Open Government Data Initiative in the State of Qatar: Aspirations and the Current Situation

Survey of Qataris and White collar Expatriates

Executive Summary
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About the Social and Economic Survey Research Institute

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The mandate of the Institute is to conduct survey research on economic, social, and cultural issues that are of direct and vital significance to the development and welfare of Qatari society. Equally important, the Institute strives to build capacity within Qatar University (QU) in survey research methodology by serving as a platform for QU faculty and students to conduct their own research. Along those lines, the Institute offers training in survey research with special emphasis on topics of interest to the academic community and the Qatari society at large.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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The opinions conveyed in this report are those of the authors and do not necessarily reflect the views of the Social and Economic Survey Research Institute (SESRI) or Qatar University. SESRI is responsible for any errors or omissions in this report, however.

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INTRODUCTION

The Ministry of Communications and Information Technology launched the Qatar Open Data Portal (data.gov.qa) in 2019 as a national platform for open data and information in adherence to international standards. The Qatar Open Data Portal is one of the most well- known OGD initiatives in Qatar. Since 2023, the Planning and Statistics Authority (PSA) has been entrusted with the operation and management tasks of the portal, and on July 16, 2023, the PSA announced on its website that it had launched the second edition of the Qatar Open Data Portal (www.data.gov.qa). However, the adoption towards actual operation of the offered data has not reached the initial expected usage figures. Thus, more research is needed to explore and analyze the main adoption factors that could shape users' decision to embrace and utilize OGD systems. This study is one such effort.

A representative sample of the Qatari population (local and white-collar expats) comprising 1,426 participants was chosen and interviewed using CATI telephone interviewing mechanisms, where their views were analyzed and further discussed in the following sections.

I. SECTION 1: DEMOGRAPHICS

This section provides insight into the demographics of the respondents for a better understanding of the subsequent findings. Of a total sample size of 1,426 participants, approximately 60% were male and 40% were female. Additionally, Qataris made up about 23% of the respondents, while non-Qataris represented roughly 77%. The data reflect the diversity and distribution of the participants, which is essential for gauging the representativeness of the survey results.

Figure I-1: Sample Distribution by Age Groups

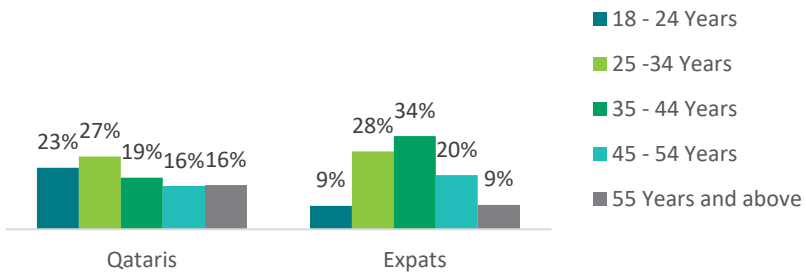


Figure (I-1) shows that about half of the Qataris (50%) in the sample were between 18 and 34 years of age and that more than half of the expatriates (59%) were between 25 and 44 years of age.

Figure I-2: Sample Distribution by Education Level

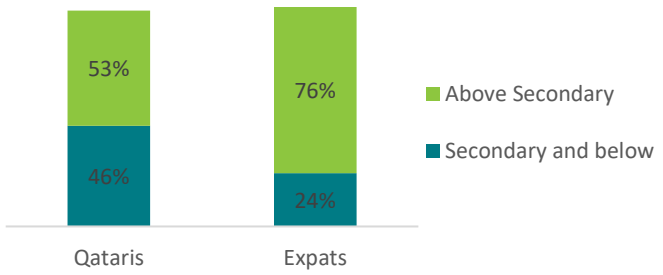


Figure (I-2) shows that slightly more than half of the Qataris (53%) in the sample had a secondary-level education or lower and that around three-quarters of the expats (76%) had a higher than secondary-level education.

Figure I-3: Sample Distribution by Employment Status & Gender

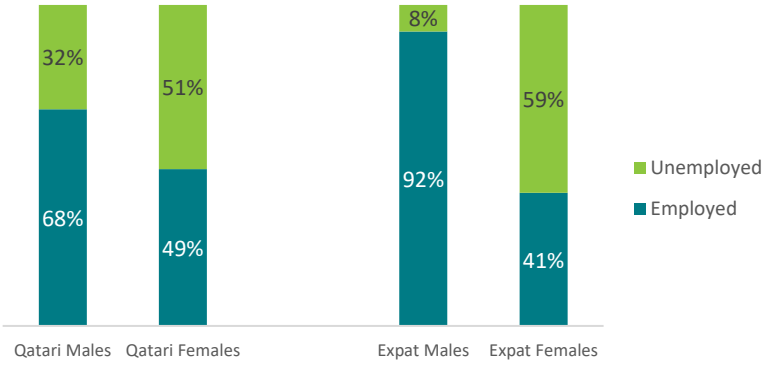
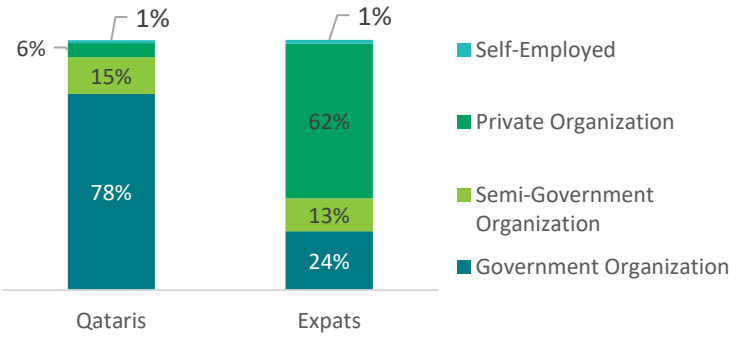


Figure (I-3) presents the employment status by gender of the Qataris and expats in the sample. Among the female participants, 49% of the Qataris and 41% of the expats were employed. For the male participants, 68% of the Qataris were employed compared to a notable 92% of the expats. This discrepancy among the male participants is attributed to a higher proportion of Qataris who were either students 10.5% or retirees 19% compared to the non-Qataris.

Figure I-4: Sample Distribution by Work Sector



(Figure I-4) outlines the employment distribution figures for the Qataris and expats. A dominant 78% of Qataris worked in government organizations, while a majority of expats (62%) worked in the private sector. Both groups had a similar rate of self-employment of one percent.

II. SECTION 2: GENERAL SATISFACTION WITH OGD INITIATIVE IN QATAR (AWARENESS AND USE)

Open data are a powerful resource in informing policy in terms of increasing transparency and measuring progress (State of Qatar Open Data, 2019)[1]. In terms of citizen satisfaction, public support for OGD, the application of ODG, as well as sufficiently high levels of information, system, and service quality appear to be necessary conditions (Gonzálvez-Gallego et al., 2020).[2] Thus, the maturity of a country's digital economy directly moderates the impact of OGD on technology acceptance and citizen satisfaction. To assess the level of OGD awareness, the respondents were asked whether they were familiar with the concept of OGD or had seen it being used before. Overall, they were aware of the concept and the types of information it could provide.

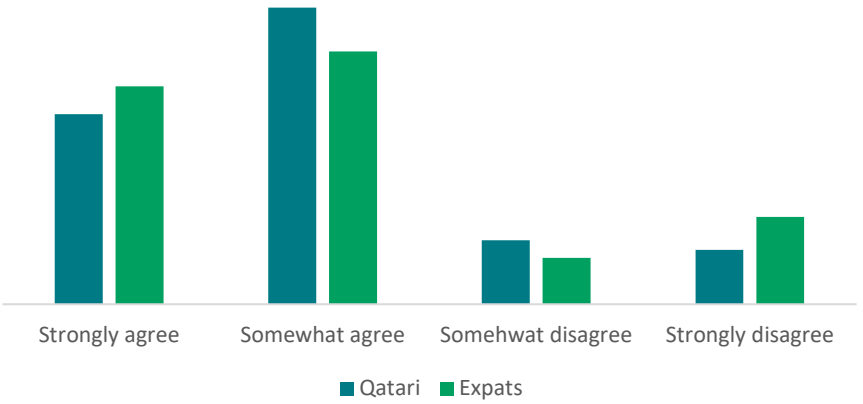
Table II-1: Familiarity with OGD concept

	Strongly Agree	Agree	Disagree	Strongly Disagree
I am very familiar with the Open Government Data concept	35%	43%	8%	13%
I am aware of the type of information that Open Government Data website offers	30%	42%	11%	17%
I have seen people around me using Open Government Data	34%	23%	16%	27%

[1] State of Qatar Open Data. About – State of Qatar open data. (2019). https://www.data.gov.qa/pages/about/

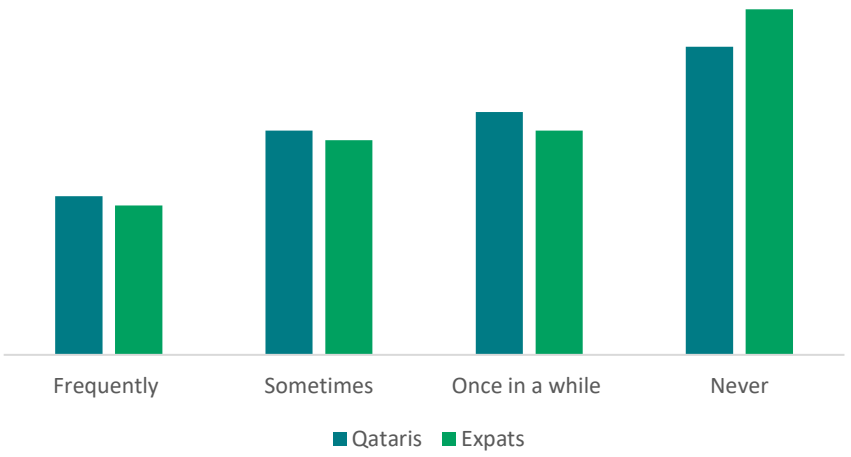
2 Gonzálvez-Gallego, N., Nieto-Torrejón, L., & Pérez-Cárceles, M. (2020). Is open data an enabler for trust? Exploring the link and the mediating role of citizen satisfaction. *International Journal of Public Administration*, *43*(14), 1218–1227. https://doi.org/10.1080/01900692.2019.1668412

Figure II-1: Familiarity with OGD concept, by respondent type



The findings presented in Figure II-1 show that the majority of Qataris and Higher income expats in the sample are familiar with OGD concept, there is still a high number of white-collar expatriates that are unaware of the concept (P-value= 0.003). Nevertheless, the differences between the different age groups, or in relation to gender and employment status was not significant.

