The Status of the Bring Your Own Device (BYOD) in Saudi Arabia: Dataset

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Summary

The paper brings across data that is utilized in the Bring Your Own Device (BYOD) status collected between February and April of 2021 across Saudi Arabia. The data set was collected using questionnaires established through online mechanisms for the respondents. In the questionnaire, personal details included five questions while seven questions addressed the working model of personal mobile devices. Six questions addressed the awareness of employees bring your own device awareness for employees comprised seven questions and two questions addressed the benefits of business achievements. In the identification of suitable respondents for the research, two approaches were applied. The research demanded that the respondents be Saudi Arabian nationals and have attained 18 years. Snowball and purposive techniques were applied in the collection of information from a wide area of Saudi Arabia while employing social media approaches that include the use of WhatsApp and emails in the collection of data. The approach ensured the collection of data from 857 respondents used in the identification of the status as well as issues across the BYOD environment and accompanying solutions. The data was also used in the provision of awareness in the community through short-term courses, cyber security training and awareness programs. The results of the research are therefore applicable to the context of the Saudi Arabian country that is currently facing issues in dealing with the application of personal devices in the work environment.

Keywords:
Bring Your Own Device (BYOD), Information Management, Saudi Arabia.

1. Specifications Table

Subject	Computer science, cyber security, and mobile device management
Specific subject area	Bring Your Own Device (BYOD), privacy, security

How the data were acquired	Google forms are the main mode of data collection as used by the researcher through the establishment of surveys. The questions posted are distributed across different files.
Data format	Raw, Analyzed and Filtered
Para meters for data collection	The research attracted 857 Saudi nationals in responding to the questionnaire. The respondents are drawn from various backgrounds that studied different age groups across three months running from February to April 2021 the targeting population over 18 years.
Description of data collection	Snowball and purposive sampling techniques are applied in the research in arriving at the specific respondents for the questionnaires. The research settled on Saudi nationals to ensure that the data is specific to the local context. The limitations of resources for the research also contained the data collection to Saudi Arabia. Cost-cutting measures brought forth the dissemination of questionnaires using social media – emails and WhatsApp.
Data source location	13 Regions of Saudi Arabia
Data accessibility	the data collected will be available online using the following link: https://data.mendeley.com/datasets/3kkrsw92s8/1
Related research article	Papers in the references [5-9]

2. Value of the Data

The data brings forth new information that covers the awareness of Saudi's various sectors not attended to in previous research papers. For example, the data addresses the perception as well as identification of the people on the ground as well as the various regions in which the expertise in the field of technology is attended to properly.

The data will be crucial for government sectors such as the ministry of communication and information technology in addressing the issues raised under the umbrella of the national cybersecurity platform in Saudi Arabia. Further, the data is critical for researchers in the field of cyber security in the establishment of proper privacy and home security concerns.

The data remains strategic for the authors, researchers and the authorities targeting to improve the levels of awareness associated with data privacy across BYOD.

The same data is applicable in educational programs through undertaking numerous training and the establishment of short courses that are related to the area of cyber security.

3. Data Description

The main target of the questionnaire was a choice of 857 respondents in Saudi Arabia. The choice of the respondents arises from a mixed region in the country and different backgrounds. The main idea of the choice of respondents is to bring forth a diverse nature of knowledge and attitude associated with the advancement of technology in society. The collection of the data set took 3 months with a close look at the survey showing that the information was categorized across five sections. The main sections as elaborated are as follows:

1. Five questions that collet personal information from the respondents. The information includes age group, gender and the level of education as varying across the target population. The questions also covered the functional status and the organization in which the respondent is working for.

2. Questions on BYOD awareness that aim to assess the nature of the identity of the respondents and associated knowledge with technological devices. The section has seven questions and addresses the knowledge, devices, placement and the functionality using a descriptive approach as elaborated on Table 2.

3. The third part is concerned with the opinion and awareness of the employees using six questions. The sic questions are designed using the Likert scale with the answers seeking either agreement or disagreement with the statements provided on a range of 1 to 5. The illustration of the same is shown in Table 3.

4. The next section assesses the opinion and awareness of the organization using a range of seven questions. In the same approach, the questions are assessed on a Likert scale, with agreeableness or disagreeableness graded from 1 to 5 as illustrated on Table 4.

5. The last section identifies the work as accomplished using BYOD and the benefits accruing to the organization. The same Likert approach is used in this section as illustrated on Table 5, asserting on a scale of 1 to 5.

