

Technical Challenges and Solutions on WFH during COVID-19 Pandemic for Financial Institution Workers: An exploratory study on Nepal

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ABSTRACT

The COVID-19 pandemic hit the world very badly and most of the countries around the globe have taken serious action like lockdown to mitigate the spread of the virus. Due to this, every business, sectors, fields etc. have impacted their work culture and seeking the alternative way to continue their jobs even in the pandemics. The safest way to continue work based on WFH concept and many organizations follow the same with optimum utilization of their resources and Financial Institutions on Nepal also provides permissions to WFH to their employees as per the guidelines provided by central bank of Nepal i.e., Nepal Rastra Bank. Banking and financial organization provides the financial services even in the lockdown period and the employees have encouraged to WFH and continues the services to their customers. The sudden widespread of such pandemics shift the working culture into teleworking and encourage employees to work safely and effectively. But at the meantime, the banks and FI faced the more technical challenges to operate the WFH for all the employees and given the appropriate resources to conduct such platform. Such pandemic also provides an experienced on WFH modality so that financial organization realizes on how effective the model works and measures the productivity. So, this exploratory study mainly examines the technical challenges associated with WFH concept and study about how the working culture shift from onsite to WFH, technical huddles to operate WFH, implications of WHF, how the policies and procedures to support WFH and provide the appropriate solution based on the findings of technical challenges. Also critically examine the relationship between pandemic and WFH and how they behave the employees of FIs so that the optimum benefit can be achieved.

Many work alternatives were improvised to adopt based on their flexibility and feasibility where remote working is one of the most promising technologies to deploy for the quick response. This study is conducted to review the published data and findings on the implementation of WFH modality of working culture during the period of COVID-19 for Financial Institutions employees mostly focusing on the technical aspect and its challenges associated with it to adopt. 30 Papers from different national level implementations of WFH with the adaptation and integration review were taken as the references. The identified papers were screened and reviewed based on implementation of WFH and its significance to the FIs employees at crisis time like Pandemic.

Keywords: *WFH, COVID-19, Financial Institution*

1. INTRODUCTION

Information technology and its value on uses towards the field of operating work culture in the office environment has leverages one of the most important aspects of gradually shrinking the physical work space and increasing the importance of virtual platforms day by day. Adaptation of the technology in the field of working procedure and culture can have more significance on the various crisis situations and pandemics like COVID-19. The pandemic caused by outbreak of COVID-19 has challenged the society in many ways regarding the existing lifecycle which need to be reconstruct to adopt the situation by considering wide range of practices from onsite work to work remotely, virtual meeting, avoid traveling frequently, social distancing and encourages to use teleworking most often.

WFH simply uses the internet connectivity to connect their workspace remotely and is known as telecommuting. The use of telecommuting mostly associated with the involvement of information

technology and its adaptation even at the period of pandemic has also risen because of its flexibility and safest way of conducting regular work comes up with the prediction that around 34% of the business leader will be used telecommuting by the end of 2020 (Douglas W. Diamond & Raghuram G. Rajan, 2000)The lockdown period due to pandemic caused by the COVID-19 has extended continuously and predicted to happen some more time (Andersen, 2020)than pre pandemic and most of the organization have influenced their employees to continue their jobs remotely as considered telecommuting unknowing having its impact, uses, challenges, benefits and other implication hurdles as correlated of the job nature (Academy of Human Resource Development Conference, Feb, 2013,, 2013)The implementation of WFH has been popular and gradually gaining the popularity of its uses in long term day by day and many of the organization focuses to adopt such concept considering the health safety of the employees.

