated according to scales adopted by Van Deursen et al. (2016) that are known as the ISS, which is composed of 25 questions identified to be credible and valid across various socio-economic characteristics. These are classified into four categories of skills, which are operational (nine items), information navigation (five items), social (five items), and creative (five items), respectively. Each item was measured on a scale of zero

to five, with five being the highest score ("very true of me"). The scale was further developed for the youth skills project and adjustments were made to account for this. See Box 2 for more details (p. 22).

Four domains

Additionally, each of the four domains of internet usage (economic, cultural, social, and personal) were assigned associated items or questions. These items consisted of COVID-19-related questions to incorporate the changes associated with increased internet usage due to the pandemic. The economic domain of internet uses was grouped into income, employment, finance, and education. Meanwhile, the cultural-uses category measured the identity and belongingness of an individual to various cultural, societal, and religious aspects of everyday life. The social domain of uses was grouped into formal, informal, and civic categories, which denotes how using the Internet affects the way individuals connect through formal, informal, and political interactions. The personal domain of internet uses consists of health, leisure activities, and self-actualization characteristics. Each item is measured on a scale of one to six ("never" to "several times a day") as an ordinal response measure. Box 3 provides a summary reference of the categories used to assess the uses and outcomes. We report the scores of various spheres of uses across different socio-economic categories.

5.3 SIGNIFICANCE TESTING

For the purpose of testing the significance levels of various variables included in the model, we conducted multiple regression analyses, using ordinary least squares as well as Logistic regressions, for skills,

To adapt the international DiSTO measures to the local context, it was necessary to use rigorous translation techniques, face-to-face conceptual validations, and pilot testing procedures.

Each of the four domains of internet usage (economic, cultural, social, and personal) were assigned associated items or questions.

uses, and outcomes. Our fully specified models incorporate a number of dummy or dichotomous variables to test differences across gender (men versus women), occupation categories (students versus other categories), nationalities (Kuwaiti versus other categories), age (old versus other categories), and education (high school versus other categories); controlling was undertaken for various skills. We report the results of the tests at a 5% significance cut-off level. This allows us to determine which of these independent variables makes a significant contribution while also explaining the specified multiple regression models of the variables that need to be elaborated upon.

Box 1: Demographic categories

To help facilitate direct comparisons of the data, we have organized the demographics according to the categories commonly used by the Kuwaiti government, as shown here.⁶

CATEGORY	CLASSIFICATION USED
GENDER	Women Men
AGE* (MEAN)	18-25 26-40 41-60 Over 60
EDUCATION (AGES 19+) **	Primary to Secondary Secondary Plus University or Higher
NATIONALITY/ ORIGIN***	Kuwaiti Arab Expatriate Asian Expatriate Other
OCCUPATION	Student Employee Homemaker Retired Unemployed Other work

⁶ See Appendix 1 for comparisons between the survey sample and the broader population.

*In some cases, all respondents over 40 have been combined due to response similarities.

** For ease of display in the graphics, these categories are often referred to as high school, high school+, and graduate, respectively.

*** The category “Arab Expat” includes all respondents from countries in the Arab League except Kuwait. The category “Asian Expat” was further subdivided into “Filipino,” “Indian,” and “Other Asians” due to the high representation of Filipinos and Indians within the sample. The category of “Other” includes respondents from all nationalities not otherwise captured by the preceding classifications. The size of the “Other” sample was too small to be included in most analysis.

Box 2: Skill classifications

ICT skills in this report are classified into four categories as follows:

Operational

The ability to manage and operate ICTs and the technical affordances of devices, platforms and apps. These range from simple things, like button knowledge, to more advanced settings management and programming.

Information Navigation

The ability to find, select, and critically evaluate digital sources of information. These include skills like using keywords, navigating to and through websites, and verifying the truth of online information.

Social

The ability to use different digital media and technological features to interact with others and build networks as well as to critically evaluate the impact of interpersonal mediated communication and interactions with others. These elements include the possession of skills, such as the ability to manage contact lists, share content, make decisions with regard to social media, and report negative content.

Content Creation

The capacity to create (quality) digital content and understand how it is produced and published as well as how it generates impact. Examples include sharing video or audio files (self-created or third-party), designing a website, and recognizing different types of online licensing.

Box 3: Categories of uses and outcomes

The different ways that people use and derive outcomes from ICTs are classified in this report into the following four categories:

Economic

This includes the subcategories of **property** (facilitating the purchase or delivery of products and services online), **finance** (inquiring about financial opportunities, comparing financial services, or using direct debit payments), **work** (looking for employment or using digital tools for work), and **education** (looking for, inquiring about, or using ICTs for formal or informal learning).

Cultural

This includes activities relating to people's sense of self and identity, such as consuming or posting information about ethnic matters, gender issues, parenting, or spirituality.

Social

This includes the subcategories of **informal** (various social interactions with family, friends, or new people), **formal** (looking for or participating in organized social activities related to sports, hobbies and interests), and **political/civic** (seeking out, commenting on, or contributing information related to social issues and problems).

Personal

This includes the subcategories of **health** (finding, using, or sharing information related to health and well-being), **leisure** (playing games, listening to music, or watching programs), and **self-actualization** (finding or exchanging information and opinions about events, activities, or relationships).

6. Accessing the digital world

6.1. DIGITAL ACCESS

To benefit from ICTs, it is first necessary to have access to them. By regional and even world standards, residents in Kuwait enjoy generally high levels of access to the Internet and mobile devices; nevertheless, important differences exist in line with people’s personal circumstances. In this section, we outline some of the key variations in how

different members of the population go online based on the survey findings.

In terms of devices, access to smartphone technology is widespread across all groups. Retired residents have the lowest percentage of smartphone ownership, which is still high at 94%. All other populations are either close to or at 100%.

Chart 1: Smartphone ownership per demographic

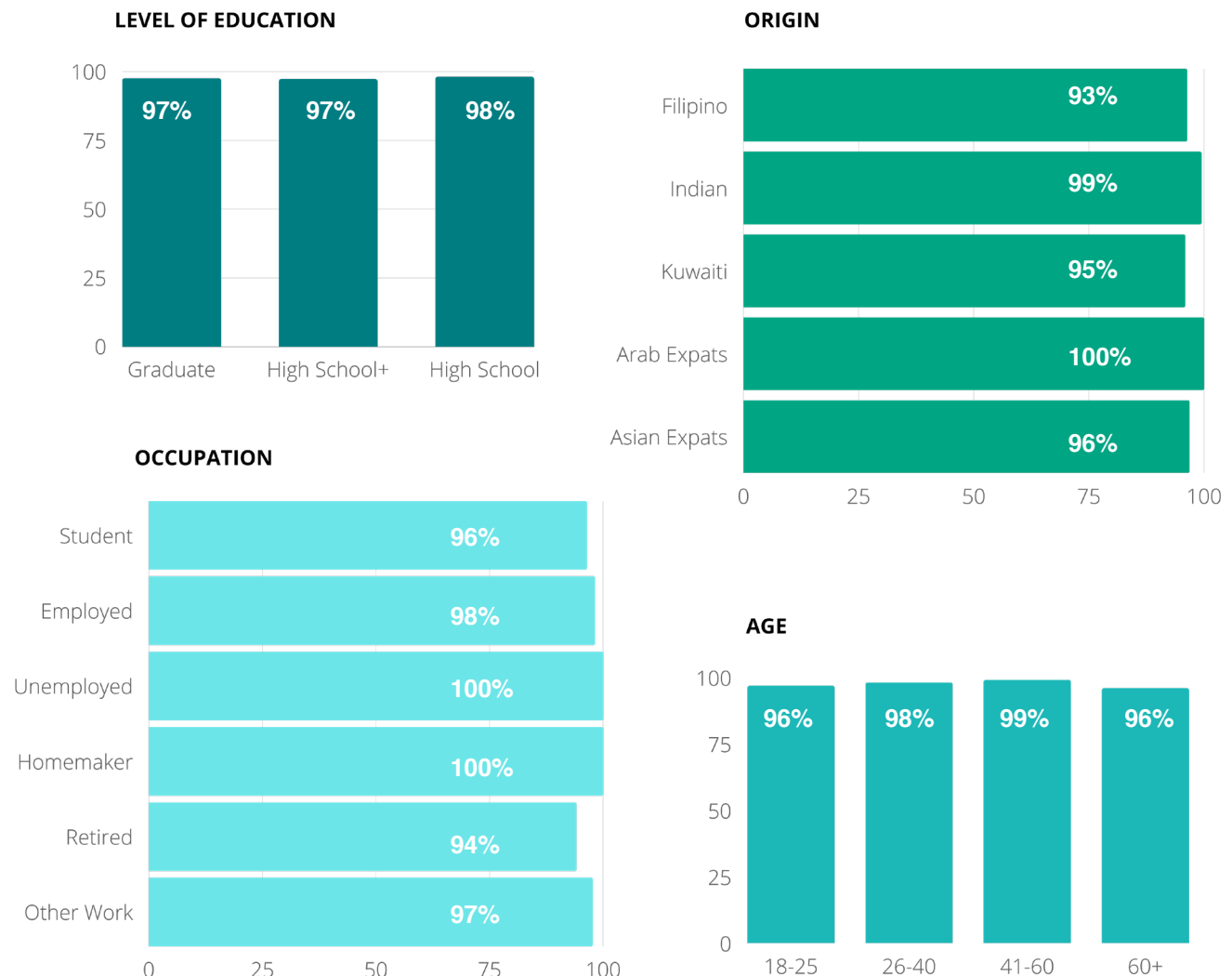
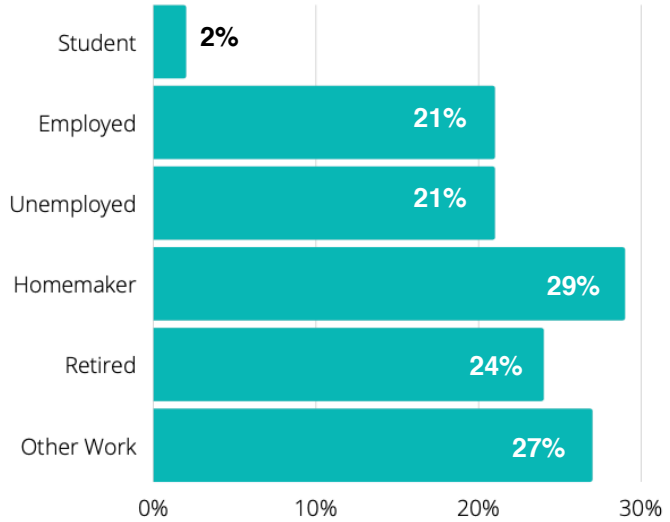
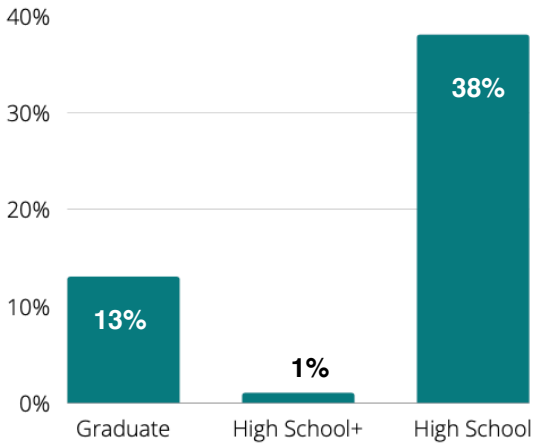
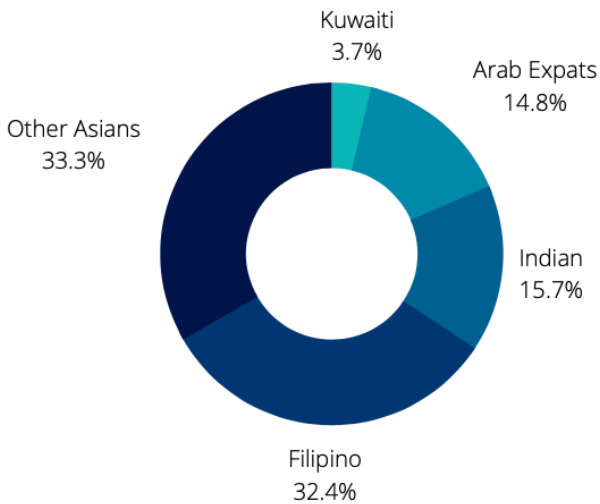