Table 1. A Questionnaire on the Use of Personal Devices in the Completion of Work and Functions (N=857)

Variable	Description	Total	Percent
Age group	From 18 to 25 years old	41	5%
	From 26 to 35 years old	193	23%
	From 36 to 45 years old	395	46%
	From 46 to 55 years old	173	20%
	From 56 to 65 years old	55	6%
Gender	Male	745	87%
	Female	112	13%
Educational level	Preparatory school	6	1%
	Secondary school	54	6%
	Diploma	65	8%
	Bachelor's degree	398	46%
	Master's degree	221	26%
	Ph.D.	113	13%
Functional status	Employee	734	86%
	Free Business	29	3%
	Student	32	4%
	Unemployed	10	1%
	Retired	52	6%
The organization you belong to	Government sector (public)	212	25%
	Government sector (health)	268	31%
	Government sector (education)	199	23%
	Private sector (public)	115	13%
	Private sector (education)	17	2%
	Non-profit sector	36	4%
	Government sector (public)	10	1%

Table 2. Using your personal device at work (N=857)

Variable	Description	Total	Percent
Do you use your personal device to accomplish your work and functions?	Yes	681	79%
	No	176	21%
Do you bring your personal device to the workplace to accomplish your work and functions?	Yes	417	61%
	No	264	39%
Do you use your personal device outside the workplace to accomplish your work and functions?	Yes	613	90%
	No	68	10%
Have you heard of the term "Bring Your Own Device" (BYOD) before?	Yes	184	21%
	No	673	79%
The special device provided to you by your organization and used to accomplish your functions in the workplace (more than one answer can be chosen):	Desktop Computer	592	51%
	Laptop	270	23%
	Tablets	48	4%
	Smartphone	135	12%
	Nothing	117	10%
	Other	10	1%
Personal devices you own (more than one answer can be chosen):	Desktop Computer	256	13%
	Laptop	662	33%
	Tablets	310	16%
	Smartphone	759	38%
	Nothing	4	0%
	Other	2	0%
Type of functions in which you use your personal device (more than one answer can be chosen):	Transaction Completion	382	21%
	Following up email	486	26%
	Using the organization's internal electronic systems	336	18%
	Following up and fulfilling orders	349	19%
	Following up the workflow and the performance of the employees	254	14%
	Other	52	3%

Table 3. In regards to employees (N=857)

Variable	Description	Total	Percent
I support my organization's administration approval to accomplish work and functions by using my personal device.	Strongly Agree	231	27%
	Agree	230	27%
	Neutral	158	18%
	Disagree	158	18%
	Strongly Disagree	80	9%
I support the use of my personal device to accomplish work and functions within the workplace.	Strongly Agree	194	23%
	Agree	241	28%
	Neutral	141	16%
	Disagree	199	23%
	Strongly Disagree	82	10%

Variable	Description	Total	Percent
I support the use of my personal device to accomplish my work and functions outside the workplace.	Strongly Agree	273	32%
	Agree	293	34%
	Neutral	118	14%
	Disagree	109	13%
	Strongly Disagree	64	7%
The use of personal devices makes it easier to accomplish administrative tasks than working on office devices owned by organizations.	Strongly Agree	290	34%
	Agree	271	32%
	Neutral	177	21%
	Disagree	84	10%
	Strongly Disagree	35	4%
The Corona pandemic has increased the tendency of employees to accomplish tasks and administrative work related to their jobs through their personal devices.	Strongly Agree	451	53%
	Agree	282	33%
	Neutral	85	10%
	Disagree	28	3%
	Strongly Disagree	11	1%
There may be security risks for employees because of insufficient IT support by organizations.	Strongly Agree	424	49%
	Agree	308	36%
	Neutral	83	10%
	Disagree	31	4%
	Strongly Disagree	11	1%

Table 4. In regards to organizations (N=857)

Variable	Description	Total	Percent
It is important to allow employees to use personal devices to accomplish tasks and administrative work.	Strongly Agree	237	28%
	Agree	292	34%
	Neutral	173	20%
	Disagree	105	12%
	Strongly Disagree	50	6%
Using personal devices to accomplish tasks and administrative work helps reduce costs.	Strongly Agree	276	32%
	Agree	346	40%
	Neutral	149	17%
	Disagree	52	6%
	Strongly Disagree	34	4%
Using personal devices to accomplish tasks and organized administrative work helps provide sufficient flexibility for employees during work hours.	Strongly Agree	300	35%
	Agree	350	41%
	Neutral	137	16%
	Disagree	49	6%
	Strongly Disagree	21	2%
Using personal devices to accomplish tasks and organized administrative work helps increase employee productivity.	Strongly Agree	281	33%
	Agree	330	39%
	Neutral	164	19%
	Disagree	58	7%
	Strongly Disagree	24	3%