Looking at the data, over 35% of the US employees used telecommuting by the end of May 2020 and this data was increased by 8.2% of what they used in Feb. Meanwhile the work effectiveness of the employees has also risen to 71.7% while using the WFH as that the study suggests (Bick, 2020). Uses of WFH and its adaptation by the organization can achieve multiple benefits and advantages like no need of office space, avoiding the gossips and politics at physical meetup, flexibility and easy way to commute and operate, safety on health, productivity improvements over satisfaction of the nature of jobs, gender diversification on the jobs with higher motivation etc. along with the optimum utilization of time and travel benefits that the employee also take advantages over freedom on workspace centric job (Payne, 2014)

Economic and social prosperity are the main important aspects associated with the financial economy and capital from individual to company (Berger, 2020). The pandemic caused by the COVID-19 has been changing so many things in the banking system that the operation of the branches to be carried out with limited no of staff and not to close all the branches for the essential services of the banks. At some point, the bank's business continuity policy has some challenges on functioning of operational aspects of different departments like treasury, SWIFT, Operation, HR, Credit, IT, Compliance/Risk in offering the virtual platform to be carried out (KPMG, 2020). Resilience and adaptability are the keen factors in the digitalization of banking processes which leverage the banking services to their customers by modernizing the IT environment with respect to customer's experience and satisfaction. Later, Nepal's central bank issued a clear policy encouraging financial institutions to allow their staff to WFH (Nepal Rastra Bank, 2020). The continuous rise of COVID-19 cases and the pandemic that happened imposed the lockdown for the people, companies and organizations which emphasize the use of the WFH concept knowingly and unknowingly. As a result, most of the organizations and companies faced the challenges over technicality and fundamentally to adopt the new form of teleworking concept. Technical, policy level, implementation, security and many other challenges are present in the operational perspective of WFH modality where the employees are connected via the internet.

1.1 Problem Statement

Various research studies have been conducted in the areas of remote working culture with the well integration of technological fields by using both employees and employers to continue work remotely and the concept is known as WFH during the crisis time of COVID-19. Because the concept is new, the problems and possibilities have equally relied on adopting and implementing the process during a pandemic such that many possibilities can be emerged and also questioned about the field of technical hurdles associated in it which have been expressed by the model TAM. A part of various challenges, the research has been conducted in various geo locations and countries like China, US and Hong Kong, the actual research is conducted for the FIs sector of Nepal to find out the scope and limitation of implementing the concept in which the finding can affect the result of analysis in the organizations.

Some of the primary technical issues addressed by global researchers in the realm of the WFH concept and its implementation concerns include:

1. How does the impact of working from home during COVID-19 pandemics affect the work and life domains?
2. In the United States, what are the effects of telework? ((Lister, 2019))
3. During COVID-19, what are the technical issues and obstacles of telecommuting? (Lister, 2019)
4. What are the drawbacks of working from home in terms of cybersecurity? (Furnell, 2020)
5. What cybersecurity precautions are envisioned in the event of a pandemic? ((Ramadan, 2021)

Because there have been very limited studies to cover up the findings of WFH model and its architecture lagging to justify the deployment process in the FIs present in Nepal, some feasible solutions have been suggested to address the concerns and problems that have arisen.

1. The majority of study about technical aspects has been conducted internationally, and very limited resources of any analogous finding present in the context of Nepal to adopt the WFH model.
2. Limitations on experiencing and covering the technical aspects and the difficulty of engaging while researching WFH and its applications and impact during the COVID-19 crisis period.
3. Financial firms, in particular, have a greater requirement to connect remotely to their workspace, and adequate standards and policies must be in place for a stronger security approach and framework resiliency.

1.2 Research Questions

The dissertation will be based on the results obtained from a primary survey. The respondent will be selected as both technical as well as non-technical background based on the Kathmandu in which the uses of WFH modality and the adaptation of the technology directly depends on its operability and technical feasibility on the daily use.

1. Is there a relationship between reliability on infrastructure and WFH?
2. Is there a significant relationship between technical readiness/challenges and WFH?
3. Are financial institution's employee satisfied and willing to continue WFH during and even after COVID-19 pandemic?

The above dissertation examines and discusses the financial organization's implementation of the WFH idea in Nepal, as well as how it operates during the COVID-19 pandemic crisis and the technical hurdles and obstacles that come with it. This is a brand-new topic for researchers, and no one has done much research into it in the Nepalese setting. For a better knowledge of the WFH modality, the study and research penetrate the various technical challenges and its impact on implementation of its use case scenario at the time of COVID-19.