Figure II-2: Usage of OGD, by respondent type



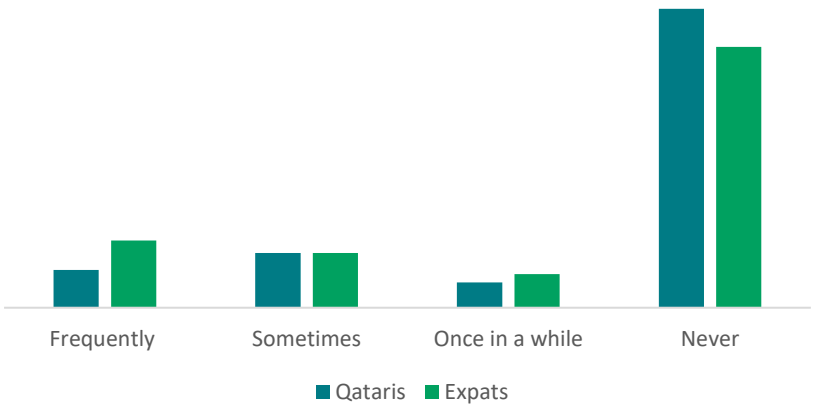
The respondents were asked to indicate the extent to which they had used the OGD website before. As demonstrated in Figure II-2, a majority of them reported to have never used the OGD website, while 26% of the Qataris and 24% of the white-collar expatriates reported that they had used the website once in a while.

Table II-2: Usage of ODG for different purposes, by respondent type

		Frequently	Sometimes	Once in a while	Never
I have downloaded an Open Government Dataset	Qataris	13%	23%	22%	42%
	Expats	11%	20%	18%	51%
I have used Open Government Data in making business decision	Qataris	6%	13%	10%	71%
	Expats	3%	12%	7%	78%
I have used an Open Government Data dataset on statistical analysis	Qataris	3%	14%	7%	76%
	Expats	2%	8%	8%	82%

To further understand why people utilize OGD, the respondents were asked to report their use of the website for specific purposes, such as to make business decisions and undertake statistical analysis. A majority of them, regardless of nationality, reported to have never utilized the website for business decisions or statistical analysis. Additionally, around one-third of the Qataris (23%) and white-collar expatriates (20%) indicated that they sometimes downloaded the Open Government Dataset.

Figure II-3: Using ODG to choose a school, by employment



Respondents were asked whether they use OGD to choose a school for their kids. As shown in Figure II-3, the overall majority of parents reported that they have never used the data to choose a school for their kids. Although 16% of expat parents reported using OGD to choose a school for their kids.

Table II-3: Satisfaction with ODG, by respondent type

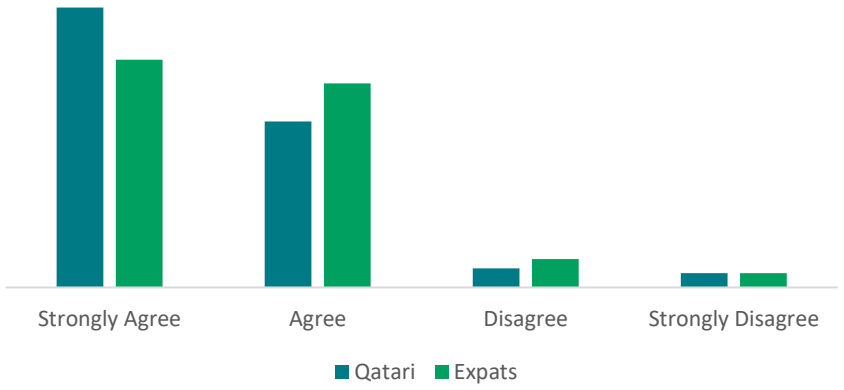
		Strongly Agree	Agree	Disagree	Strongly Disagree
My experience with using Open Government Data was better than I expected	Qataris	31%	51%	12%	6%
	Expats	44%	47%	6%	1%
The Open Government Data portal provides a user friendly environment	Qataris	77%	19%	2%	2%
	Expats	82%	17%	1%	0%
The Open Government Data portal provides strong dataset search capabilities using different criteria	Qataris	31%	56%	9%	4%
	Expats	47%	45%	6%	2%
The Open Government Data portal enabled me to download datasets easily and efficiently	Qataris	44%	42%	10%	4%
	Expats	52%	39%	5%	4%
	Qataris	51%	38%	7%	3%

Overall, I am satisfied with the services offered by the Open Government Data portal	Expats	64%	31%	3%	2%
Overall, I am satisfied with the Open Government Data transparency measures	Qataris	42%	44%	9%	6%
	Expats	59%	36%	3%	1%

In order to measure user satisfaction, the respondents were asked whether the OGD website exceeded their expectations, 51% of the Qataris and 47% of the white-collar expatriates reported that it had. An overwhelming majority of both Qataris and white-collar expatriates strongly agreed that the OGD portal is user friendly.

When asked about their overall satisfaction with the OGD portal, 51% of the Qataris and 64% of the white-collar expatriates strongly agreed.

Figure II-4: Satisfaction with ODG, by gender

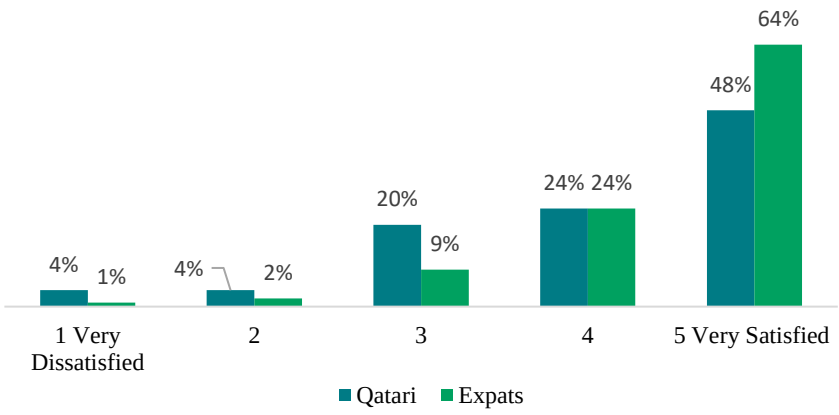


III. SECTION 3: SATISFACTION WITH GOVERNMENT OGD MOBILE APPLICATIONS

Qatar's government launched some mobile applications to further enhance its transparency and boost the sharing of government information with the public. Mobile applications, such as EHTRAZ and Qatar Statistics, are some examples of government mobile applications based on the use of internal government information for the betterment of the society in general. In this section of the survey, the respondents were asked about their experience using these applications.

On a scale from one to five where one means very dissatisfied and 5 means very satisfied, respondents' were asked to rate the effectiveness of the applications in terms of promoting transparency and increasing trust in the government. The majority of the respondents said that they are very satisfied (48% Qataris, and 64% white-collar expatriates) (see).

Figure III-1: Respondents' rate of the effectiveness of the OGD applications at promoting Transparency and increasing Trust in the Government

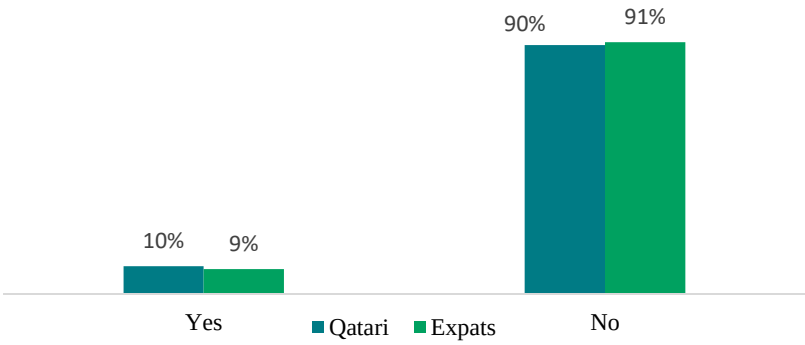


Satisfaction with the usage of Qatar Statistics application

When asking the respondents' if they have used the Qatar Statistics application provided by Qatar Planning and Statistics Authority, most

of the respondents' said they have not used it, while 10 percent of Qataris and 9 percent of white-collar expatriates said that they have used the application (see Figure III-2). The results varied significantly in terms of the gender of the respondents; males (12%) were more likely to have used the Qatar statistics application compared to females (5%) (p = .0013).