Variable	Description	Total	Percent
Using personal devices to accomplish tasks and organized administrative work helps increase employee job satisfaction and motivate them to work.	Strongly Agree	236	28%
	Agree	292	34%
	Neutral	212	25%
	Disagree	77	9%
	Strongly Disagree	40	5%
It's important to have regulations and policies related to the implementation of tasks and administrative work on personal devices within the workplace.	Strongly Agree	378	44%
	Agree	305	36%
	Neutral	126	15%
	Disagree	32	4%
	Strongly Disagree	16	2%
There may be security risks to the organization's systems and data due to the unregulated use of personal devices in organizations.	Strongly Agree	446	52%
	Agree	309	36%
	Neutral	79	9%
	Disagree	17	2%
	Strongly Disagree	6	1%

Table 5. In regards to accomplishing work (N=857)

Variable	Description	Total	Percent
Using personal devices to accomplish tasks and administrative work has various benefits for employees and organizations.	Strongly Agree	238	28%
	Agree	383	45%
	Neutral	153	18%
	Disagree	62	7%
	Strongly Disagree	21	2%
The employee's knowledge of the basic requirements for the work of his personal device helps more to raise the level of achievement of tasks and administrative work.	Strongly Agree	289	34%
	Agree	362	42%
	Neutral	153	18%
	Disagree	37	4%
	Strongly Disagree	16	2%

4. Experimental Design, Materials and Methods

The main approach for the research involves conducting a survey using a questionnaire that looks into the levels of user awareness on the privacy and security accorded to BYOD devices. In the 857 observations recorded from a wide variety of respondents between February and April 2021. In administering the survey, the research made use of google forms responsible for collecting the information across respondents in different regions. The main criteria for the choice of respondents were adherence to 18 years age limit while the other main requirement was necessary to be a Saudi citizen. As far as the collection of the data was concerned, the researcher made use of google forms connected directly to the google accounts of the respondents and hence the respondents only submit data once. Meeting the requirement of the researcher was verified using creation of a mail list among all the participants especially those using BYOD devices. Encouraging the participation

in the survey was made possible by employing the use of other social media applications such as WhatsApp. Social media mainly invited the participants based on the personal connections established, but also adhered to the protocol mentioned for the research. A few individuals were called upon to disseminate the link to the survey to close colleagues, friends and family in order to achieve the desired number of participants. However, the participation was established without the need for coercion and only willing participants were engaged. The researcher appreciated the participants who agreed on the collection of data and after the sub mission of data, an appreciation message was sent al across. At the end of the data collection period, the survey was disabled online and not accepting any further responses. Finally, the research was able to achieve a total of 857 responses as downloaded from the filled survey forms online.

The researcher references some of the studies that arise from specific people based on grouping on the same subject. However, a scrutiny of the studies shows that there was limitation sin the ability to focus on the entire population and hence lacked the ability to come up with conclusive remarks that address the problems associated with BYOD from a privacy and security perspective. The research therefore brings forth new approach from the motivation that comes from an innovative approach of organizations to employ BYOD. The benefits associated with the acceptance of use of the technology model offers an avenue to identify the problems concerned with use of technology across different employee platforms in Saudi Arabia. Hence, the design of the questionnaire is inspired from the above gaps and hence the questionnaire was translated into both English and Arabic in order to effectively address the emerging issues. An evaluation of the questionnaire was necessary which showed a content validity index of 0.83 in an examination of the reliability of the survey, the research employed the Cronbach's Alpha that resulted in an overall coefficient of 0.863.

5. Ethics Statements

The ethical approval for conducting the survey was taken from the Emirate of Makkah Province and King Abdulaziz University with the reference number from the office as MDP-IRI-13-2020. One of the main ethical considerations of the research asserts on ensuring that the respondents remain anonymous, despite the total voluntary and consent of the respondents.

6. Supplementary Materials

All the materials as used in the research are references and further primary data as collected from the respondents available on the following link: https://data.mendeley.com/datasets/3kkrsw92s8/1

7. Declaration of Competing Interest

The research is totally funded by the researcher and did not receive any additional resources from specific institutions or organizations. Further, the researcher declares that the research is purely based on individual merit and lacks bias of influence from any organization or institution in a manner purporting to distort the findings of the research. At the same time, there were no completing sources of resources or interests influencing the process of carrying out the research in any way.

8. Credit Authorship Contribution Statement:

Khalid Almarhabi, Ahmed Mohammed Alghamdi, and Adel Bahaddad: Ideology, Approach Design, Software used, Data Analysis, Actual Draft Creation, Editing and Review Draft Versioning, Organization of information, Research on the cause, Visualization.

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