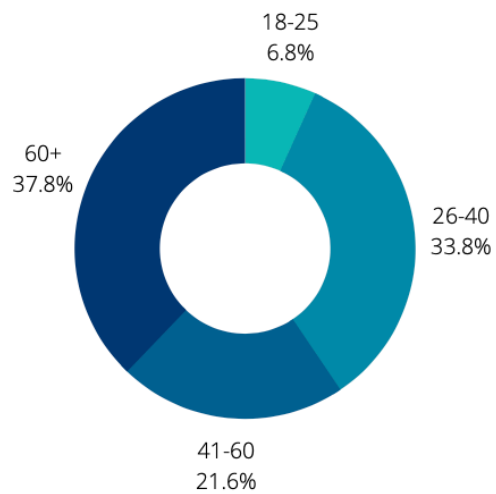
Chart 2: Smartphone only access



BY PLACE OF ORIGIN



BY AGE GROUP

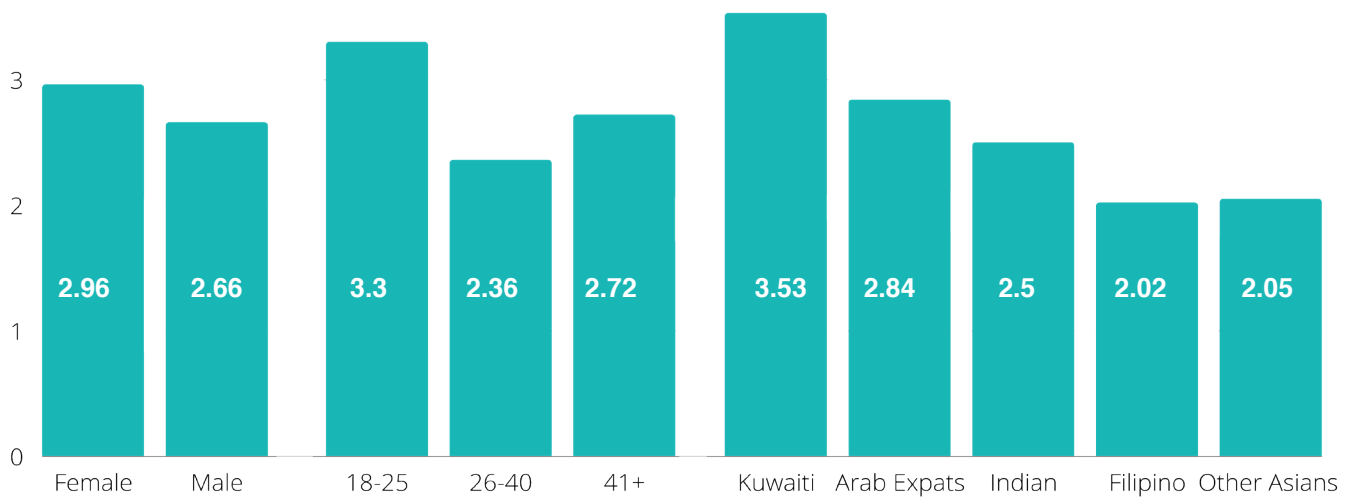


Device access varies considerably based on people’s place of origin. For approximately one-third of the Asian expatriates sampled, their smartphone is the only internet-accessible device they have, with the exception of Indians in this group for whom this number on reaches 16%. When combined, Asian expatriates make up over 80% of the total population with smartphone-only access, despite representing about 40% of the national populace. Furthermore, on

average, Kuwaitis have the highest level of diversity of internet-accessible devices, while Filipinos were recorded as having the lowest rate of any group.

Gender and age are also significant factors in terms of how many internet-accessible devices people can readily utilize. On average, women have access to a greater diversity of them than men, and the youngest respondents (19–25-year-olds)

Chart 3: Access to internet-accessible devices



have access to more internet-accessible devices than any other age group.

Overall, the proportion of people with internet subscriptions displays minor differences between groups, with nearly all respondents reporting the availability of personal access to the Internet through their smartphones. On average, Kuwaitis are approximately one-third more likely to use personal Wi-Fi connections than all other nationalities, while women report significantly higher levels of personal Wi-Fi access (72%) than males (55%).

Public Internet hotspots

Most respondents also reported regularly using public Internet hotspots to go online, although one exception to this was uncovered among those who attained a high school education or less. This group is only half as likely to use public Wi-Fi compared to those who have more advanced qualifications. Homemakers are another group that rarely use public Wi-Fi, leaving both communities at greater risk of digital isolation.

Chart 4: Personal WI-Fli access

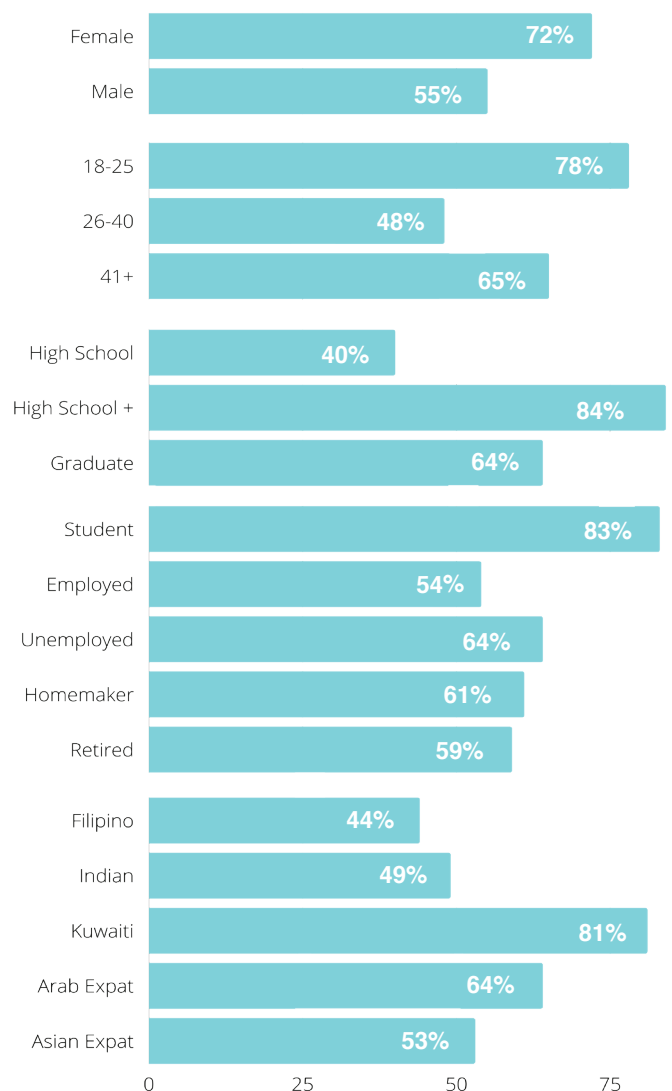
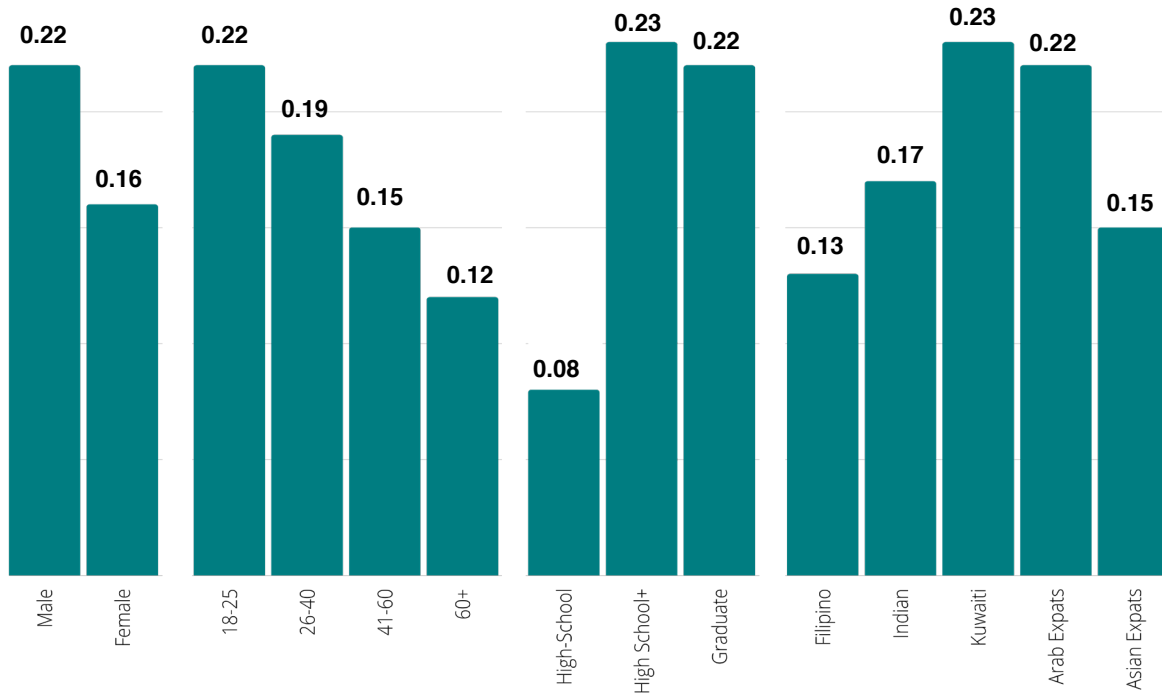


Chart 5: Public internet access



6.2 MOTIVATIONS AND OBSTACLES

To evaluate how ICTs integrate into society (or fail to do so), it is also useful to consider people’s attitudes towards these technologies. In terms of personal motivations, information-seeking is the primary reason that most individuals in Kuwait use ICTs, followed by staying connected with family and friends, entertainment, occupational use, and content sharing. The most significant difference between genders is that a greater number of women (85%) find ICTs helpful for study or work than men (78%).

According to people’s places of origin, all expatriates are more likely than Kuwaitis to use ICTs to allow them to stay connected with their loved ones. This impetus to keep in touch connected generally