Figure III-2: Usage of Qatar Statistics application



Those who have used the Qatar Statistics application were asked about the extent of their usage and satisfaction with the application. In general, based on the results the majority of the respondents' indicated that they had a good experience with the application according to their answers, moreover, white collar expats were more satisfied than Qataris (see

and Figure III-3). When the respondents' were asked about the easiness of use of the Qatar Statistics application, 91 percent of Qataris, and 99 percent of white-collar expatriates agreed (strongly agree and somewhat agree) that the application is easy to use. Furthermore, 93 percent of Qataris, and 100 percent of white-collar expatriates agreed that the Qatar Statistics application is very useful. Moreover, 94 percent of Qataris and 97% of white-collar expatriates finds the Qatar Statistics application trustworthy.

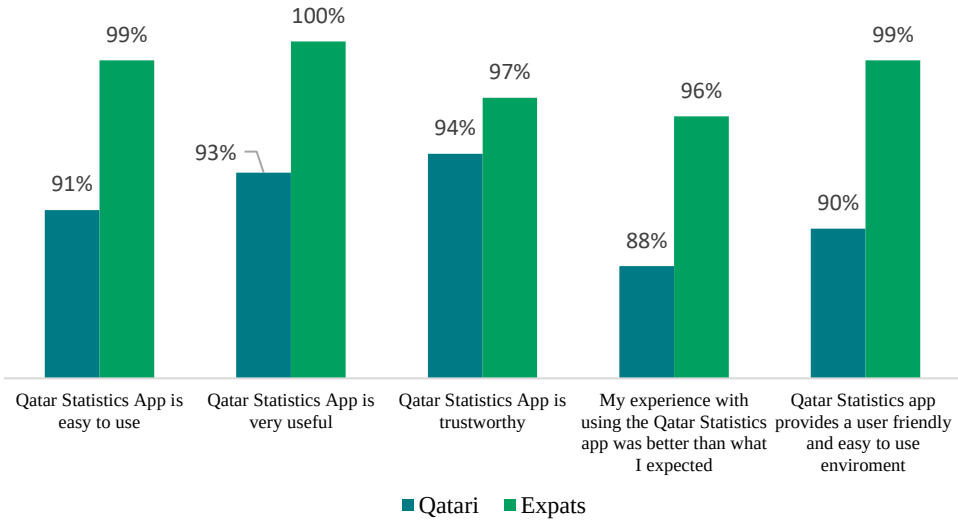
Additionally, the respondents' were asked if their experience with using Qatar Statistics application was better than what they expected, 88

percent of Qataris, and 96 percent of white-collar expatriates agreed that it had. Furthermore, the majority of the respondents agreed that the Qatar Statistics application provide a user friendly and easy to use environment (90% Qataris, and 99% white-collar expatriates).

Table III-1: Respondents' level of agreement on their satisfaction with the usage of the Qatar Statistics application

		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
The Qatar statistics application is easy to use	Qataris	45%	46%	6%	3%
	Expats	69%	30%	1%	-
The Qatar statistics application is very useful	Qataris	59%	34%	6%	1%
	Expats	72%	28%	-	-
The Qatar statistics application is trustworthy	Qataris	60%	34%	5%	1%
	Expats	78%	19%	3%	-
My experience with using the Qatar statistics application was better than what I expected	Qataris	50%	38%	9%	2%
	Expats	65%	31%	4%	-
The Qatar statistics application provides a user friendly and easy to use environment	Qataris	46%	44%	9%	1%
	Expats	77%	22%	1%	-

Figure III-3: Respondents' Perceived Attitude toward using Qatar Statistics Application



Satisfaction with the usage of EHTRAZ application

The respondents were asked about their experience using the EHTRAZ application, which was mandatory during the COVID-19 pandemic. This application provided statistical information related to COVID-19 (e.g., the number of positive cases, recovered patients, number of deaths, etc.).

In general, and consistent with the results regarding the Qatar Statistics application, the respondents seemed to be satisfied with the EHTRAZ application, with the white-collar expatriates being more satisfied than the Qataris (see Table III-2 and Figure III-4). The respondents were also asked whether the EHTRAZ application was easy to use, with 94% of the Qataris and 98% of the white-collar expats agreeing that it was. Furthermore, 86% of the Qataris and 94% of the white-collar expatriates believed that EHTRAZ was very useful. Moreover, the respondents were asked whether they thought that EHTRAZ was trustworthy. Eighty-one percent of the Qataris and 94% of the white-collar expats agreed that it was.

Additionally, when asked whether their experience with EHTRAZ exceeded their expectations, 83% of the Qataris and 91% of the white-collar expatriates agreed that it had. Finally, 89% of the Qataris and

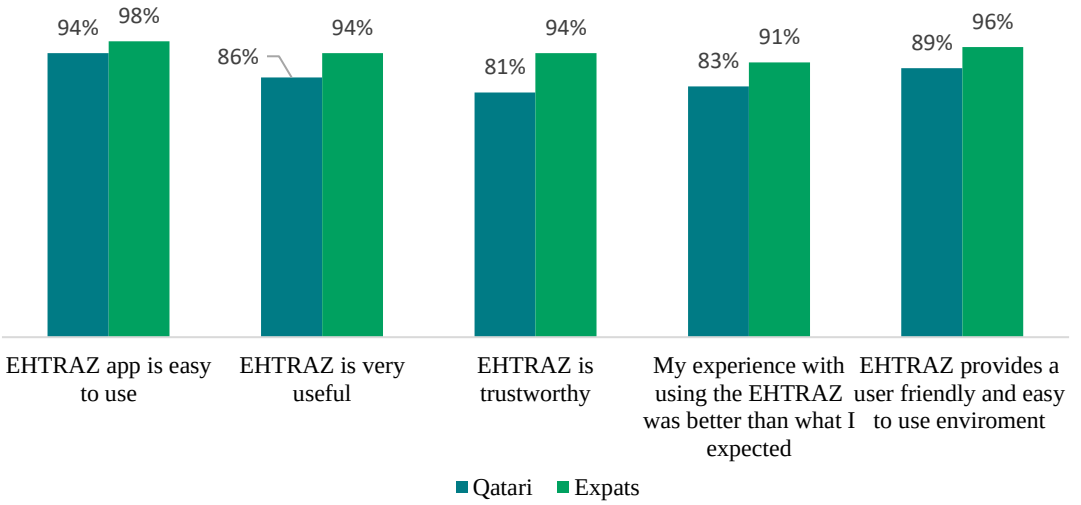
96% of the white-collar expatriates agreed that EHTRAZ provided a user-friendly and easy to use environment.

Intriguingly, it was found that some of the EHTRAZ application results varied significantly based on the respondents' income. Around 96% of white-collar expatriates who earned less than 15,000 QAR found EHTRAZ more useful compared to white-collar expats (92%) who earned 15,000 QAR or more (p = 0.05). Around 84% of Qataris who earned less than 50,000 QAR found EHTRAZ more trustworthy in comparison to 80% of Qataris who earned 50,000 QAR or more (p = 0.05). Furthermore, around 96% of white-collar expats who earned less than 15,000 QAR found EHTRAZ more trustworthy compared to 90% of white-collar expats who earned 15,000 QAR or more (p = 0.0008). Additionally, around 95% of white-collar expats who earned less than 15,000 QAR were more likely to agree that their experience with EHTRAZ exceeded their expectations compared to 88% of white-collar expats who earned 15,000 QAR or more.

Table III-2: Respondents' level of agreement on their satisfaction with the usage of EHTRAZ application

		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
The EHTRAZ app is easy to use	Qataris	78%	16%	3%	3%
	Expats	83%	15%	2%	1%
EHTRAZ is very useful	Qataris	66%	20%	6%	8%
	Expats	76%	18%	3%	3%
EHTERAZ is trustworthy	Qataris	57%	24%	9%	10%
	Expats	73%	21%	4%	3%
My experience with using EHTRAZ was better than what I expected	Qataris	56%	27%	8%	9%
	Expats	70%	21%	5%	3%
EHTRAZ provided a user friendly and easy to use environment	Qataris	65%	24%	5%	6%
	Expats	79%	17%	2%	2%

Figure III-4: Respondents' Perceived Attitude toward using EHTRAZ Application



In general, the respondents seemed to be satisfied with the OGD applications, although the white-collar expatriates seemed to be more satisfied than the Qatari citizens, albeit marginally. Although almost everyone in Qatar used EHTRAZ and knew about it, since its use was mandatory during the COVID-19 pandemic, not enough respondents used the Qatar Statistics application provided by the Qatar PSA. The lack of use of the Qatar Statistics application could be because of the lack of awareness of it and its offering. It is highly recommended that the Qatar PSA promote the application to raise awareness among Qataris and white-collar expatriates and encourage them to use it in order to support the OGD initiative in Qatar.