1.3 Research Objectives

The major goal of this research technique is to discover and assess the actual technical hurdles and difficulties that financial institution personnel in Nepal faced when implementing the WFH concept during the Covid-19 outbreak. For the employees safety from COVID-19 viruses and need of organization to continue their daily operation forces to adopt the new form of technology and encourages their employees to adopt quickly as working remotely. As a result, the research focuses on the core concept of working from home, its viability in contemporary circumstances, and the technical obstacles that come with executing it. This study focuses on the technical part of remote working culture in order to make the framework more relevant and realistic in a nation like Nepal. The study also examines the

impact of COVID-19 on remote working mechanisms, as well as the benefits and drawbacks of using it for employees of financial institutions.

The main objectives of this research as states as:

1. To determine whether there is a relationship between reliability on infrastructures and WFH
2. To examine whether there is a significant relationship between technical readiness/challenges and WFH
3. To study the technical attributes affecting the long-term adaptation of WFH even after COVID-19 pandemic

1.4 Scope of Research

The research is primarily concerned with the technical aspects of the WFH concept, as well as the different technological problems encountered from the start of the procedure through the completion of a more result-oriented output during the COVID-19 pandemic crisis. In terms of technicalities, the topic's reach can be broadened while delving in-depth on how to adopt, use, automate, and apply processes. The goal of such an exploratory topic for financial organization employees is to talk about the current culture and circumstances and how to implement the WFH concept with few huddles and simplicity of use to achieve the best results.

1.5 Significance of Research

The research is significant on the technical challenges associated with the adaptation and implementation of WFH along with its impact on the working culture at the time of crisis time like pandemic hits by COVID-19 and how such implications can be identified, analyze and eliminate with collaborating industry best practices, guidance, policies and procedure. The major significance of this research identifies the relationship between technical aspects of deploying WFH and how such variables hit the employees and employer of the organization to achieve the optimum benefits.

The WFH model is directly associated with the technical, operational, compliance, governance, financial, architectural and other cross-industrial factors within the FIs. The collaboration with various factors will provide the significant aspect of using this and its challenges while implementation so that the actual insight can be achieved in terms of productivity, satisfaction and challenges. Different private and public sectors with different business prospects other than FIs like the health and educational industry can be a part of the survey so that the diversified outcome will be generated.

The adoption of the WFH framework and its use to achieve the best results, even during the COVID-19 pandemics, has resulted in a considerable transformation in the working culture of Nepalese financial institutions, which can be summarized as follows:

- The WFH framework will make the working process easier during pandemics where work cannot be disrupted and will continue to supply the necessary services to their consumers.
- This will describe the whole technological architecture employed in the WFH modality, as well as a summary of the full process for future development.
- This will lay the groundwork for future research on the WFH idea and its application in the Nepalese context.

2 Literature Review

As part of the literature study, 30 papers were reviewed, with the thematic element focusing on three main areas. Implementation of the remote working culture for the company like financial organization at the time of crisis situation, its associated technical challenges to discuss to elaborate the evolution and revolution of the architecture in Nepalis context and the impact of WFH for the FIs employees at extreme circumstances. The literature research and baseline paper evaluation were more focused on

nation specific implementation, global trend, WFH strength and weakness, ecosystem governance, outcome, and efficacy of imposing the most recent technology for employees who used WFH. According to the published publications, various challenges associated with the successful implementation and adaptation of WFH.

2.1 Technical aspect of WFH and its Evolution

Information technology integration and adaptation has become one of the most integral parts of the operating office environment and it gradually decreased the importance of being physically present at working premises. The concept of working remotely or WFH modality was accepted by many of the countries over more than 30 plus years. Office refers to the designated place where normally the employees are willing to work for a certain period of time (Aithal, 2021)

Before the initial introduction of remote working culture, the engineer from NASA whose name was Jack Niles had come up with the modern working methodology termed as teleworking back in 1973 and then IBM tested this method by allowing some of their workers to test the effectiveness and adaptiveness of newly discovered telecommuting. As per the survey conducted by Gartner that 115% rise on adopting and utilizing the telecommuting after the pandemic happened by COVID-19 and 74% of the moreover business are willing to shift their physical presence on working environment into remote working culture as part of the post pandemic situation (Gartner, 2020)