Chart 6: Overall Motivations

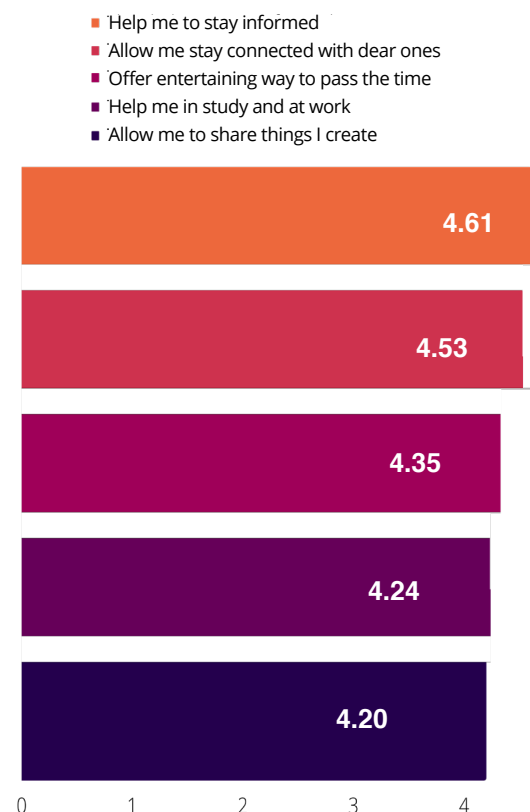


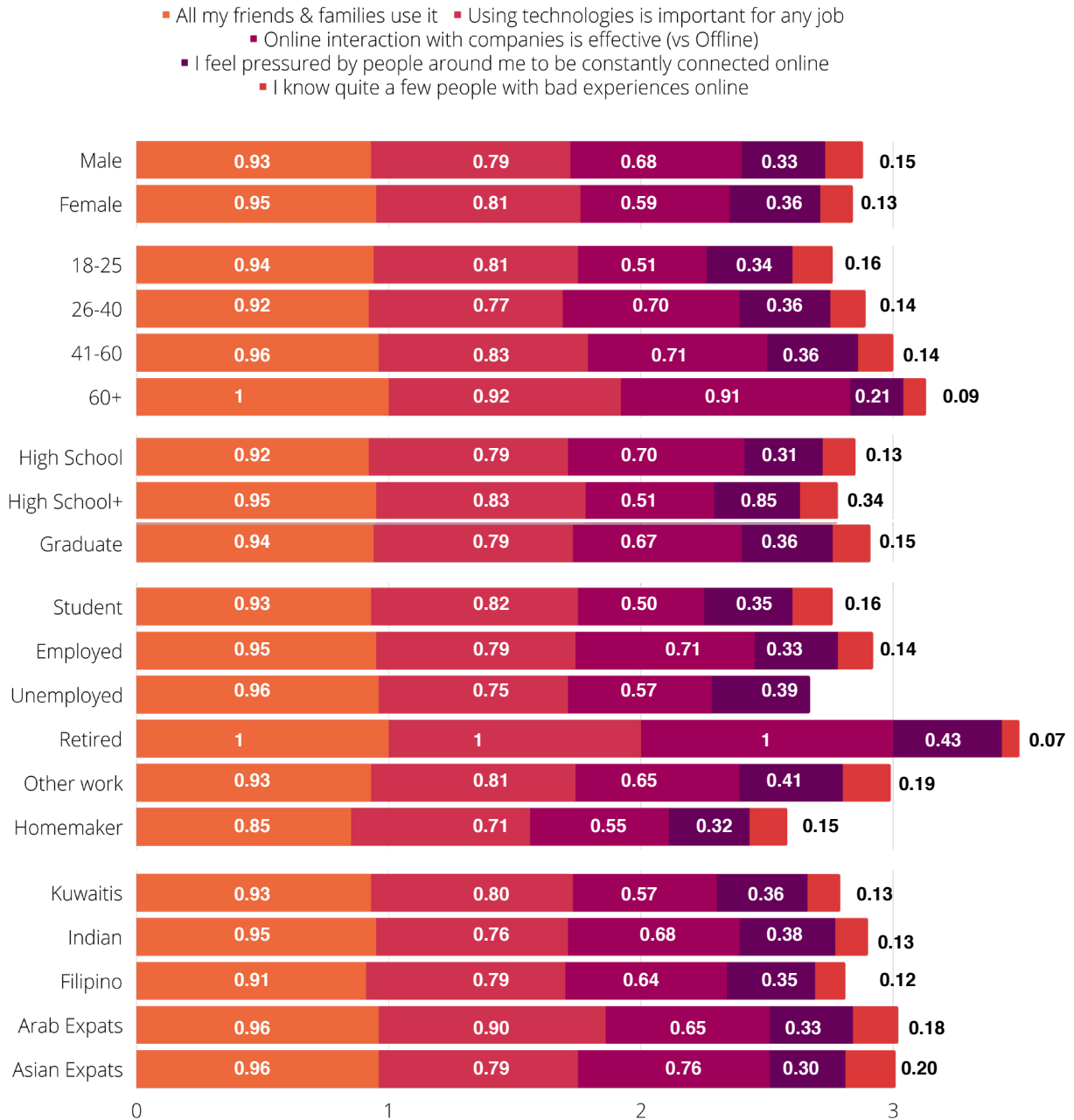
Chart 7: Motivations by group



Chart 8: Social pressures to use ICTs



Chart 9: Pressures to use ICTs by demographic



increases among with age. Similarly, social pressures influencing people’s use of ICTs are dominated by the motivation to stay connected with friends and family who are already using these technologies, especially among older respondents and the retired. The next most significant influence is the

need to use such technologies for work or study.

Negative aspects of ICT

Differences in how people view the negative aspects of ICT are most pronounced according to the delineations

Chart 10: Negative attitudes toward technologies

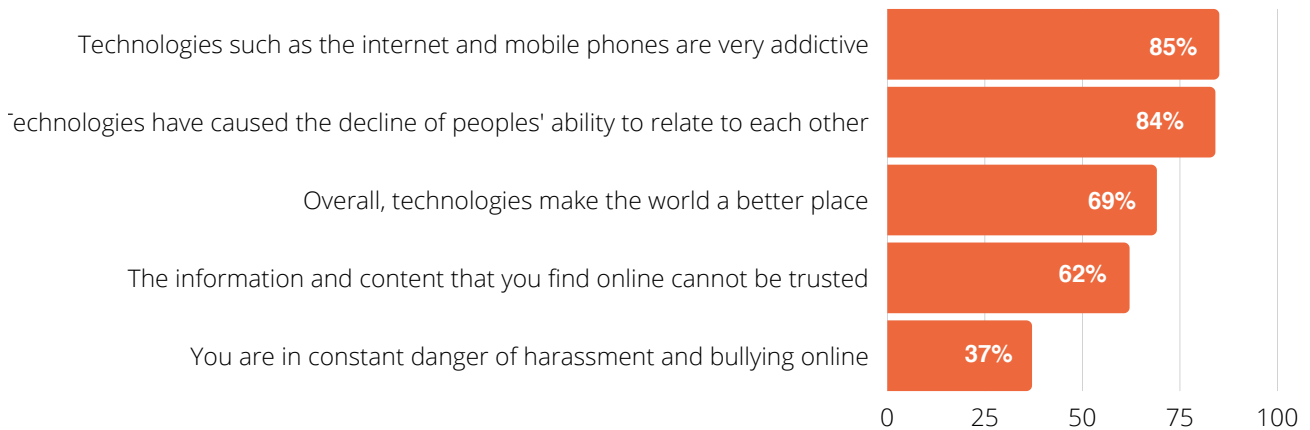
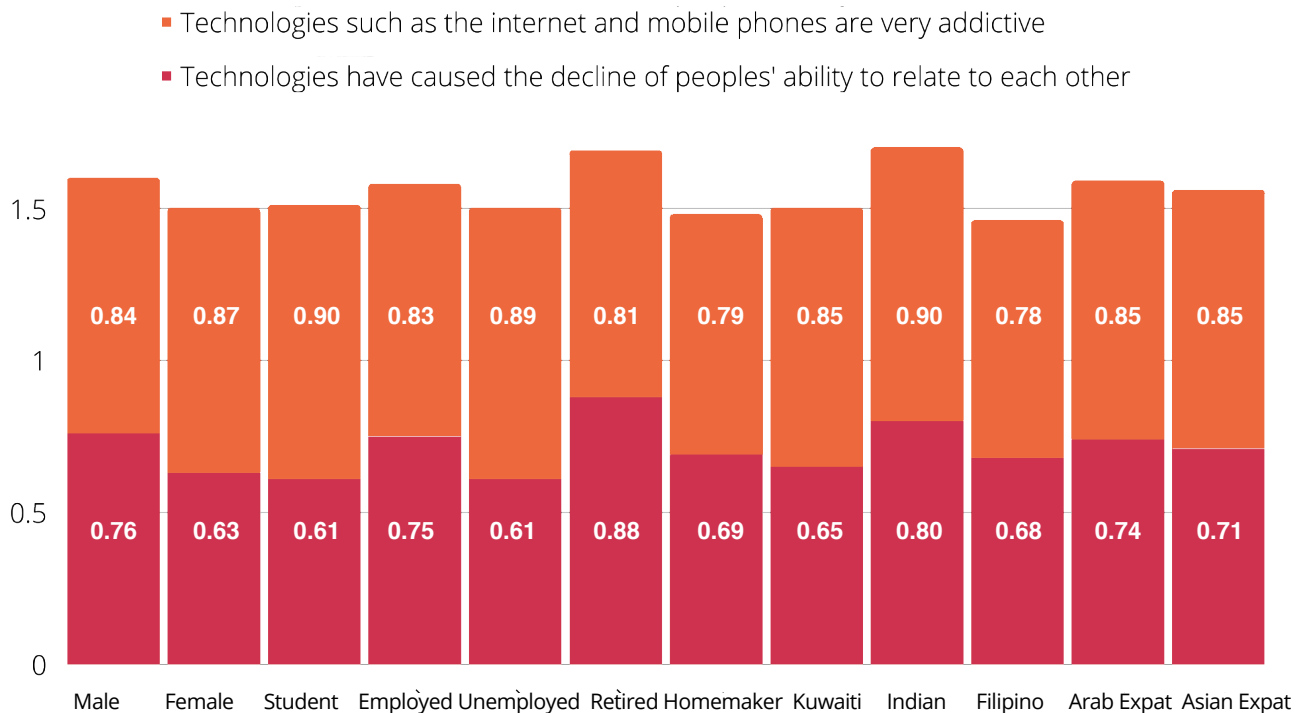


Chart 11: Top 2 negative attitudes by group



between genders. Three-quarters of men (76%) blame these technologies for a decline in people’s ability to relate to one another compared to about two-thirds of women (63%), while women are twice as likely to cite the dangers of online harassment as a negative aspect of technology use, which is

a common concern among women in many countries.

Across nearly every demographic group, the biggest worry about ICTs is their addictive nature, with an average of 85% of people expressing this concern. Retired people are the only exception as nearly 90% them

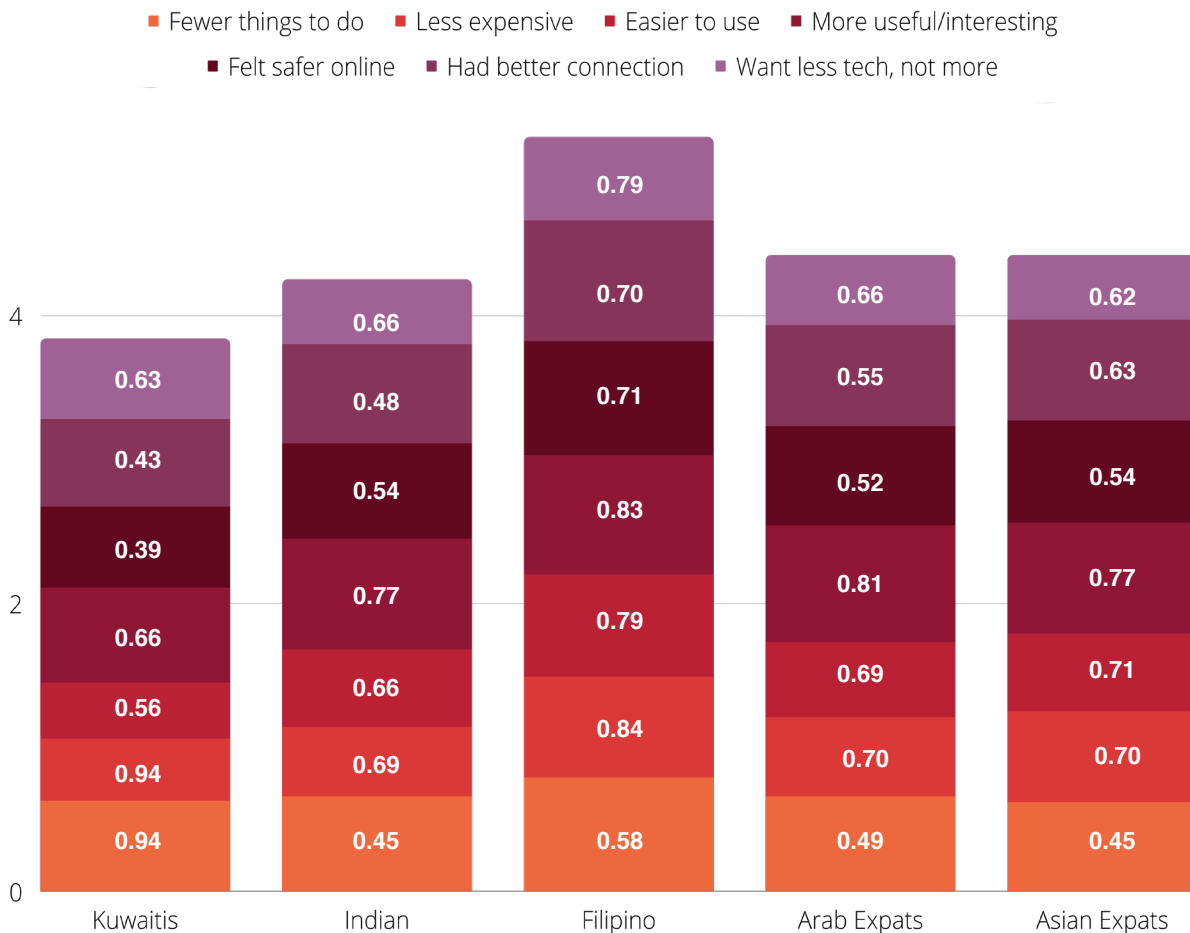
instead see the decline in people’s capacities to relate to one another as their biggest fear amidst today’s ICT-dominated environment.

Issues like time, cost, accessibility, utility, perceived safety, and personal attitudes can be potential barriers that limit how and when people use the Internet and its associated technologies. Such obstacles exhibit the most noteworthy disparities in line with a person's place of origin. For instance, Kuwaitis and Indians are the least likely populations to see cost as a barrier to accessing ICTs. Moreover, compared to Kuwaitis, all other nationalities said they would use the Internet more if there were more interesting or useful things available to them online.

Time, cost, accessibility, utility, perceived safety, and personal attitudes can be potential barriers that limit how and when people use the Internet and its associated technologies.

Taken together, the findings illustrate that the motives to go online outweigh the physical or psychological barriers that impede doing so for almost everyone, with the greatest differences between groups having been found along the demarcated lines of origin, gender, and occupation.

Chart 12: Would use ICTs more if...