IV. SECTION 4: GENERAL PERCEPTION WITH OGD (USEFULNESS, AND TRUST)

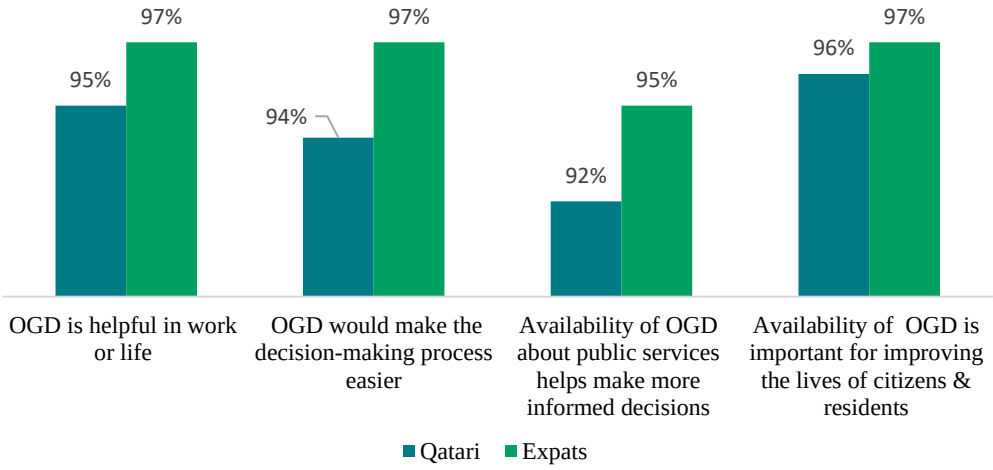
A number of statements on the usefulness and trust related to the use of OGD were used to ascertain the respondents' overall thoughts and perceptions of Qatar's open government data initiative and its impact on the overall relationship between government and the general public.

First, the respondents were asked to indicate their level of agreement or disagreement with a set of 16 statements concerning OGD usage in terms of value and usefulness to the public and the quality of the information and knowledge they require. Overall, the Qatari nationals and white-collar expatriates reported high levels of agreement (strongly agree and somewhat agree) with all 16 statements.

Figure IV-1 below summarizes the answers resulting in the most agreed respondents' answers with the usefulness statements. According to the results, 95 percent of the Qataris and 97 percent of the white-collar expatriates believe that the open government data is helpful in work or life. Around 94 percent of the Qataris and 97 percent white-collar expatriates reported that having open government data would make the decision-making process easier, for example in transportation or education and other areas. In addition, 92 percent of Qataris and 95 percent of the white-collar expatriates stated that "The availability of open government data on public services such as education, health, and social care, among others, assists me in making more informed decisions". Regarding to the importance of the availability, 96 percent of Qataris & 97 percent of the white-collar expatriates indicated that the availability of open government data is critical for enhancing citizens and residents lives. Although, the majority of the respondents strongly agreed with the statement that OGD is important for improving the lives of citizens and residents, the results significantly vary among age group, in which only 93% of the youngest age group, 24 years of age or younger agreed with this

statement in comparison to almost all respondents in all other age groups (p-value = 0.0082).

Figure IV-1: Usefulness of using OGD



Breaking down the usefulness statements by group category (usefulness, benefits and available information), the results clearly show demonstrable conformity in the opinions expressed by Qatari nationals and white-collar expatriates. The majority of responses were positive, indicating the usefulness of OGD in everyday life in terms of making work and life more efficient (Figure IV-1).

Table IV-1: Usefulness of using OGD

Items		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Never used it
Open Government Data is very useful in our daily lives	Qataris	65%	29%	3%	2%	1%
	Expats	69%	25%	3%	1%	2%
Open Government Data could help me to engage more with the government	Qataris	51%	40%	5%	3%	1%
	Expats	63%	33%	2%	1%	1%
I believe Open Government Data makes work or life more efficient	Qataris	66%	29%	2%	2%	1%
	Expats	72%	25%	1%	1%	1%
	Qataris	70%	25%	2%	1%	2%

I believe Open Government Data is helpful in work or life	Expats	76%	21%	1%	1%	1%

Regarding to the benefit of using open government data in Qatar. Table IV-2 below illustrates that 86 percent of the Qataris and 89 percent of white-collar expatriates agree that they are aware of the benefits of using open government data compared to 11 percent of the Qataris respondent and 8 percent of the white-collar expatriates who disagree. Only 3% of the respondents of either group indicated that they had never used open government data.

The statement “open government data helps reduce fraud” was met with significant agreement by Qataris (88%) and white-collar expatriates (94%), with variation by education level in which around three quarters (76%) who never attended school agreed with this statement in comparison to the majority of the respondents who attended school or university (p= 0.0272)]. Additionally, in terms of the benefits of using OGD, the results demonstrate a marginal statistical significance based on gender, 96 percent of male respondents believe that open government data could benefit them, whereas 93 percent of the female respondents agreed with this statement (p= 0.0198).

Table IV-2: Benefit of using OGD

Items		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Never used it
I know the benefit of using Open Government Data	Qataris	43%	43%	7%	4%	3%
	Expats	52%	37%	4%	4%	3%
I feel that Open Government Data could bring me benefits	Qataris	57%	35%	4%	3%	1%
	Expats	64%	32%	2%	1%	1%
Having OGD would make the decision-making process easier; ex in transportation or education and other areas.	Qataris	70%	24%	3%	1%	2%
	Expats	75%	22%	2%	-	1%
Open Government Data helps reduce fraud	Qataris	59%	29%	8%	3%	1%
	Expats	69%	25%	3%	2%	1%

Table IV-3: The Respondent's Opinion about the Information Provided by OGD

Items		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Never used it
OGD helps with my daily decision making ex: information from EHTERAZ, weather, public transportation schedule, and other sources.	Qataris	57%	32%	5%	4%	2%
	Expats	66%	27%	4%	2%	1%
The availability of OGD about public services, such as, education, health, and social care, etc. helps me make more informed decisions	Qataris	61%	31%	4%	2%	2%
	Expats	73%	22%	2%	2%	1%
Open Government Data helps me understand how the government works, and how policies are made	Qataris	48%	37%	8%	5%	2%
	Expats	56%	33%	5%	4%	2%
The Open Government Data portal provides sufficient datasets	Qataris	36%	47%	9%	4%	4%
	Expats	47%	42%	5%	2%	4%
The Open Government Data portal provides up to date datasets	Qataris	47%	42%	5%	2%	4%
	Expats	58%	34%	2%	2%	4%

Furthermore, all respondents were asked what they thought of the information supplied by open government data in Qatar. The majority of Qataris (89%) and white-collar expatriates (93%) indicated that open government data (such as EHTERAZ information, weather, public transportation schedules, and other sources information) helps them in making their everyday decisions. About the type of information available, the majority of respondents (83% of Qataris and 89% of the white-collar expatriates) agreed that the information of OGD datasets were sufficient and up to date (89% of Qataris and 92% of the white-collar expatriates). About 85 percent of Qataris and 89 percent of the white-collar expatriates said that open government data helps them to

understand how the government works, and how policies are made (see Table IV-3)

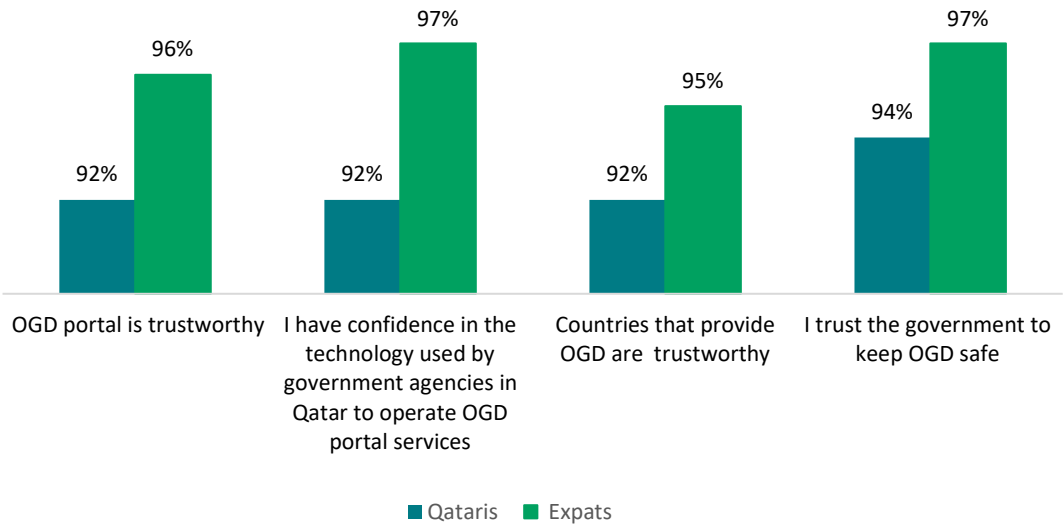
Next, the respondents were asked about availability of open government Data. As shown in Table IV-4, the vast majority of Qataris (91%) and white-collar expats (95%) agreed that government agencies in Qatar could meet users' needs.

The study results revealed that most Qataris and white-collar expatriates perceive open government data as advantageous to their lives, in part because it has the ability to promote transparency in the provision of public services and in part because it has the capacity to aid in public policy decision-making. This shows that Qataris and white-collar expatriates in Qatar are prepared to utilize OGD in their daily lives. Thus, government of Qatar needs to maintain its effort in ensuring that the data is adequately managed and used to benefit its citizens and expatriates.

Table IV-4: The availability of OGD for users

Items		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Never used it
The availability of Open Government Data is important for improving the lives of citizens & residents	Qataris	74%	22%	2%	1%	1%
	Expats	81%	16%	1%	1%	1%
Increasing the availability of Open Government Data is one of the most important government policy issues	Qataris	46%	43%	6%	3%	1%
	Expats	54%	39%	3%	2%	2%
Government agencies in Qatar can meet users' needs	Qataris	52%	39%	5%	3%	1%
	Expats	65%	30%	2%	2%	1%
Government agencies in Qatar have the skills and expertise to provide Government Data in an expected manner	Qataris	43%	41%	9%	5%	1%
	Expats	59%	34%	4%	2%	1%

Figure IV-2: Perceived Attitude towards Open Government Data-Trust



Trust towards technology and trust towards government has been proven to be key success factors in e-government. According to (Teo *et al.,* 2008) when the citizens trust the government and the technology, they will be more likely to use the government services. It is also believed that the trusted party will act in a publicly responsible manner to meet the expectations of the trusting party.[3] According to the results presented in (Figure IV-2), the majority of all respondents positively rated that open government data and government agencies in Qatar is trustworthy and they trust the government to keep these data safe. The majority of respondents also expressed trust in the technology employed by Qatari government entities to administer the open government data portals services. According to the findings, respondents had a good attitude toward countries that give accessible government data, which they regard as more trustworthy than those that do not.

[3] Teo, T. S., Srivastava, S. C., & Jiang, L. I. (2008). Trust and electronic government success: An empirical study. Journal of management information systems, 25(3), 99-132.

Table IV-5 below shows the breakdown of the respondents' answers who agree or disagree with the statements related to the trust to open government data. Overall, Qatari nationals and white-collar expatriates reported high levels of agreement with the statements. Notably, a few statements revealed a very slight significant difference with education level and employment that is not reveal any big differences throw demographic characteristics.

Table IV-5: Perceived Attitude towards Open Government Data-Trust

Items		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Never used it
I believe that the Open Government Data portal is trustworthy	Qataris	61%	31%	4%	2%	2%
	Expats	73%	23%	2%	1%	1%
In my opinion, government agencies in Qatar are trustworthy	Qataris	67%	27%	4%	1%	1%
	Expats	82%	15%	1%	1%	1%
I have confidence in the technology used by government agencies in Qatar to operate Open Government Data portal services	Qataris	62%	30%	5%	3%	1%
	Expats	76%	21%	2%	1%	-
I believe that government agencies can be trusted to use Open Government Data in decisions making	Qataris	63%	29%	5%	2%	1%
	Expats	77%	19%	1%	1%	2%
I believe the technologies supporting the Open Government Data portal are secure	Qataris	62%	31%	3%	3%	1%
	Expats	75%	23%	1%	-	1%
I believe the technologies supporting the Open Government Data portal are reliable	Qataris	62%	32%	3%	2%	1%
	Expats	74%	23%	2%	-	1%
Countries that provide Open Government Data are more trustworthy than those that do not	Qataris	65%	27%	4%	2%	2%
	Expats	76%	19%	3%	1%	1%

I trust the government to keep Open Government Data safe and protected and anonymous	**Qataris**	**71%**	**23%**	**3%**	**2%**	**1%**
	Expats	**79%**	**18%**	**2%**	**1%**	**-**

The results of the survey indicate that the Qataris and citizens believe that the open government data portal in Qatar is trustworthy and accessible. Based on the survey's findings, it is strongly advised that Qatar keep developing and enhancing its OGD platform. This will improve the portal's credibility and usability even more. Qatar should also make sure that all information on the portal is safe and that it is regularly updated with fresh, reliable information.

V. SECTION 5: OGD CURRENT CHALLNGES & INTENTION TO ADOPT OGD

The availability of open data has considerably increased, with pressure being applied on all kinds of public institutions to release their raw data (Janssen *et al.,* 2012).[4] "Given that the Open Government Data (OGD) initiatives of any country are founded on principles of transparency and accountability, it is important that the data sets permit a user-friendly interface for the data sets to be re-used (Saxena, 2018, p. 358).[5] Barriers make it difficult for users to leverage the potential of open government data.

Figure V-1: Barriers and Challenges of Using OGD

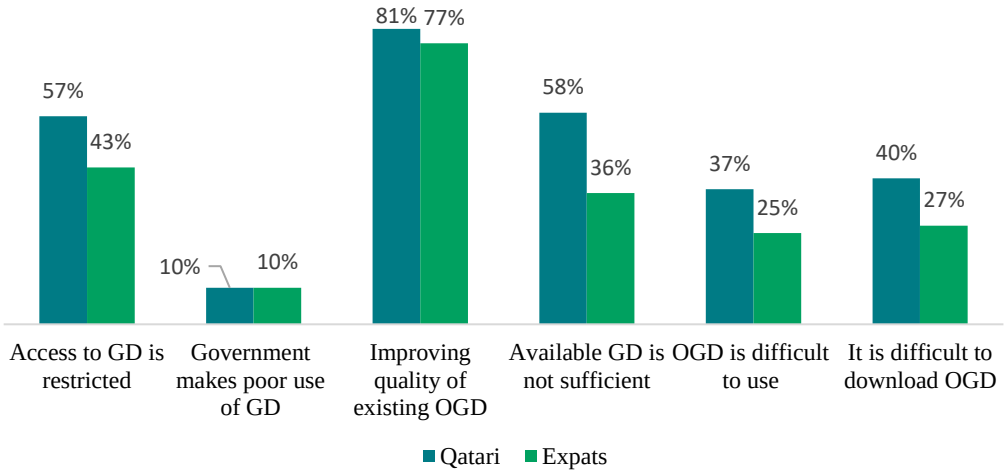


Figure V-1 shows that 57% of Qataris and 43% of white-collar expatriates believe that access to government data in Qatar is restricted. While only 10% of Qataris and white-collar expatriates feel that the government does not make sufficient use of existing government data. Notably, the majority of both groups (81% of Qataris and 77% of white-collar expatriates) agree that improving the quality of existing open government data is more important than making new data available.

[4] Janssen, M., Charalabidis, Y., & Zuiderwijk, A. (2012). Benefits, adoption barriers and myths of open data and open government. Information systems management, 29(4), 258-268.

[5] Saxena, S. (2018). Drivers and barriers to re-use Open Government Data (OGD): a case study of open data initiative in Philippines. Digital Policy, Regulation and Governance.

Furthermore, 58% of Qataris and 36% of white-collar expatriates agree that the available government data is not sufficient. The results varied significantly in terms of the education level of the respondents; the higher the education level the more the respondents agree that the available data is not sufficient [36% who never attended school; 37% who hold a secondary of below; 38% who hold a post-secondary; 41% who hold a bachelor's degree and 55% who hold a postgraduate degree (p-value = 0.0005)]. The results also varied significantly vary among the age groups of the respondents [34% for 24 years of age or younger; 41% for 25 to 34; 44% for 35 to 44; 41% for 45 to 54; 44% for 55 to 64 and 25% for 65 years of age or older (p-value = 0.0310)].

Additionally, around a third of Qataris (37%) and a quarter of white-collar expatriates (25%) found it difficult to use OGD. The results significantly vary among lower-income and higher income Qataris and white-collar expatriates. Around 43% of Qataris who earn less than 50,000 QAR monthly find open government data difficult to use in comparison to 32% of Qataris who earn more than 50,000 QAR every month (p-value = 0.0021). Around 26% of white-collar expatriates who earn less than 15,000 QAR monthly find open government data difficult to use in comparison to 23% of white-collar expatriates who earn more than 15,000 QAR every month (p-value = 0.0253). The results also significantly vary depending on the education level of the respondents; the lower the education level the more the respondents agree that the open government data is difficult to use [80% who never attended school; 35% who hold a secondary of below; 22% who hold a post-secondary; 26% who hold a bachelor's degree and 22% who hold a postgraduate degree (p-value = 0.0021)].

Finally, around 40% of Qataris and 27% of white-collar expatriates found it difficult to download OGD. A higher percentage of Qataris (43%) who earn less than 50,000 QAR monthly find open government data difficult to download in comparison to 38% of Qataris who earn more than 50,000 QAR every month (p-value = 0.0141), the results doesn't vary among white-collar expatriates. The results also significantly vary depending on the education level of the respondents, the lower the education level the more the respondents agree that the open government data is difficult to download [53% who never attended school; 34% who hold a secondary of below; 23% who hold a post-secondary; 29% who hold a bachelor's degree and 31% who

hold a postgraduate degree (p-value = 0.0375)]. Table V-1 below shows the breakdown of the responses to the statements related to barriers and challenges of using OGD.

Table V-1: Barriers and Challenges of Using OGD

		Strongly Agree	Agree	Disagree	Strongly Disagree
Access to Government Data is restricted	Qataris	23%	34%	21%	22%
	Expats	16%	27%	22%	35%
The government makes poor use of Government Data	Qataris	2%	8%	22%	68%
	Expats	4%	6%	19%	71%
Improving the quality of existing Open Government Data is more important than making new data available	Qataris	37%	44%	13%	6%
	Expats	37%	40%	14%	9%
Available Government Data is not sufficient	Qataris	22%	36%	19%	23%
	Expats	10%	26%	27%	37%
Open Government Data is difficult to use	Qataris	9%	28%	27%	36%
	Expats	5%	20%	29%	46%
It is difficult to download Open Government Data	Qataris	12%	28%	26%	34%
	Expats	7%	20%	24%	49%

The findings demonstrate that the majority of Qataris and expats believe that access to government data is restricted in Qatar. It is crucial that the Qatari government recognize that the public is not satisfied with the level of access. To improve this situation, the government should attempt to increase the availability and accessibility of government data. Open government data can help boost public trust in institutions by making it easier for citizens to obtain crucial information and by giving them the tools they need to make informed decisions. Moreover, in terms of improving the quality of OGD, it is highly recommended that policy-makers make sure that the data is cleaned regularly to guarantee accuracy and reliability. In terms, of the perceived ease of use, the Qatari government should make data available through standard open data formats that are easy to

understand and use and to provide training and resources to properly prepare OGD users are well prepared to comprehend and use OGD.