7. Managing the digital world

7.1. SKILLS AND CONFIDENCE

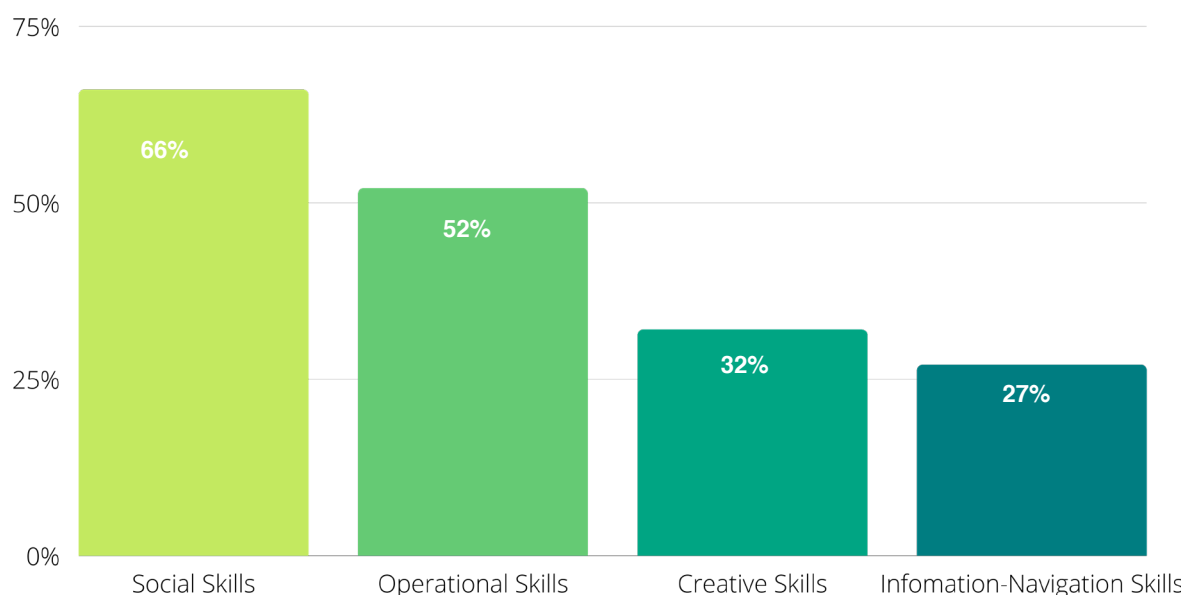
The survey included a set of 20 items organized into four categories of transferrable skills: social communication, technical-operational, content creation, and information navigation (See Box 2 on p. 22 for more details about the composition of these skill-related categories).

Overall, the results underscore that people are most confident about their digital social skills and then their operational, creative, and information-navigation skills. Leading on from this men, youngsters, and Asian expatriates estimate their overall aptitude to be higher than other demographical groups; however, statistically significant differences were only identified between the older and younger generations. The most substantial differences between women (49%) and men (55%) were in operational skills, and men

also reported possessing better skills in the creative and information-navigation domains.

The descriptive analysis of occupational groups and educational levels partially confirms the findings of the literature regarding inequalities in skill levels. For all of the aforementioned aptitudes, students indicated that they had the highest levels, except in terms of information-navigation skills where differences were not significant. Interestingly, the unemployed rank second, reporting higher overall skills than all groups aside from students. This result might be explained due to the peculiarity of the labor market in Kuwait where only nationals can be officially unemployed. Meanwhile, regarding educational level, those with a high-school education or less reported notably lower skills in all

Chart 13: Digital skills overall



categories compared to university students and graduates, confirming the influence of education on the acquisition of digital competences, which has been seen globally.

Other significant findings related to each category of skills include:

Social Communication and Interaction:

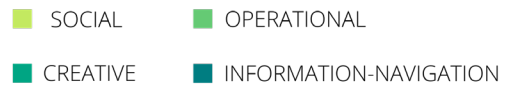
Research has emphasized the importance of social and communicative digital skills with regard to many of the activities that take place on digital platforms. Indeed, Kuwaitis (35%) report the highest level of digital social skills and Filipinos (28%) the lowest, with Indians (33%), other Asian expatriates (32%), and Arab expatriates (30%) representing the other groups. When analyzing the influence of age, the younger populations described having higher levels of social skills than their older counterparts.

Technical and Operational: Men and youngsters report significantly higher technical and operational skills than women and older populations. In terms of occupation, the highest technical skills are found among students (57%), the employed (54%), and the unemployed (53%).

Content Creation: Age has the clearest effect on the acquisition of creative skills as young people suggest they have more adept content-creation capabilities than older populations. Occupationally, students (36%) have the greatest aptitude in this area, while the retired (15%) have the lowest. Women also scored lower in relation to creative skills than men.

Information Navigation and Processing: Overall, Skills in this area were seen to be at the lowest levels of the four categories tested. Employees and students (both 27%) have relatively high information-navigation competencies within the occupational

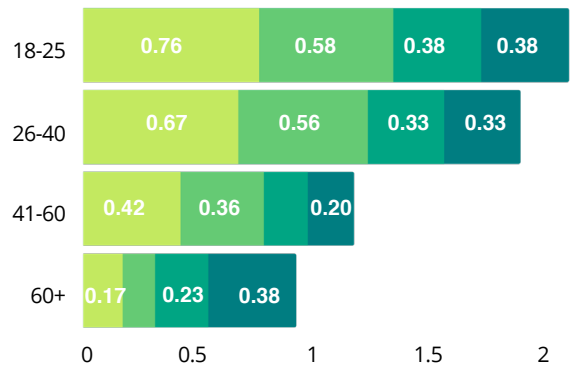
Chart 14: Skills by gender, age and origin



GENDER



AGE



ORIGIN



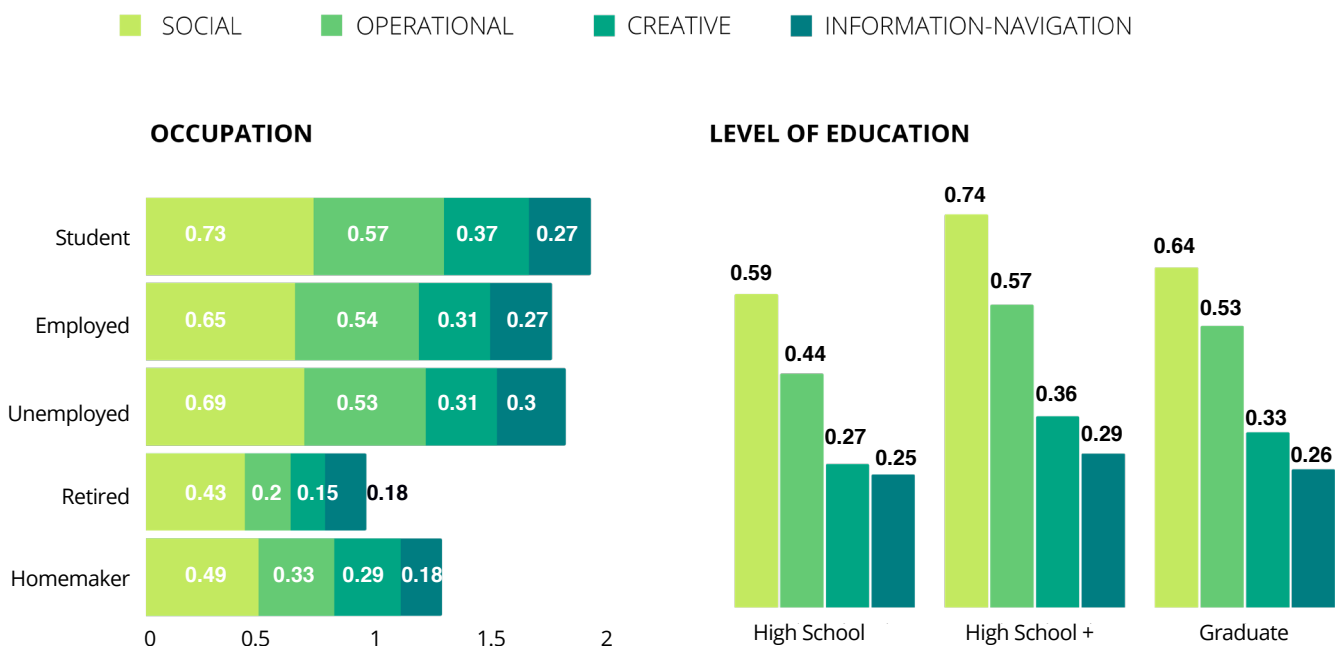
groups. As with other skills, people aged 25 years and younger (29%) scored higher than other age groups (21% average). Meanwhile, according to origin, Arab expatriates scored the lowest in relation to information-navigation skills, as did women; however, the differences in both cases were not statistically significant.

In terms of digital skills, age is the most consistent factor across all classifications, with younger people demonstrating consistently higher aptitude than older populations on all four skill domains. A gender gap persists in terms of technical, creative, and information-navigation skills, although there is evidence that women have a slight advantage when it comes to digital social skills. University students have the highest overall average skills score of any demographic group at 49%, perhaps demonstrating a skills intersection between age, educational level, and occupation.

In terms of digital skills, age is the most consistent factor across all classifications, with younger people demonstrating consistently higher aptitude than older populations on all four skill domains.

A gender gap persists in terms of technical, creative, and information-navigation skills, although there is evidence that women have a slight advantage when it comes to digital social skills.

Chart 15: Skills by occupation and education



8. Navigating the digital world: uses and outcomes

8.1 Overall Uses and Outcomes

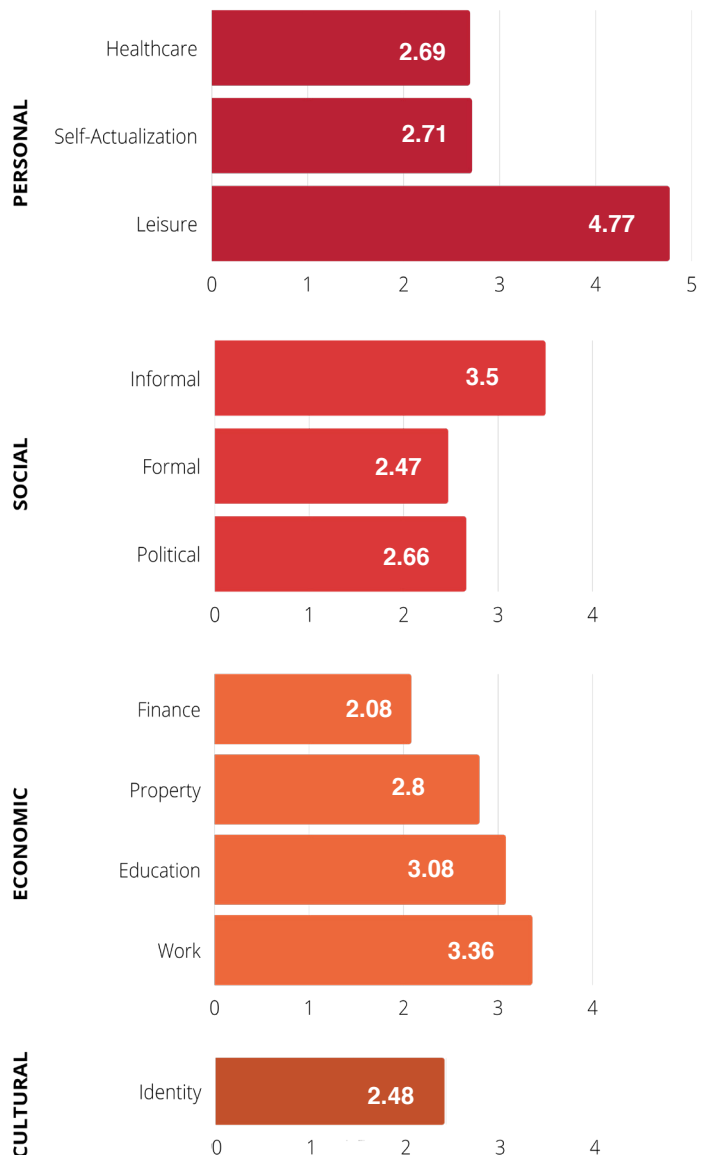
The issues of access, motivation, and skills provide insight into people's potential to capitalize on ICTs, yet they are not sufficient indicators in themselves for discovering the contours of digital inequalities in a given society. How people utilize these aspects in practice and the kinds of positive or negative outcomes they derive are equally telling measures of the progress towards digital transformation. This section provides findings relating to people's uses of and outcomes from ICTs categorized across four domains of activity that relate to personal, social, economic, and cultural considerations. (See Box 3 on p. 22 for more information about the composition of each category.)

8.1.1 Overall Uses

The main uses of ICTs in Kuwait occur in the personal domain; in this sphere, the pursuit of leisure activities, such as playing games, listening to music, or watching videos, is the highest scoring area of activity across all of the studied areas. Next, social uses constitute the second-highest domain; within this, informal socializing is the most frequent activity, which incorporates meeting new people online, commenting on other people's updates, or talking to family and friends who live far away.

Economic activities rank third among the four domains. Within this area, financial utilizations of ICTs are undertaken the least often of all subcategories, including

Chart 16: Overall uses by domain



in relation to activities like finding financial services or investments online and establishing direct-debit payments. It is worth noting that economic activities, such as buying and selling things online, occur with less frequency by nature than other forms of usage, such as socializing

or seeking leisure activities. As such, the relative weight of economic uses compared to the other domains is less revealing than the inequalities that exist between groups within the economic domain. At the same time, cultural uses scored the lowest average among the domains and include identity-related activities, such as learning about ancestry, ethnicity, religion, gender, or parenting.

In terms of the four domains of ICT use in Kuwait, people prioritize the gratifications found in personal and social domains and spend less time seeking out economic and cultural benefits that might otherwise be derived from ICTs.

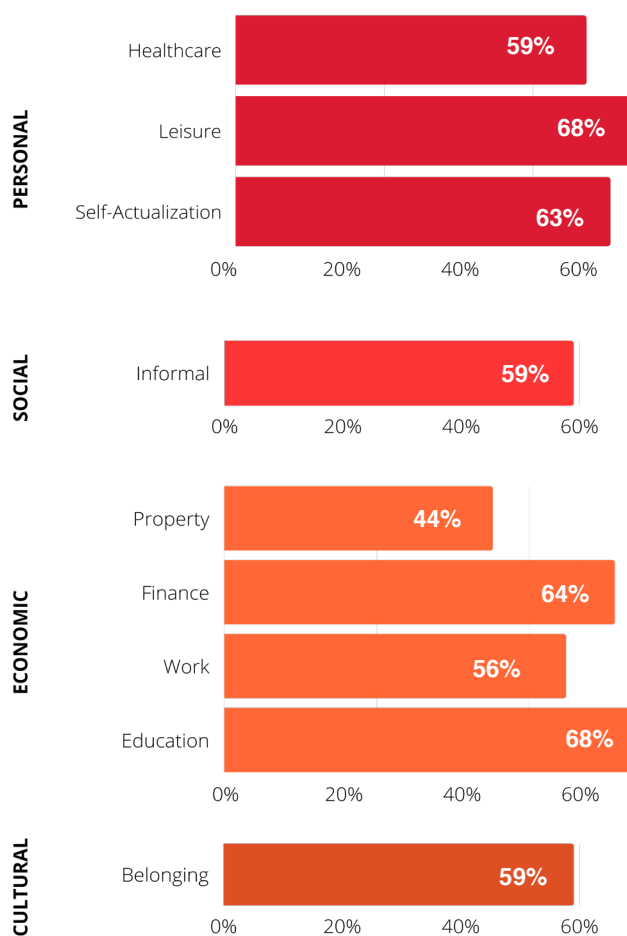
8.1.2. Overall Achievements and Satisfaction

As previously mentioned, an additional dimension of ICT use is identifying the degree of tangible outcomes that people achieve when attempting to use these technologies to undertake an activity as well as the degree of satisfaction they associate with those outcomes.

When looking across the four domains, the highest level of advantageous outcomes accomplished are in the personal domain (63% on average), which also makes up the highest area of ICT usage. The other three domains (economic, social, and cultural) have a similar average of between a 58–59% overall achievement rate for activities that were undertaken.

The two highest outcomes are realized in relation to leisure activities (68%) and educational pursuits (68%). The two least extensive outcomes both relate to the economic domain. These include buying and selling products or services online (collectively referred to as property) (44%)

Chart 17: Overall achievements by domain



and work-related achievements (56%). People's satisfaction levels with their ICT outcomes are generally high at an average of 73%, indicating nearly three-quarters of respondents are satisfied with the majority of the outcomes they obtain as a result of using ICTs.

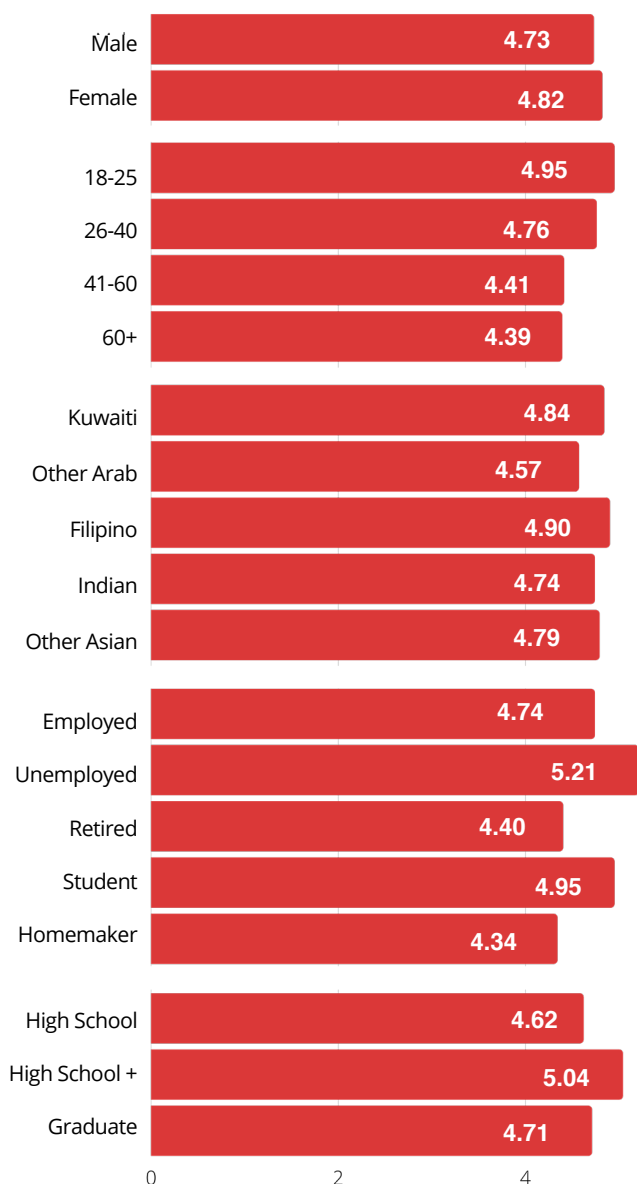
Moving on from a description of general uses and outcomes, the remainder of this section presents key findings for these two areas in relation to each one of the four primary domains: Personal, economic, cultural and social.

8.2. Personal Uses and Outcomes

The personal domain includes leisure-related uses, such as playing games and consuming

music or shows. Health-related activities are also a key aspect of this area as using the Internet for health and fitness is an important online activity. The third element in the personal domain reflects the use of ICTs for mental and physical well-being and aptitude. An important element here is the idea of self-actualization (informal knowledge-gathering that makes a person feel better about themselves). For example, this could involve using the Internet to exchange information with others about problems or issues that are of concern to the individual.

Chart 18: Leisure uses by group



8.2.1. Personal Uses

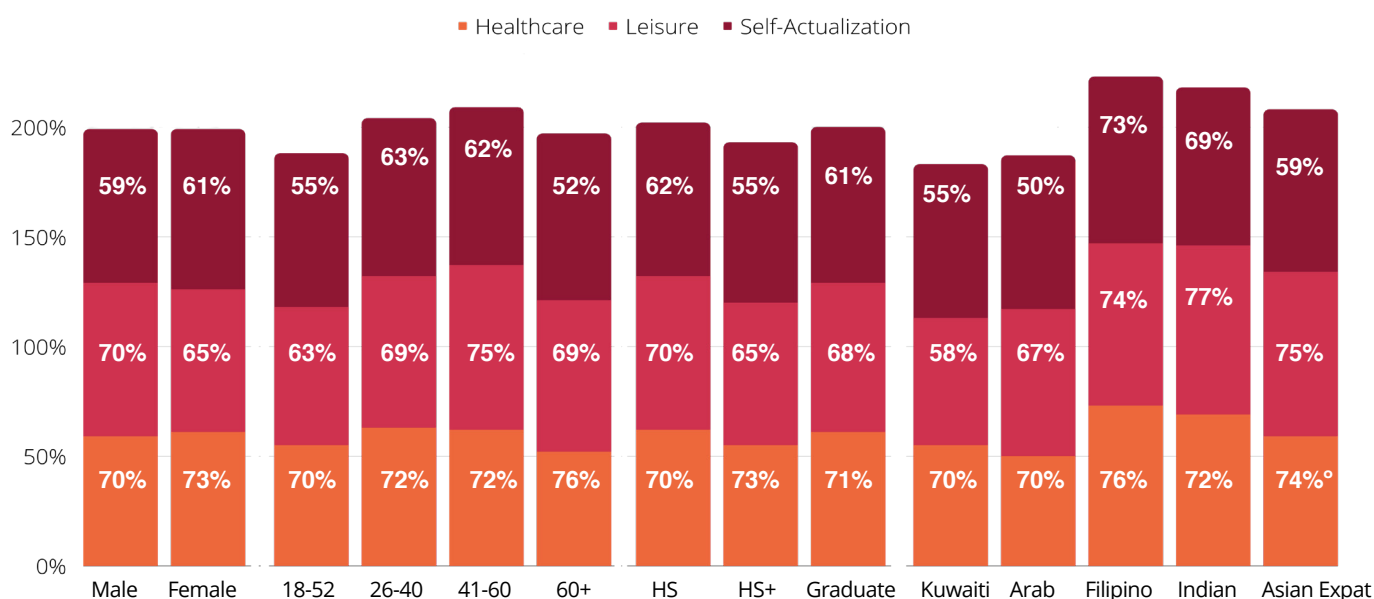
The pursuit of personal interests is a generally popular area of use among all populations, especially with regard to leisure activities, which is the most prevalent of all types of utilizations by some margin.

Women reported significantly higher usage than men in all categories for personal use, especially in relation to healthcare and self-actualization. According to occupational grouping, students report more extensive employment of the Internet for self-actualization (e.g., discussing a topic of personal interest with others online) than any other group.

The results also show that the most wide-ranging utilization of ICTs for personal use is among Filipinos who are also the heaviest users of ICTs for both leisure and healthcare activities, closely followed by Kuwaitis in both cases. Also of note is that Arab expatriates are the least heavy consumers of health content online, perhaps indicating that there are limitations regarding the availability of appropriate content for them. A positive correlation exists between the number of devices someone owns and the frequency of their ICT utilizations for personal activities. Those with higher operational and creative skills also demonstrate a corresponding increase in personal uses.

8.2.2. Personal Achievements and Satisfaction

While women report higher levels of personal usage of ICTs, there are no significant differences between genders in terms of the achievement of/satisfaction with personal outcomes. Place of origin is also a noteworthy factor in people's realization of personal goals online in the areas of

Chart 19: Personal achievements

health and leisure activities. Again, Kuwaitis and other Arabs achieve significantly lower outcomes in these areas than all other groups. Accordingly, both groupings also exhibit lower levels of satisfaction with their personal outcomes, such as health and leisure achievements, when compared to Asian expatriates.

Significant differences according to age are also present for all subcategories of outcomes within the personal domain (healthcare, leisure, and self-actualization). The 26–40 age group exhibited higher levels of achievement in terms of healthcare and self-actualization activities compared to other age groups, while those between 41 and 60 years of age displayed the highest outcomes in leisure pursuits.

8.3 Economic Uses and Outcomes

8.3.1 Economic Uses

The economic field is one of the areas of research that has received the most attention in relation to policy-making and

digital interventions, especially in terms of thinking about which online activities are related to the areas of property, finance, work, and education. Uses linked to the economic field concern poverty, joblessness, and wealth, and they are typically measured in line with income, educational level, employment, and financial indicators. Online, this might translate into using the Internet for financial services and banking or shopping. It could also refer to buying or selling something online, or indeed job seeking/looking for learning opportunities to improve job prospects.

Kuwaitis and Arab expatriates reported a significantly lower usage of ICTs for property activities, such as buying and selling goods and services online, compared to Indians and Filipinos. Conversely, Kuwaitis demonstrate a higher level of other financial uses than expatriates. Regarding the use of ICTs to aid with work, women, Filipinos and university graduates more extensively utilize them in this domain than other groups. Women are also significantly more likely to use ICTs for educational pursuits than men.