Figure V-2: Perceived Attitude towards Open Government Data

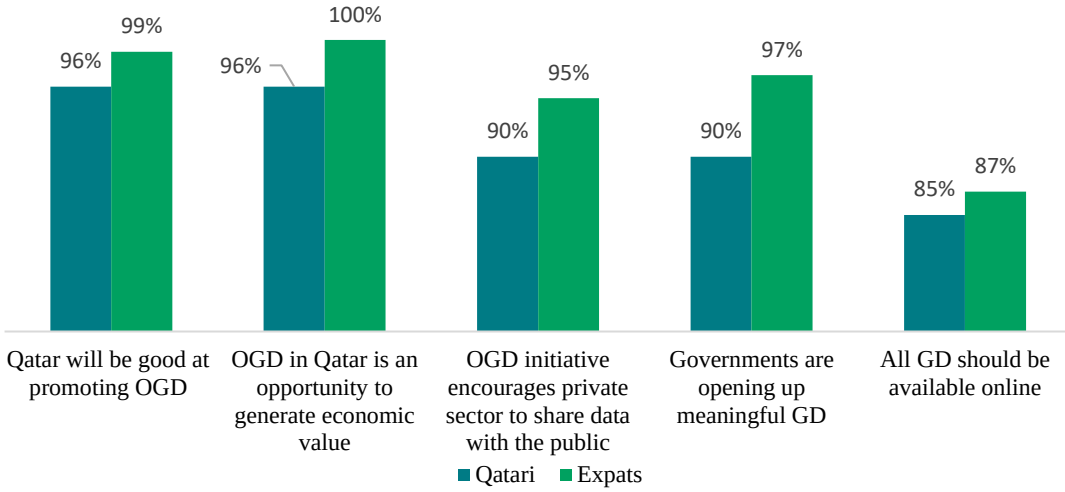


Figure V-2 shows that 96% of Qataris and 99% of white-collar expatriates agree that in five years from now, Qatar is anticipated to be well equipped to promote OGD. The results significantly vary depending on the education level of the respondents, only three quarters of those who never attended school agree that Qatar will be good at promoting OGD in five years in comparison to the utmost majority of all other respondents [76% who never attended school; 99% who hold a secondary of below; 98% who hold a post-secondary; 97% who hold a bachelor's degree and 98% who hold a postgraduate degree (p-value = 0.0000)]. Additionally, the prospects to generate greater economic value by leveraging the use of OGD through social innovation are recognized by 96% of Qataris and all (100%) of the white-collar expatriates.

Notably, 90% of Qataris and 95% of white-collar expatriates believe that the OGD initiative in Qatar will encourage the private sector to share their own data with the public. The results significantly vary by age groups of the respondents [89% for 24 years of age or younger; 95% for 25 to 34; 95% for 35 to 44; 95% for 45 to 54; 96% for 55 to 64 and 89% for 65 years of age or older (p-value = 0.0044)].

Furthermore, 90% of Qataris and 98% of white-collar expatriates provided an affirmative response that governments are opening up meaningful government data. The results also significantly vary among age groups of the respondents [92% for 24 years of age or younger; 96% for 25 to 34; 97% for 35 to 44; 97% for 45 to 54; 97% for 55 to 64; and 88% for 65 years of age or older (p-value = 0.0040)].

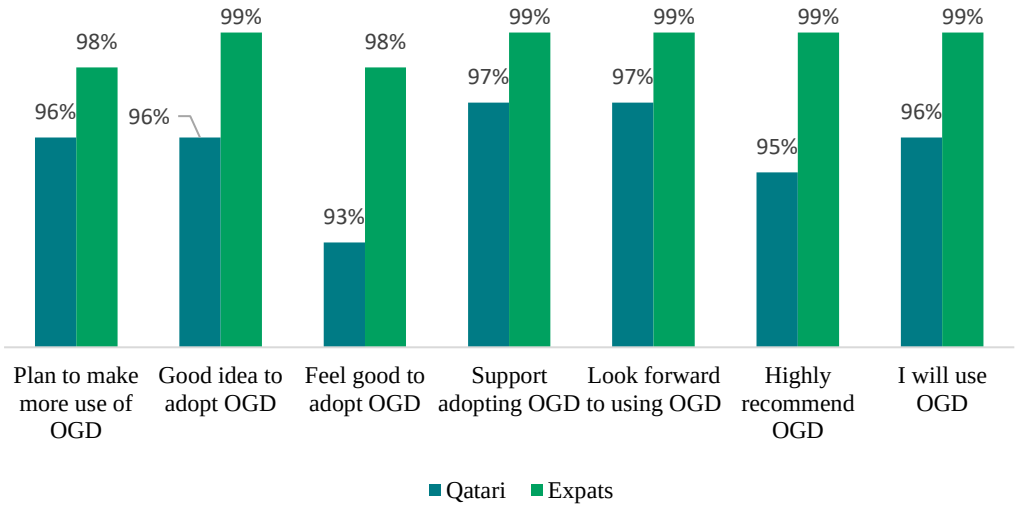
Lastly, 85% of Qataris and 87% of white-collar expatriates agree that all government data should be available online. Table V-2 below shows the breakdown of the responses to the statements related to perceived attitudes towards OGD.

Table V-2: Perceived Attitude towards Open Government Data

		Strongly Agree	Agree	Disagree	Strongly Disagree
Qatar will be good at promoting OGD five years from now	Qataris	70%	26%	3%	1%
	Expats	77%	22%	1%	0%
Use of Open Government Data in Qatar is an opportunity to generate greater economic value through social innovation	Qataris	72%	24%	3%	1%
	Expats	81%	19%	0%	0%
In Qatar, the Open Government Data initiative will encourage the private sector to share their own data with the public	Qataris	55%	35%	6%	4%
	Expats	63%	32%	3%	2%
Governments are opening up meaningful Government data	Qataris	47%	43%	6%	4%
	Expats	64%	33%	2%	1%
All Government Data should be available online	Qataris	60%	25%	10%	5%
	Expats	61%	26%	9%	4%

The findings demonstrate that the majority of respondents expressed high levels of confidence in the country's potential to advance OGD in the immediate and long term. It is highly recommended that Qatar keeps making long-term investments in technology to remain at the forefront of global innovation and support OGD.

Figure V-3: Intention to Adopt Open Data



The use of Open Government Data is highly endorsed among the citizens of Qatar and expatriates as shown in Figure V-3. The vast majority of Qataris (96%) and white-collar expatriates (98%) agree that they plan to make more use of OGD in the future, they believe it is a good idea to adopt OGD (96% of Qataris and 99% of white-collar expatriates). This is supported by the fact that the greatest majority of Qataris (93%) and white-collar expatriates (98%) feel good about adopting this kind of data. Similarly, the majority of Qataris (97%) and white-collar expatriates (99%) support adopting OGD and look forward to using it (97% of Qataris and 99% of white-collar expatriates). There is overwhelming support for using this data as almost all Qataris (95%) and white-collar expatriates (99%) highly recommend using this portal. This is embodied in the fact that almost all Qataris (96%) and white-collar expatriates (99%) are committed to using the Open Government Data portal regularly in the future. Table V-3 below shows the breakdown of the responses to the statements related to the intention to adopt OGD.

Table V-3: Intention to Adopt Open Government Data

		Strongly Agree	Agree	Disagree	Strongly Disagree
	Qataris	68%	28%	2%	2%

I plan to make more use of Open Government Data in future	**Expats**	**71%**	**27%**	**1%**	**1%**
I believe it is a good idea to adopt Open Government Data	**Qataris**	**77%**	**19%**	**2%**	**2%**
	Expats	**82%**	**17%**	**1%**	**0%**
I feel good about adopting Open Government Data	**Qataris**	**59%**	**34%**	**5%**	**2%**
	Expats	**74%**	**24%**	**1%**	**1%**
I support adopting Open Government Data	**Qataris**	**72%**	**25%**	**2%**	**1%**
	Expats	**80%**	**19%**	**1%**	**0%**
I look forward to using Open Government Data to meet the needs of work or life in the future	**Qataris**	**75%**	**22%**	**2%**	**1%**
	Expats	**79%**	**20%**	**1%**	**0%**
I highly recommend using Open Government Data to others	**Qataris**	**71%**	**24%**	**3%**	**2%**
	Expats	**78%**	**21%**	**1%**	**0%**
I will use the Open Government Data portal regularly in the future	**Qataris**	**64%**	**32%**	**4%**	**0%**
	Expats	**68%**	**31%**	**1%**	**0%**

The findings reveal that respondents intend to adopt OGD. It is encouraging to see that Qataris and white-collar expatriates appreciate the benefits of OGD and intend to use it to build more efficient and transparent public services. This is a step in the right direction for Qatar and its people since it will improve access to crucial information and resources, encourage more responsible decision-making, and foster a closer bond between the government and its population. Therefore, it is strongly recommended to promote OGD to enhance operations and services for both nationals and foreigners. OGD can assist in enabling citizens to more easily obtain correct and current information while also enhancing corporate performance by granting access to secure and reliable data. Furthermore, OGD can support greater accountability and openness in public institutions, supporting good governance.