Chart 20: Economic uses by group

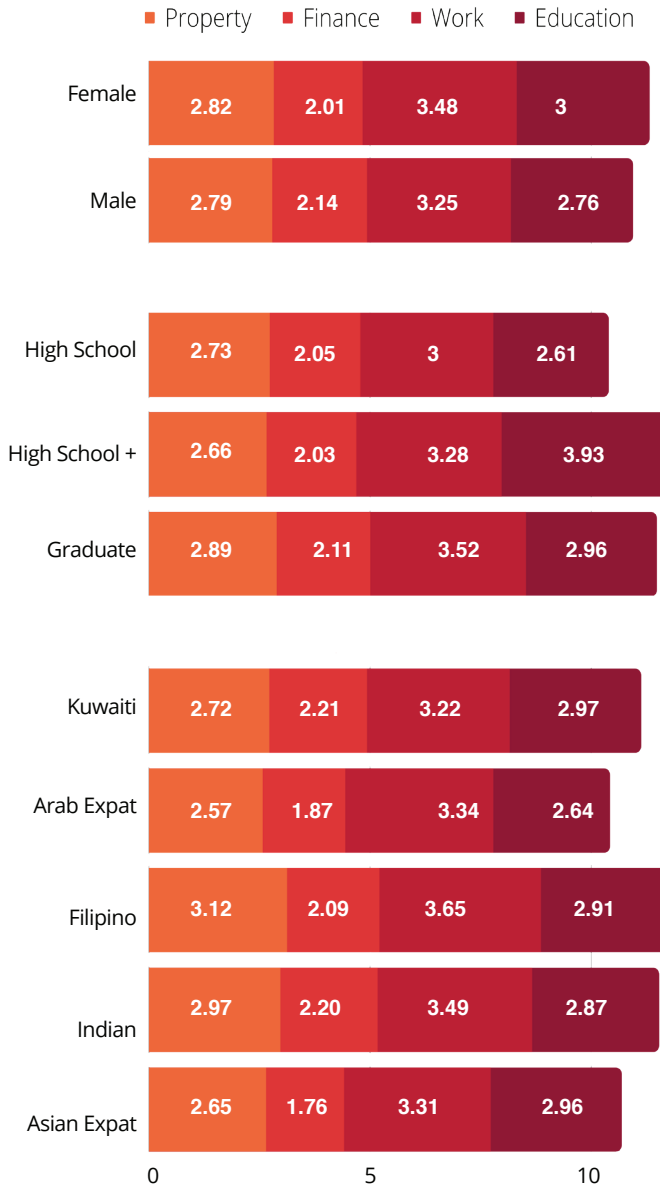
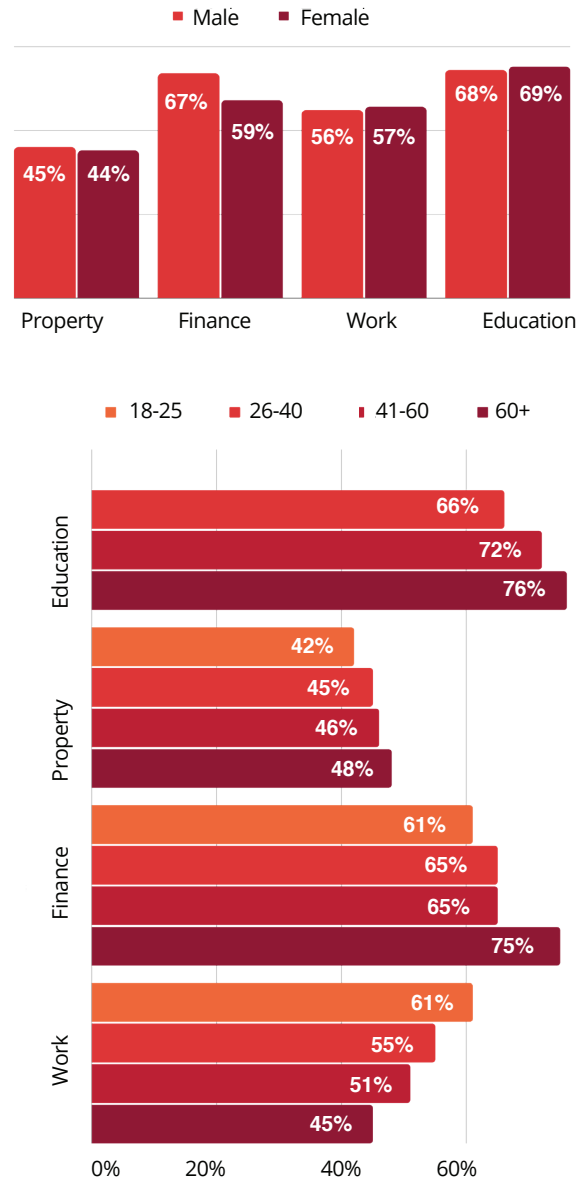


Chart 21: Economic achievements by gender and age



At the same time, people with higher technical and operational skills reported significantly more extensive economic uses across all subcategories. In general, people who utilize public Internet more frequently also engage in higher levels of economic uses. Meanwhile, those who suggested they had higher levels of creative or social skills were more likely to use digital technologies for educational purposes.

8.3.2. Economic Achievements and Satisfaction

General economic achievements, such as benefits in relation to property, finance, work, and education, range from the highest overall outcomes with regard to educational activities (68%) and the lowest for property (44%), and there are few significant differences between populations.

Chart 22: Economic satisfaction by occupation

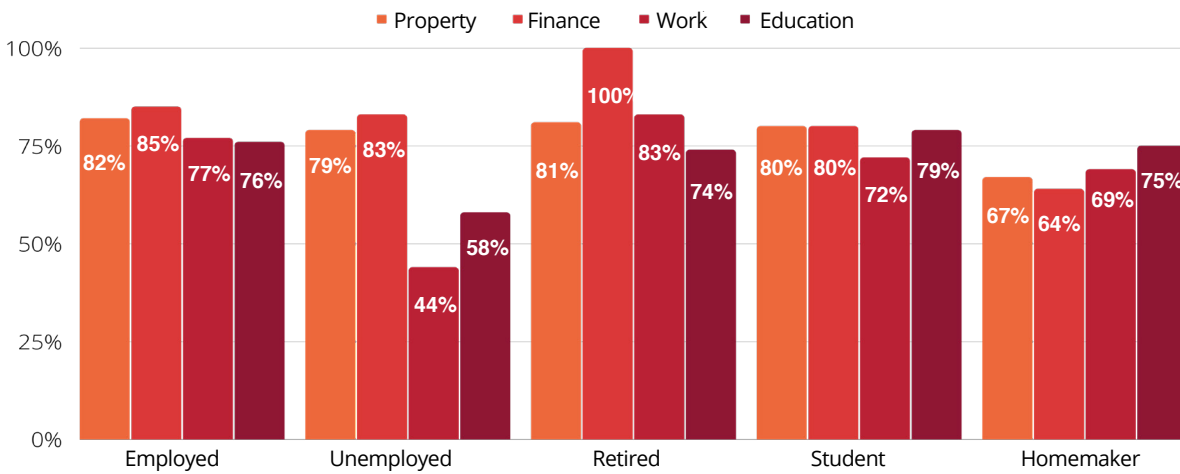
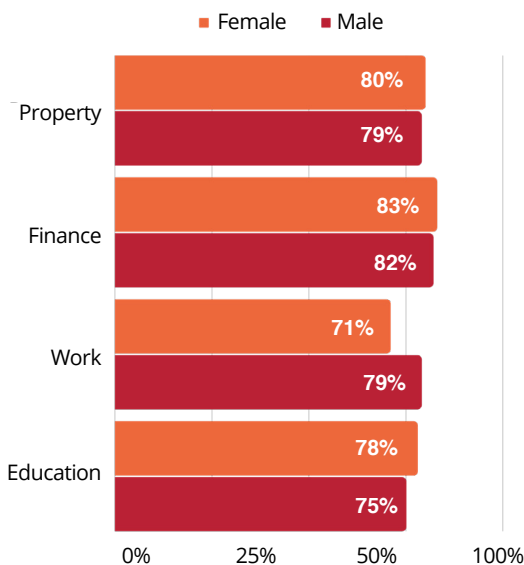


Chart 23: Economic satisfaction by gender



In contrast, people's satisfaction levels with these outcomes demonstrated that successfully completing an activity does not necessarily guarantee contentment. Overall satisfaction levels are highest in the areas of property and finance, while they are lower for work-related and educational outcomes.

In accordance with gender, there are no statistically significant variations between men and women in terms of achieving economic outcomes, although men have

an 8% higher rate of achievement in the subdomain of finance. However, despite the relative uniformity in economic achievements, satisfaction levels with those attainments still differ according to gender. Indeed, women express higher levels of satisfaction with all subdomains of economic outcomes, except for those that are work-related. As noted in the section on ICT uses, women are significantly more likely to employ ICTs for work-related activities than men, even though their satisfaction with the outcomes is generally lower.

Age is another relevant factor in the achievement of economic outcomes. In general, older respondents attain more economic outcomes in the subdomains of finance, education, and property; however, in the area of work-related outcomes, the trend is reversed.

Property Achievements: Success in buying and selling items online is similar across most groups (low to mid-40s), yet those with more advanced educational attainments and older individuals are more likely to derive outcomes from this type of activity. The same is also true for Filipinos,

even if the disparities are not statistically significant.

Property Satisfaction: Satisfaction with the quality or price of online purchases is relatively consistent across different groups as well, with no statistically significant differences. A person's place of origin represents the biggest distinction in the sense that all Asian expatriates show higher property satisfaction levels than their Kuwaiti and Arab counterparts. Of note, satisfaction levels with buying and selling online correlate directly with the levels of the actual activity evidenced by each population, as discussed in the section on ICT uses above.

Financial Achievements: Using online financial products and services is almost 10% higher among men than women. In relation to the various age groups, the oldest population (60+) achieves at least 10% more financial outcomes than all other ages. According to people's places of origin, online financial outcomes are particularly high among Kuwaitis and Filipinos.

Financial Satisfaction: As with financial achievements, satisfaction with fiscal products and services also increases with age. Other differences between groups in this area are not significant.

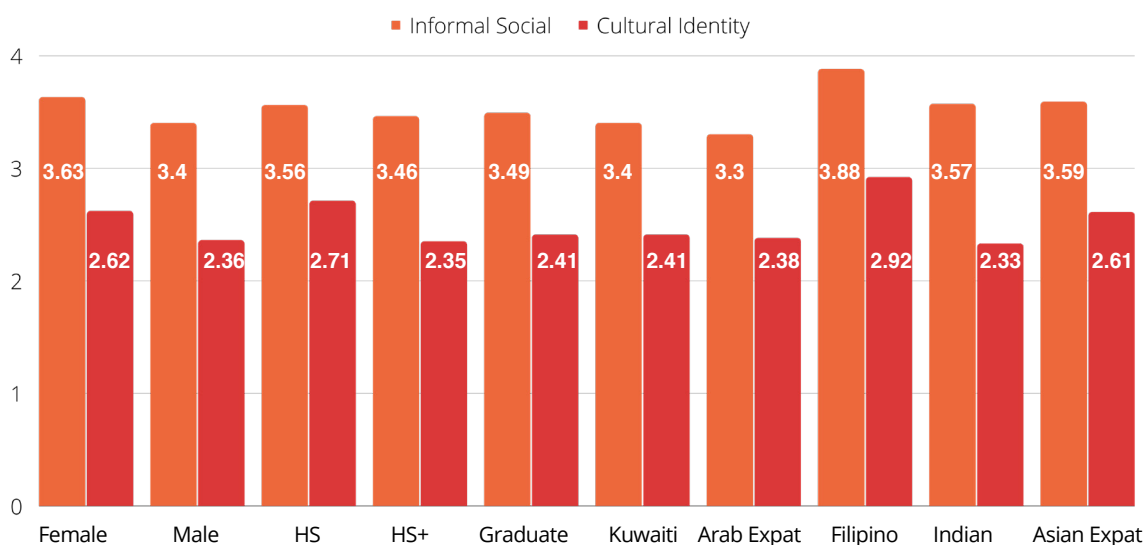
Work Achievements: Using digital tools for work, such as engaging in employment-based activities from home or finding suitable vacancies, displayed an inverse correlation between age and achievements, with younger users gaining the best outcomes in relation to this set of activities. Students are the most successful occupational group in terms of these results (63%). With regard to educational level, the lowest achievement of work-related outcomes occurs among the least educated populations who are less

likely to be employed in careers with high ICT demands.

Work Satisfaction: In relation to gender, males are more satisfied (by 8%), and the older someone is, the more satisfied they are with their work-related outcomes. Meanwhile, with regard to place of origin, Indians (87%) and Filipinos (83%) are the most satisfied with their work-related outcomes. It is also perhaps to be expected that the unemployed (44%) are the least satisfied with their work-related outcomes.

Educational Achievements: Significant differences were not found among the educational outcomes for any of the groups that were examined. However, it is notable that the two older classifications of respondents (everyone 41 years of age and older) reported more satisfactory levels of educational outcomes than younger respondents. This perhaps reflects the high degree of ICT benefits in relation to self-education and information-seeking among older populations that was brought about by the COVID-19 pandemic. It may also signal the likelihood that those who use online forms of education may already be employed and are seeking career advancement, whereas younger people may be currently or recently enrolled in formal education.

Educational Satisfaction: As with all other areas comprising the economic domain, Indians and Filipinos showed the highest levels of satisfaction regarding educational outcomes among any nationality group, which were 10% higher on average than among all of the other groups. Interestingly, a person's educational level does not appear to significantly affect their level of satisfaction with educational outcomes (or the lack thereof).

Chart 24: Informal social & cultural identity uses

8.4 Cultural and Social Uses and Outcomes

8.4.1 Cultural and Social Uses

Within this section, cultural and social uses are combined. As a reminder, cultural uses include activities relating to people's sense of personal identity and belonging, such as consuming or posting information about ethnic, gender, parenting, or spiritual issues. Meanwhile, social uses include activities linked to formal and informal socializing as well as civic engagement.