VI. METHODOLOGY

Sample design

Like other countries in the Arab Gulf region, Qatar's population is divided into three distinct groups: Qatari nationals, white-collar expatriates, and blue-collar expatriates. The "white collar" expatriate group encompasses individuals typically engaged in professional, managerial, teaching, or administrative roles, usually in an office, cubicle, or other administrative settings. In contrast, the "blue collar" group consists of labor migrants working in construction, security, customer service, public-facing sales, transportation, household assistance (where they live with a family), or other service-oriented jobs. White-collar expatriates generally have higher educational qualifications and receive higher salaries and better benefits compared to the blue-collar group. Legal stipulations, mainly related to income, often prevent blue-collar workers from bringing their families to Qatar. They are much more likely to live in group quarters, shared accommodations, or at their employer's residence. In this survey, the target population include two population groups: Qatari nationals and white-collar expatriates. The target population exclude blue-collar expatriates, people who are less than 18-year-old, and those who do not live in Qatar during the survey reference period.

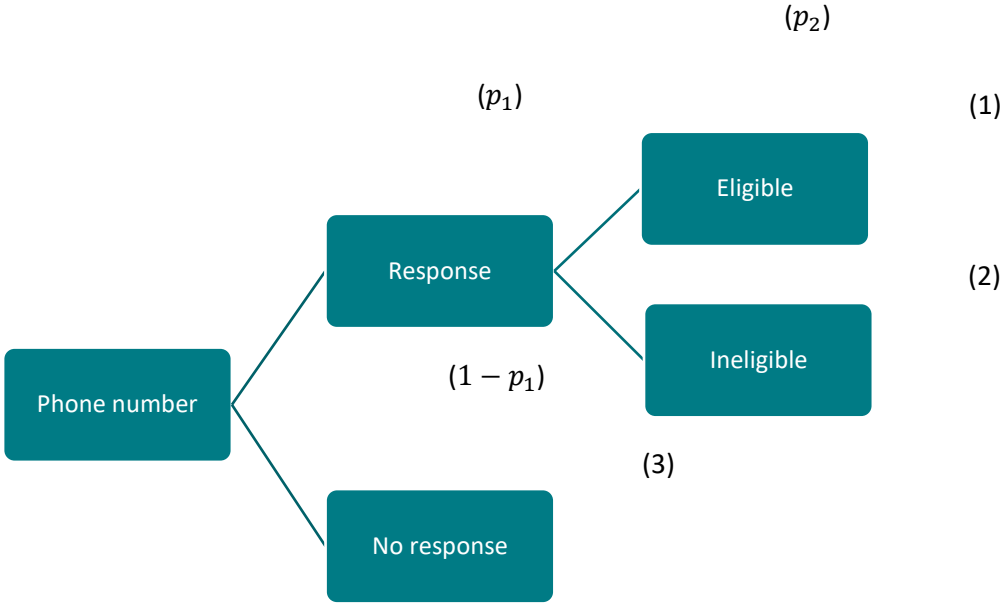
In Qatar, a vast majority (98%) of adults have access to at least one cell phone, irrespective of their work-related status or living arrangements.6 Accordingly, a wireless sample survey is expected to provide excellent coverage for this target population. Working with local cell phone providers in Qatar, SESRI has developed a cell phone frame suitable for the survey. The target sample for both waves included Qatari nationals as well as white-collar and blue-collar expatriates. A further screener ensured that all participants were 18 years of age or older and resided in Qatar during the survey reference period. The survey was conducted using a Computer Assisted Telephone Interviewing (CATI) system.

In a phone survey, the result (or disposition) from dialing a phone number can be described in two stages. First, we can get a response or no-response (e.g., non-working or disconnected numbers, immediate hang up or refusal) from the dialing. Then, in the second stage, a phone number with a response can be identified as eligible or

[6] This number is based on a face-to-face Omnibus survey conducted by SESRI in 2019.

ineligible (e.g., blue-collar expatriates, less than 18 years old) as shown in figure 1.

Figure VI-1: Dialing result (phone number states and probabilities)



According to figure 1, there are three possible states for a phone number. A phone number can be (1) an eligible person for the survey, (2) an ineligible person, or (3) a phone number with no-response. Since we do not know the state of a phone number prior to the survey (prior to dialing), the sampling process is conducted while the state of the phone number is unknown. Accordingly, a simple random sampling (SRS) can be quite inefficient and associated with high survey cost as a large number of sampled phone numbers may end up in ineligible or no-response states.

Based on the sampling literature originally developed to target rare population (e.g., racial or ethnic minorities, low-income households),[7]

[7] Waksberg, J. et al. 1997. Geographic-based oversampling in demographic surveys of the United States. *Survey Methodology*.
Sanchez, N. et al. 2009. Health care utilization, barriers to care, and hormone usage among male to female transgender persons in New York City. *Medical Journal of Public Health*.

SESRI has developed a sampling process to address this issue. First, using previous phone surveys, in which the states of the phone numbers have been identified after dialing, we apply a two-stage (or nested) logistic regressions corresponding to figure 1. In the first stage regression, the dependent variable is response or no-response, and in the second stage regression, the dependent variable is eligible or ineligible. For both regressions, the independent variables are derived from auxiliary information. Following these regressions, the probabilities p_1 and p_2 in figure 1 can be calculated as follows:

$$p_i = \frac{e^{x_i\beta_i}}{1 + e^{x_i\beta_i}}$$

where i is 1 or 2, x_i is a vector of independent variables, and β_i is a vector of estimated coefficients from the nested logistic regressions.

The probability for each state is the product of these two probabilities; that is, p_1p_2 for eligible, $p_1(1-p_2)$ for ineligible, and $1-p_1$ for non-response. Since the independent variables are derived from the auxiliary information, these probabilities can be extrapolated to all phone numbers in the frame. In other words, for every phone number in the frame, we can calculate its probability of belonging to state 1, 2, or 3. Next, using these probabilities we divide the frame into five strata in descending order of probability. The first stratum includes phone numbers that are most likely to be eligible while the last stratum consists of phone numbers that are least likely to be eligible (most likely including ineligibles and no-responses).

Finally, we construct a disproportionate stratified sample from these strata. The disproportionate allocation is important to achieve efficiency whereby a higher sampling fraction is applied to the stratum with a higher probability of eligibility. With this allocation, we can reduce the survey cost as the sample is more likely to contain eligible phone numbers. In fact, we can achieve an optimal allocation of the sample into these strata by solving the optimization problem in which the objective function is the variance of an estimated mean $Var(\bar{Y})$ and the constraint is the survey cost. The optimal sampling fraction derived from this optimization is:

Chen, S. and G. Kalton. 2010. Geographic oversampling for race/ethnicity using data from the 2010 US population census. *Journal of Survey Statistics and Methodology*.
Elliott, M. et al. 2013. Using indirect estimates based on name and census tract to improve the efficiency of sampling matched ethnic couples from marriage license data. *Public Opinion Quarterly*.
Kim, J., et al. 2014. Surname Sampling: Reevaluating Kim Sampling in Korea and the United States. *Field Method*.

$$f_h \propto \sqrt{\frac{P_h}{P_h(c-1)+1}}$$

where P_h is the proportion of the eligible phone numbers in stratum h, and c is the ratio of the data collection cost for eligible phone numbers to that of the ineligible phone numbers. Further details of this optimization problem and its solution can be found in Kalton (2009), Chen and Kalton (2010), Barron et al (2015).[8]

The phone numbers in the sample were released for interviewing in batches to ensure that the complete call procedures were followed for all numbers. For every phone number in the sample, there were up to eight attempts to complete the interview. The phone calls were made over different times during the day and different days of the week to maximize the chances of making contact with respondents. For phone numbers with break-off and soft refusal, dedicated interviewers would try to contact and convert them to completed interviews. Supervisors remotely monitored a proportion of calls to ensure quality control and adherence to strict protocols for reading the survey instrument. In accordance with Qatar's cultural customs, male interviewers did not interview females. Female interviewers continued interviewing a male respondent if willing to go through the survey. Otherwise, they would transfer the case to the "male only" group of interviewers. The following table shows the disposition of all dialed phone numbers during this survey.

Table VI-1: Calling dispositions

Disposition	Freq.
Completed	1426
Not completed	13784
Eligible	2967
Ineligible	8958
Unknown eligibility	1859
Raw response rate (RR1)	22.8%
Adjusted response rate (RR2)	28.5%

[8] Kalton, G. 2009. Methods for oversampling rare subpopulations in social surveys. *Survey Methodology*.
Chen, S. and G. Kalton. 2010. Geographic oversampling for race/ethnicity using data from the 2010 US population census. *Journal of Survey Statistics and Methodology*.
Barron, M. et al. 2015. Using auxiliary sample frame information for optimum sampling of rare population. *Journal of Official Statistics.*

On the basis of table 1, the response rates were calculated using standardized coding and interpretation procedure for different calling dispositions as set by the American Association for Public Opinion Research (AAPOR, 2015). Completed responses included those who finished the whole survey questionnaire. Those who did not complete the survey interview were divided into three categories: eligibles, ineligibles, and unknown eligibilities. Eligibles included Qatari nationals and white-collar expatiates who refused to participate in the study and those who agreed to an appointment, but the appointment was not fulfilled upon follow-up. People who completed part of the interview were also included in this category. Ineligibles included mostly blue-collar expatriates (or labors) and those under 18 year olds. Unknowns consist of phone numbers with no answer. Those who immediately refused to participate in the survey and interviewers were unable to identify their eligibility were also included in this category.

We report two response rates in the last two rows of table 1. First, the raw response rate is the ratio between the number of completes and total sample sizes after excluding ineligibles: $RR1 = \frac{C}{C+E+UE}$ where C is the number of completes, E is the number of eligible responses, and UE is the number of unknown eligibility. Second, the adjusted response rate is $RR2 = \frac{C}{C+E+eUE}$ where e is the estimated proportion of eligibilities which is given by this expression $e = \frac{C+E}{C+E+IE}$ where IE is the number of ineligibles.

With the numbers of completes presented in table 1, the maximum sampling error for a percentage is 3.5%. The calculation of this sampling error takes into account the design effects. One possible interpretation of sampling errors is: if the survey is conducted 100 times using the exact same procedure, the sampling errors would include the "true value" in 95 out of the 100 surveys. Note that the sampling errors can be calculated in this survey since the sample is based on a sampling scheme with known probabilities.

Calculation of data weights

Following the data collection, we calculate the weight for each completed response. There are three components in this calculation: (1) the base weights reflecting the sample selection probability, (2) the adjustment factors to account for the non-response, and (3) the

calibration to make the survey results in line with the population parameters. Additionally, we use weight trimming since highly variable weights can introduce undesirable variability in statistical estimates.[9]

First, the base weights are the inverse of the selection probability of the unit in the sample. Due to the disproportionate sampling as described in the sample design, the selection probabilities are needed to ensure unbiasedness in the analysis.

$$W_{base} = 1/p$$

where W_{base} is the base weight for the phone number, p is the probability of selection.

Second, assuming the responding and non-responding units are essentially similar with respect to the key subjects of the investigation, the base weights can be adjusted to account for the non-response by this formula:

$$W = \alpha W_{base}$$

where $\propto$ is called the adjustment factor for non-response which is derived from the propensity that a sampled unit is likely to respond to the survey.10

Third, calibration is used to make results in line with the population parameters. This calibration can help reduce the effect from non-response and under-coverage of the sampling frame. SESRI uses a "raking" method in the calibration to adjust the weights of the completed responses so that the proportions of the adjusted weights on certain characteristics (such as marital status, gender, and age groups) agree with the corresponding proportions for the population.

Questionnaire development

The questions were initially designed in English and then translated into Arabic and other languages by professional translators. After the translation, the translated versions were carefully checked by

[9] Weight trimming can reduce variance but increase bias in the statistical estimates. Therefore, weight trimming should only be applied to cases with very large values of weights. The goal is to reduce the overall mean squared errors. Further details can be seen in this paper: *Potter, F. (1990). A Study of Procedures to Identify and Trim Extreme Sampling Weights. Proceedings of the Section on Survey Research Methods, American Statistical Association, 1990, 225-230.*

[10] We use propensity weighting to adjust for the non-response. A good discussion of this method can be found in Varedian M. and G. Forsman (2003), "Comparing propensity score weighting with other weighting methods: A case study on Web data" In Proceedings of the Section on Survey Statistics, American Statistical Association; 2003, CD-ROM

researchers who are fluent in English and the other language. Next, the questionnaire was tested internally inside SESRI. This allows the project team to learn whether respondents were able to understand and answer the questions, and to identify important concerns that affect responses to the questions.

After making necessary changes to the questionnaire based on this internal pre-test, the survey was programmed into CATI (Computer Assisted Telephone Interview) system using the software BLAISE. After debugging the program, a face to face pre-test on a small number of people was conducted. This pretest gives valuable information to refine question wording, response categories, introductions, transitions, interviewer instructions, and interview length. Based on this information, the final version of the questionnaire was created and then programmed into CATI for the fieldwork.

Survey Administration

SESRI is strongly committed to equipping interviewers with proper interviewing techniques, field procedures, and an understanding of the fundamentals of academic survey research. This comprehensive training ensures the highest quality of data collection. We achieve this through continuous interviewer training, robust support during field production, strict adherence to quality through monitoring protocols, and real-time evaluation of interviewing activities using advanced technology. Every interviewer receives general training on standard, fully structured academic interviewing protocols,11 hands-on training on effective use of the CATI system, and project-specific preparation before each survey. These sessions delve into academic survey research interviewing fundamentals, standard protocols for administering case dispositions, and incorporate practical phone interview exercises.

Throughout the data collection phase, SESRI's call center implements a stringent monitoring protocol. This includes supervisory oversight in the calling lab, audio and video monitoring, and statistical analysis of interviewer behavior using both survey data and paradata collected on interviewer behavior (time per question, movement within the questionnaire, path and branching behavior, disposition selection).

[11] These procedures are outlined comprehensively in Patricia A. Gwartney, *The Telephone Interviewer's Handbook: How to Conduct Standardized Conversations*. Jossey-Bass, 2007)

These measures help ensure that questions are asked appropriately and responses are accurately recorded by interviewers.

Data Management

After data collection, all individual interviews were merged and saved into a single BLAISE data file. In compliance with the standards set by the Institutional Review Board (IRB) Committee at Qatar University and the best practices in academic survey research, we removed all identifying information, such as telephone numbers, from the dataset to preserve confidentiality. We then cleaned, coded and converted this anonymized dataset into the STATA (Statistical Software for Data Science) format. Having weighted the final responses to adjust for probability of selection and non-response as detailed above, we undertook univariate, bivariate, and multivariate analyses. SESRI's data is safeguarded by our dedicated IT unit in collaboration with Qatar University's Information Technology Services (ITS). Moreover, the data resides securely on Qatar University servers, managed by the university's data security specialists. SESRI is an ISO 9001:2015 Quality Management Standards-compliant organization.

CONCLUSION & RECEMMENDATIONS

The main findings of this study can be outlined in the following points:

- There is quite very low level of awareness when it comes to OGD as a concept and as a tool to be used by respondents. The respondents were asked to report using the website for specific purposes, such as: making business decisions, choosing school for their kids, and statistical analysis. The majority of respondents, regardless of nationality, reported to have never utilized the website for any of the above. The same discovery is repeated in the area of OGD applications as when asking the respondents' if they have used the Qatar Statistics application for example, most of the respondents' said they have never used it. The lack of usage of such applications could be because of the lack of awareness of this OGD-based application, and what it offers. It is highly recommended that the Qatar Planning and Statistics Authority promote the application to raise the awareness of Qataris and white-collar expatriates of the application and encourage them to use it in order to support the open government data initiative in Qatar. Thus, more and more awareness campaigns are must for further utilization of the OGD systems.

- There is high level of trust and optimism amongst respondents that OGD had the capacity and capability to help them to engage more effectively with government entities. The study results revealed that most Qataris and white-collar expatriates perceive open government data as advantageous to their lives, in part because it has the ability to promote transparency in the provision of public services and in part because it has the capacity to aid in public policy decision-making. The majority of all respondents positively rated that open government data and government agencies in Qatar is trustworthy and they trust the government to keep these data safe. The results of the survey indicate that the Qataris and citizens believe that the open government data portal in Qatar is trustworthy and accessible. Based on the survey's findings, it is strongly advised that Qatar keep developing and enhancing its OGD platform. This will improve the portal's credibility and usability even more. Qatar should also make sure that all information on the portal is safe and that it is regularly updated and modified with fresh, reliable

information. This shows that Qataris and white-collar expatriates in Qatar are prepared to utilize OGD in their daily lives. Thus, government of Qatar needs to maintain its effort in ensuring that the data are adequately managed and utilized to realize the benefit amongst its users of citizens and expatriates.

- There are many current challenges when it comes to the quality and quantity of the actual data offered in OGD systems. It is important that the data sets permit a user-friendly interface for the data sets to be re-used as many barriers make it difficult for users to leverage the full potential of open government data. Based on the results of current study, majority of respondents agree that improving the quality of existing open government data is more important than making new data available. Furthermore, most respondents agree that the available government data is not sufficient, and indicate that they are very difficult to be used. Thus, more hands-on training sessions and courses are needed for a better utilization of OGD data. Moreover, in terms of improving the quality of OGD, it is highly recommended that policy-makers make sure that the data is cleaned regularly to guarantee accuracy and reliability. The Qatari government should make data available through standard open data formats that are easy to understand and use and to provide training and resources to warrant that OGD users are well prepared and equipped to comprehend and use OGD.

- The use of Open Government Data is highly endorsed among the citizens of Qatar and expatriates. The vast majority of Qataris and white-collar expatriates agree that they plan to make more use of OGD in the future, and they believe it is a good idea to adopt. Similarly, the majority of respondents support adopting OGD and look forward to using it. There is overwhelming support for using this data amongst majority of respondents. The findings reveal that respondents intend to adopt OGD. It is encouraging to see that Qataris and white-collar expatriates appreciate the benefits of OGD and intend to use it to build more efficient and transparent public services. This is a step in the right direction for Qatar and its people since it will improve access to crucial information and resources, encourage more responsible decision-making, and foster a closer bond between the government and its population.

Therefore, it is highly recommended to promote OGD to enhance operations and services for both citizens and expatriates in the country. OGD can support greater accountability and openness in public institutions, supporting good governance.

Overall, governments in general can capitalize on the tremendous benefits that OGD can provide not only to promote transparency in the country, but also to increase civic engagement and enhance the overall public trust in the country.