Overall, there were few significant differences between groups when it came to cultural and social uses, yet there were exceptions in relation to cultural identity and informal social uses. Women use ICTs more than men with regard to identity-related issues as well as for informal social activities. Differences in these two areas are also present in relation to a person's origin in that Filipinos are the heaviest consumers of cultural content, while Indians are the lowest. At the same time, Kuwaitis and Arab expatriates utilize ICTs for informal social activities less than all other Asian

populations. Remarkably, the highest use of ICTs relating to cultural identity was among those with the lowest levels of educational attainment.

8.4.2 Cultural and Social Achievements and Satisfaction

According to our findings, Kuwaitis (60%), Arab expatriates (57%), and Indians (54%) gain fewer cultural outcomes from ICT use than Filipinos (68%) and other Asian expatriates (68%). Kuwaitis and Arab expatriates are also less likely to achieve informal social (and personal) outcomes compared to all Asian expatriates.

Informal social achievements from ICT use increase steadily with age and range considerably between Arab and Asian respondents. Moreover, satisfaction with formal social and cultural outcomes of ICT use are higher among Filipinos than any other nationality. Looking outside of the workforce, the unemployed (44%) and homemakers (44%) are least satisfied with their online cultural outcomes, while the retired are the most satisfied (81%).

Chart 25: Social and cultural achievements

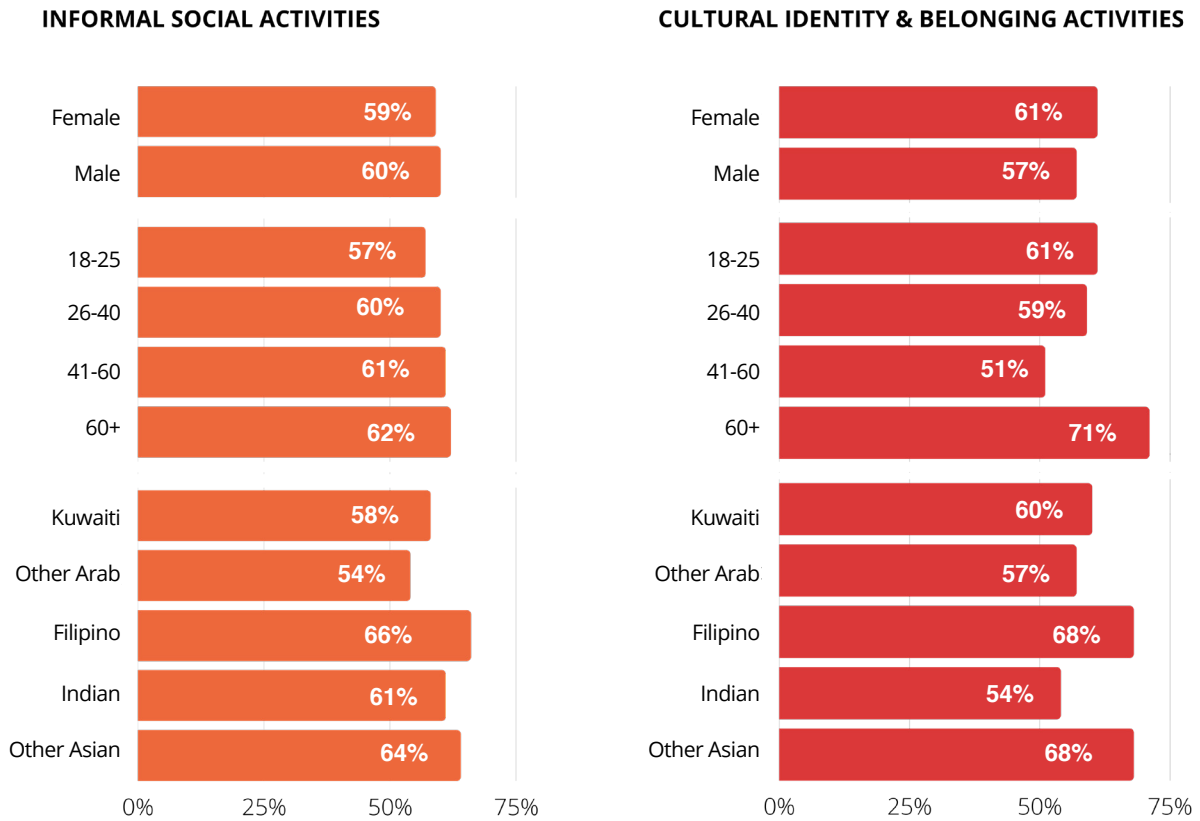
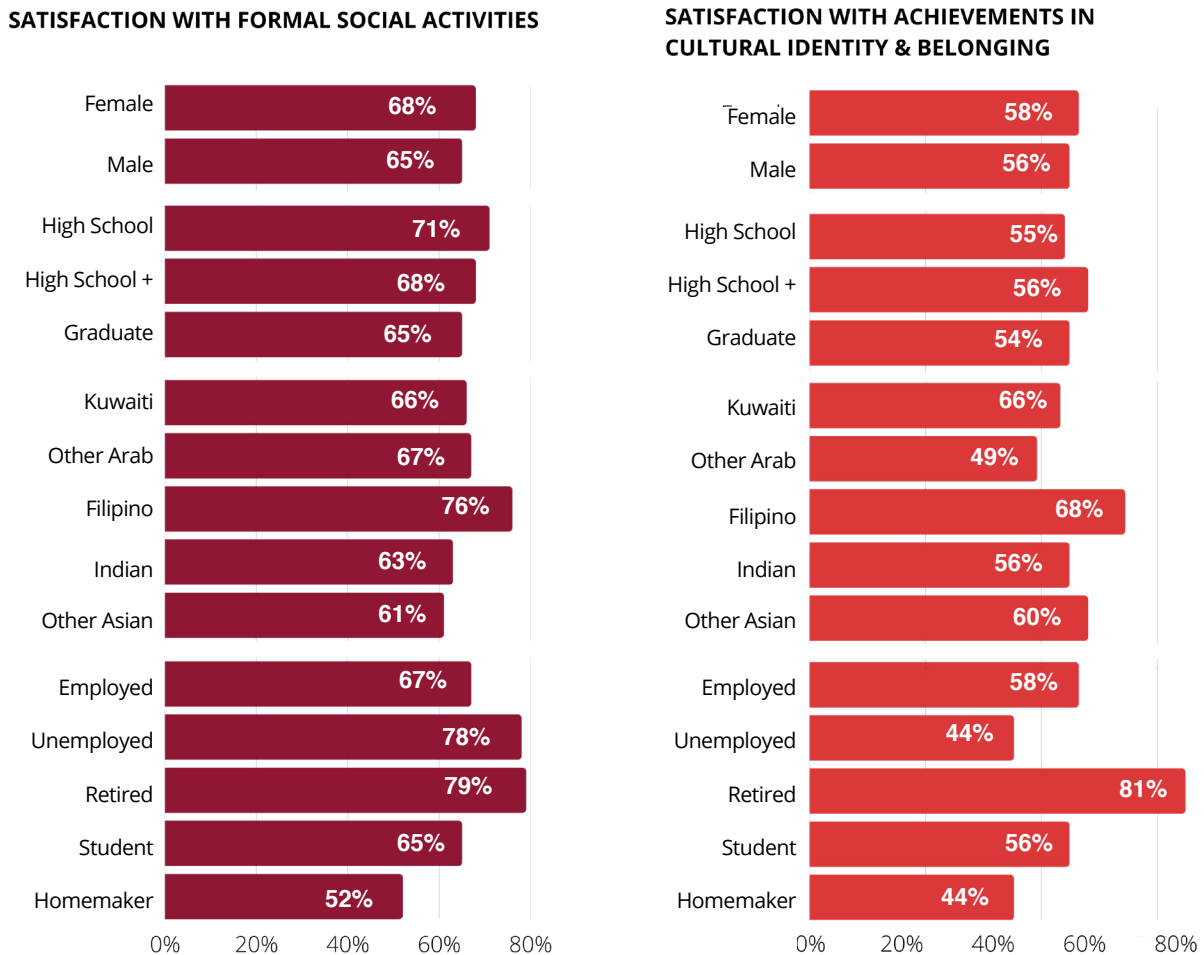


Chart 26: Social and cultural satisfaction



9. Summary and Recommendations

The rapid and pervasive diffusion of ICTs in Kuwait forms an important component in the country's strides towards a digital transformation. With a widespread foundation of access largely in place, attention can be directed toward addressing additional aspects of digital inequalities within the realms of skills, uses, and outcomes. To aid in this endeavor, the summary and recommendations are organized according to the main demographic groups examined in this study, which is preceded by a discussion of the high-level trends in the areas of access, motives, skills, uses, and outcomes.

9.1 HIGH-LEVEL TRENDS

9.1.1. Access

Levels of basic access to the Internet are high across the board, and there is near-universal smartphone ownership among the sampled population. This type of widely available and autonomous access is vital because it can foster skill development and engagement. However, not all types of access are equal. For example, among many individuals whose education stopped after finishing high school as well as a sizable portion of the Asian expatriate community, their smartphone-only access limits the types of activities they can conduct; as a result, the tangible outcomes they can achieve are affected.

The recent growth of digital media use due to the pandemic has exacerbated societal divisions in terms of access to and benefits from the digital economy. Contrary to what has been seen in many national studies, old age is not the strongest predictor of low

levels of internet access or usage among Kuwait's populace. In fact, a person's place of origin appears to more significantly predict access to and acquisition of digital devices. In this sense, policies that make an effort to target specifically disadvantaged groups highlighted in this study according to their particular needs will have the biggest national impact.

9.1.2. Motives

Even when access is widely available, it is people's individual and social motives that determine the conditions under which they either utilize that access or choose not to. Here, attitudinal drivers and barriers provide insight. As the data for this project was collected during the first wave of the COVID-19 pandemic lockdowns, it is not surprising to find that information-seeking is the primary motive driving people to use ICTs, which was followed closely by the desire to stay connected with others. The gap that exists between people's motives to seek out information (highest) and their self-reported skills in navigating this information online (lowest) is also worth noting. To put it another way, respondents regularly seek quality information online, yet they assert that their skills for finding it are relatively low. This may partially reflect the nature of the informational environment surrounding the pandemic in which contradictory and false information is widely circulated and hotly contested, leading to what some have called a parallel info-demic. Educational initiatives relating to media literacy and ICT-skills training provide direct results in improving the effectiveness of information-seeking activities online, especially for those

populations who are already motivated to engage in this type of activity.

The strongest social pressures that motivate ICT use are that these technologies are already utilized by friends and family (93%) and centrality within work-based endeavors (79%). This shows that there is a strong social component that is inherent to the process of ICT diffusion. Conversely, deterrents to greater ICT use differ according to gender and origin as discussed in more detail below. However, one concern with regard to ICT use that applies across demographic groups (with an average agreement of 85%) is the perceived addictiveness of today's digital technologies. This common anxiety emphasizes the importance of promoting a healthy balance between people's online and offline activities as a goal of digital transformation, rather than a narrow pursuit of pervasive ICT use in all domains of life.

9.1.3. Skills

Different kinds of online activity require different types of skills to achieve the desired outcomes. In Kuwait, online social skills (66%) are the most common examples, followed by technical or operational capabilities (52%). Competencies in relation to content creation (32%) and information navigation (27%) are both considerably less widespread among the population. As noted previously, the gap between information-navigation skills and the high degree of information-seeking behaviors suggests there is a strong need for the provision of more accessible and reliable online information and literacy training.

A high degree of technical skill exists among the various populations in Kuwait. This has positive implications for people's

ability to adapt to the increasingly virtual demands of life in the country and elsewhere. Corporations, educational institutions, government bodies, businesses and other types of organizations can best capitalize on the inherent potential of such widespread technical skill by matching their own digital engagement activities (websites, social media platforms, e-commerce activities, teaching and learning systems, etc.) to the high operational skill levels (and expectations) that already exist among their key stakeholders.

In contrast, the level of impetus and skills that can be called upon to create original online content are both low. Greater encouragement in these areas can help foster the development of more appealing content across multiple domains. Indeed, improved content-creation abilities would benefit organizations seeking greater digital engagement with their stakeholders. Members of expatriate communities would also benefit, as they are currently less likely to find online content in Kuwait that is tailored toward them. Improving people's content creation skills via the likes of formal and informal educational initiatives could thereby help address the demand for more accessible and applicable online content in the country. Importantly, the ability to create more homegrown ICT applications and content is fundamental for establishing Kuwait as a nation capable of navigating towards a digital transformation in its own right, rather than developing an imbalanced reliance on outside perspectives and expertise to steer the way.

9.1.4. Uses

Access, motives, and skills are the foundations for digital engagement, yet

it is in the domain of uses where they manifest into action. Of the different types of utilizations examined here, personal uses dominate, especially with regard to leisure activities. The second-highest on average is social uses, under which informal socializing is the second highest activity overall after leisure uses. Of note, socializing is also the second-highest motive for ICT use and the highest-rated skill area that was assessed, illustrating that compelling motives combined with regular usage can contribute to high skill development, which then leads to more positive engagement.

Economic uses come in third with an average rate that is slightly lower than for its social counterpart. The strongest drivers in this area are work and educational pursuits, and the least extensive include property-related activities (buying and selling goods and services) and financial activities (inquiring about, comparing, and using online financial services or setting up direct-debit payments). As mentioned previously, economic activities naturally occur with less frequency than those in the other domains. Therefore, the most relevant consequences in this sphere are found in relation to the different demographic groups, as discussed below. That said, stimulating economic activities and creating policies related to property and financial uses are one way that policymakers can contribute to the health of Kuwait's digital marketplace and the associated economic growth that comes with it. Vitality, people with higher operational skills engage in more economic uses across all subcategories. This suggests that the necessary skills are already widespread in society but the incentives and opportunities driving people to involve themselves in online economic activities fail to efficiently seize upon these capacities.

Of the four types of uses, cultural uses are the least common. This includes activities related to people's sense of self and identity, such as consuming or sharing information about ethnic, gender-related, parenting, or spiritual issues. As with the potential benefits it can bring for organizational engagement and information provision, improving people's content-creation skills also increases the likelihood that they will share and engage more with cultural content supporting their sense of self and community.

9.1.5. Outcomes: Achievements and Satisfaction

The final area of high-level trends examined are the outcomes that people achieve as a result of their use of ICTs as well as their levels of satisfaction with these outcomes; that is, the tangible benefits that people are getting from using the Internet and technologies like mobile phones. In alignment with uses, personal outcomes, including engaging in leisure activities, record the highest level of achievement, yet this is only by a small margin over social, cultural, and economic outcomes. Meanwhile, leisure and educational pursuits (68% each) are the highest areas of outcome-based achievement, while the lowest is property exchange (44%).

Interestingly, people's satisfaction with their (relatively limited) property outcomes remains high at 80%, which is equal to the satisfaction levels for leisure and higher than those for education. This indicates that one of the obstacles to growing Kuwait's digital marketplace could be a limited scope of e-commerce opportunities rather than people's attitudes toward the experience of buying and selling goods and services

online. Moreover, another way to further support more balanced economic outcomes is the provision of a safe and effective regulatory environment that aligns with global best practices for data protection, privacy, and cybersecurity. Such measures help to provide both individuals and organizations with greater protection when pursuing digital outcomes of any type.

9.2 DEMOGRAPHIC TRENDS

In this section, important findings are organized according to the primary demographic groups from the report, and they include a summary of relevant points relating to access, motives, skills, uses, and outcomes for each cluster of the population.

9.2.1. Gender

Unlike in many countries in the Middle East and North Africa, women in Kuwait do not appear to experience a significant gender gap in the areas of ICT access, uses, or outcomes. In fact, on average, women show higher levels of personal internet use, own more devices, and produce better work-related results with ICTs than do men. Nevertheless, one area where women frequently score lower than men is in the domain of skills. Men report higher operational, information navigation, and content creation capabilities. Only in the area of online social skills do women record slightly higher values than their male counterparts.

On the other hand, the motives driving ICT use are similar across the genders. One exception is that women are more likely than men to use ICTs because of the benefits they provide for study or work. Accordingly, measures of both women's

uses and achievements concerning work-related activities are higher than men, yet their skills in this area and satisfaction with the associated outcomes are lower. Programs targeting women, which focus on skills development in aptitudes like content creation, can help close the gender gap in these areas and simultaneously contribute towards greater employment equity, accessibility, and satisfaction.

A few negative barriers to using ICTs also differ significantly according to gender. Men are more concerned than women that technologies contribute to declining social relations. However, women are significantly more likely to express concerns with regard to the dangers of online harassment and bullying. Two of the previous recommendations can address both of these negative motivators, namely promoting a healthy balance between online and offline activities via the likes of media-literacy training in schools as well as creating a safe and responsive ICT regulatory environment that allays some of these fears and protects those who would otherwise be most vulnerable to online dangers.

As mentioned earlier, it is important to involve more women in the design of ICT services, platforms, and content to make sure that their needs and expectations are adequately addressed. The domain of work may be one telling area in this regard. Women record both higher demands and greater use of ICTs for work-related activities, yet the quality of these interactions and engagements is significantly lower than for men. This could be because the necessary content, services, work environments, or ICT tools that are available are not consciously designed to effectively serve those outside of society's dominant positions.

9.2.2. Age

The biggest effect of age is seen in relation to skills. For all types of capabilities (social, technical/operational, information navigation, and creative), people between the ages of 18 and 25 score higher than all older groups. In fact, their average for all skills combined are twice the levels of people aged 41 and older. In terms of access, populations between the ages of 18 and 25 are also more likely to utilize both personal and public Wi-Fi as well as own more internet-accessible devices than any of the older groups. In terms of how to deal with this disparity, collaborative approaches between governments and private/third-sector organizations can be effective for reaching and improving the skills of people who are over 40. Often, these involve innovative techniques that bring technologies and training to mature communities where they already engage rather than expecting members of those communities to join training wherever and whenever it might otherwise be provided.

Where access and skill clearly favor youth, most categories of ICT use do not reflect significant differences in accordance with age. One important exception relates to using ICTs for work. Here, the youngest population (18–25 years old) reported the lowest scores among everyone under 60 years old. Similarly, personal uses were most extensive among the youngest cohort while their economic uses and levels of satisfaction with work outcomes were the lowest among the groups. The differences in these last three areas are not statistically significant when considered in combination with this cohort's (significantly) lower scores for work usage, yet there is clearly potential for younger members of the population to more effectively apply their higher-level ICT skills to work-related activities.

9.2.3. Education

As commonly found elsewhere, variations in people's educational attainment directly relate to the persistence of a digital divide within Kuwait. According to data from the Central Statistics Bureau, less than a quarter of people residing in Kuwait are educated beyond a high-school level. For the remaining 77% of the population, issues relating to access, skills, and outcomes pose serious obstacles to their digital engagement and well-being. In this study, the sample representing this group are comprised of people over the age of 15 that successfully completed either a primary or secondary education. It does not include those who are illiterate or only possess basic literacy skills, although they are presumed to be even more disadvantaged than the sample serving as their proxy here.

In terms of access, the lowest-educated group uses public hotspots the least, own the fewest number of devices, and are the most likely population group in the study to own only a smartphone with which they access the Internet. They also possess lower skills across every area, engage in the least amount of usage with regard to the majority of personal and economic activities, and derive the least satisfaction from their property, educational, and work outcomes. Providing public or low-cost, device-based access and skills training would expand the opportunities on offer for members of this group to better engage with the demands of the digital transformation.

One area where this group does outperform others is in their high utilization of ICTs to access cultural content relating to their sense of identity. Both their uses of and satisfaction levels with cultural content were higher than they were among people with

more advanced educational qualifications. Policies aimed to improve digital access or skills among the least educated portion of the population might therefore find cultural content to be a useful point of entry for facilitating deeper engagement that can bridge the gap to other digital domains.

9.2.4. Occupation

Differences between occupational groups are most pronounced in terms of skills. The highest overall skill levels are found among students, followed by the employed. Of note, the unemployed constitute the next highest skills group. Policies aimed at encouraging greater workforce participation can capitalize on the skills already possessed among this underutilized group.

Of the four types of skills evaluated, social skills are the highest for all occupational groups and information-navigation skills are the lowest, consistent with findings for the population overall. Again, this demonstrates the broad societal need for educational initiatives in media literacy and ICT-skills training to improve information-seeking abilities by communities of all types.

The employed demonstrate more frequent ICT uses for property and work activities than other groups, while students, understandably, use ICTs more for education by a wide margin. The employed translate their overall economic uses into higher overall economic outcomes as well. However, the group achieving the highest financial outcomes specifically are the retired. Those with the fewest financial outcomes are homemakers, who also have the lowest internet access of all occupational groups. Among these groups, homemakers may, therefore, be at the greatest risk of digital exclusion. In preparing society for

sustainable digital transformation, it may therefore be important to consider initiatives and policies that consciously create benefits at the household level and not just at the individual or group levels. Doing so can help to elevate the digital experiences of populations like homemakers, the elderly, and the least educated who can otherwise be difficult to reach through more direct conventional interventions.

9.2.5. Origin

Several differences between the groups were evident based on a person's place of origin, which in keeping with the Kuwaiti government's classifications, included Kuwaitis, Arab expatriates, and Asian expatriates. Asian expatriates were further subdivided into Indians, Filipinos, and other Asians given the large representation of Indians and Filipinos in the sample. Leading on from this, Kuwaitis were the least likely to only own a smartphone and instead recorded the highest level of device ownership of any group as well as the highest utilization of both personal and public Wi-Fi. Moreover, in terms of what motivates them, Kuwaitis are more likely to find useful content and feel safer online compared to others. They and Indians are the least likely groups to see cost as a barrier to greater ICT use as well.

A person's place of origin does not play a statistically significant role in terms of skill possession, although slight differences can be seen in the averages across all skills; Arab expatriates scored somewhat lower than the other groups did. Variations relating to origin are more apparent in terms of ICT uses and outcomes, especially within the economic domain. Furthermore, Indians and Filipinos are most likely to engage in property uses online (buying

and selling), while Arab expatriates are the least inclined to do this. Likewise, Indians and Filipinos show the highest satisfaction with their property outcomes, while Arab expats exhibited the lowest. Meanwhile, Kuwaitis and Indians engage in the highest levels of financial utilization, although it is Filipinos who derive the greatest outcomes and satisfaction in this area. They are also most likely to use ICTs for work, yet their achievement scores in this area are the lowest of any nationality group.

When evaluating the effects of origin, levels of access and positive motivators primarily favor Kuwaitis and, to a lesser extent, Indians. Finding ways to remove barriers and add incentives for other groups to go online (such as customized costing, relevant content, and easily accessible public Wi-Fi) can foster greater equity among nationalities. Arabic-language-based skills interventions might also encourage Arab expatriates to advance their levels of ICT access and the scope of their achieved outcomes by not only improving productivity but also by engendering participation and general well-being.

9.3 PARTING WORDS

Kuwait's quest to transition from a reliance on hydrocarbon exports to a knowledge-based economy depends heavily on the country's ability to effectively integrate ICTs into multiple facets of society and across an incredibly diverse population. The country clearly has many digital advantages already in place in this regard. While gaps remain, the general level of access and the widespread availability of technologies have attenuated

obstacles found at the first-level digital divide which are commonly seen in many other countries. Potential financial, psychological, and social barriers do not appear to significantly weaken the hearty appetite found among most populations to use ICTs for a diverse range of personal, social, and professional applications.

As a result of the widespread diffusion of ICTs, many groups demonstrate a high level of existing skills. For more privileged groups, these skills often have a direct correlation to both uses and outcomes, suggesting that such communities are already in a strong position to contribute positively to society's digital transformation efforts. Indeed, the study findings suggest that there is still considerable room for the availability of online content, services, and application to fully tap into the diverse skillsets already available in the country. Notably, Kuwait does not evidence the stark digital gender divide found in many Arab countries. In fact, in important areas related access, motives, skills and achievements, women often demonstrate higher performance than men.

Importantly, however, groups with fewer existing advantages are more likely to face obstacles with access, skills, digital content, and the achievement of tangible outcomes. Many in this position appear to be male expatriates of both Arab and Asian origin who hold rudimentary levels of education. Since these groups currently comprise a significant portion of Kuwait's population, there remains considerable room to create policies and practices that can help bring their digital experience more in-line with the country's planned trajectory to transition from tankers to tablets.

Appendix 1

Sample comparison to national demographics

GENDER

	POPULATION	SAMPLE
Women	39%	46%
Men	61%	54%

EDUCATION *

	POPULATION	SAMPLE
Primary to Secondary	68%	31%
Secondary Plus	9%	17%
University Degree or Higher	13%	47%
NA	10%	5%

PLACE OF ORIGIN

	POPULATION	SAMPLE
Kuwaiti	31%	33%
Non-Kuwaiti	Arab Expat 27% Asian Expat 40% Other 2% Total 69%	Arab Expat 17% Asian Expat 45% Other 4% Total 67%

AGE (MEAN) **

	POPULATION	SAMPLE
15-39*	56%	79%
40-59	37%	17%
60	7%	4%

Sources: World Bank, Kuwait Central Statistics Bureau, Kuwait Public Authority for Civil Information, and World Population Review.

* The figures are based on ages 15+ as percent of the total population with more than basic literacy (approx. 2.5 million). The secondary plus category includes those with more than secondary education but who have not completed university, such as diploma holders and active students.

** Population percentages are calculated based on the total population 15 years and older, as per available government age classifications which aggregate ages 15-19 in one category. Minimum age for participation in the DiSTO survey was 18 years.

OCCUPATION ***

	POPULATION	SAMPLE
Student	12%	30%
Employee	74%	52%
Homemaker	5%	5%
Retired	3%	2%
Unemployed	1%	4%
Other Work/Not Stated	5%	7%

*** Occupation figures are based on the total labor force over 15 years of age which is approximately 3.8 million.