The evolution of the telework generations leads to every possible aspect of use and effect of ICTs for the employees to adopt the environment implicitly or explicitly for the sake of productivity, cost control, flexibility, ease of use, diversity of growth etc (Messenger, 2016)).The conceptual framework of telework entirely generalized and expressed the terms and attributes of the evolutionary process of telework back then 1970s. At the early stage of remote working, there were limited technological resources to facilitate this where terminal servers and mini or mainframe computers were being used. The main characteristics of the current networking technologies could be described as transparent IP connectivity which means that the network is no more physically dependent to connect wired with high bandwidth. Internet protocol (IP) now plays the major role in secure connectivity with various versions like IPv4 and IPv6 and it provides the location independence advantages for remote telework.

Working life, among other elements of existence, has changed dramatically since the Covid-19 epidemic broke out in 2020. Teleworking and other flexible employment arrangements are not new concepts. Various factors involved in the workspace which directly impacted on the adaptation of the technology like considering the preference of the employee to workspace, development of ICT with respect to its reliability, availability and financial matters, new trends on experiencing the activity, time used for the employee to operate, balancing the work and its consequences, financial issues on development of business and unique change in behavioral adaptation caused the deployment of any conceptual model.

2.2 Technical aspect of WFH and its Revolution

With the rise of COVID-19 cases and the government of Nepal's lockdown, organizations such as IT, FI, and other private and public sectors have shifted their culture to a work-from-home model. As a result, most businesses and organizations are having difficulty both technically and fundamentally adopting the work-from-home culture Internet access is a key component of the WFH model, which allows numerous online services and apps to broadcast remotely via the internet. Web applications for remote commuting include Zoom, Microsoft Team, Skype, Viber, and Google Talk. Other online presentation platforms such as Live Meeting, WebEx, and Go to meeting have also been used.

The total number of internet users in Nepal during the Lockdown have increased significantly, and according to Digital 2021, the overall internet users was 10.78 million, up 567 thousand (+5.5) between 2020 and 2021. In January 2021, the number of mobile connections was estimated to be about 38.61 million (Digital, 2021). Because the WFH idea and modalities are relatively new for Nepalese enterprises

like FI, they face greater problems in adapting to the pandemic situation than the benefits and advantages.

The transition to homeworking has exacerbated gender disparities. The remote working perspective via WFH has to be the equality of both man and women participation with technology advancement mechanisms by controlling and monitoring the activities of the users to leverage the ease of working carrier building for better flexibility. Working from home or teleworking has proven to be incredibly beneficial on a personal level, with huge Spillovers for organizations who allow their employees to do so. Home employees reported higher job satisfaction, which leads to lower turnover rates, among other things. Remote employment has been shown to improve employees' work-life balance by allowing them to tailor their working hours to their personal and family obligations. However, that the working environment of teleworkers may have an impact on their work-life balance, health, and performance. All of these factors are intertwined and can have varying degrees of impact on remote employees. Now, more than ever, it's critical to pay close attention to all of the disadvantages that teleworkers face. As the remote work phenomenon grows in popularity, so does the risk of negative consequences. Some issues arose as a result of the widespread transition to working from home. For many respondents, ICT infrastructure was a problem, and their ability to network and engage in professional growth was restricted. Others were less enthralled by virtual interactions. Some people yearned for the camaraderie of the office or a break from their home or family's continual presence. Employees, on the whole, desire to be able to WFH for at least part of the week.

The use of both the techniques of information technology with cyber security embedded factors to boost the need of each other. Among various regulatory bodies, the National institute of Standards and Technology (NIST) has set the appropriate industry standards policies and guidelines to cope with the nature of the situation, which necessitates additional precautions due to the increased risk of exposure and threats from outside the network. (ITC Bulletin, 2020). The readiness of the cyber security culture in various organizations and commercial domains from various nations, as well as the importance of teleworking in the COVID-19 issue, The broad spectrum of security on cyber threats during the COVID-19 pandemics, which included flow-control attacks, various injection type of attacks, data prevention attacks, DDoS attacks, and other various sophisticated attacks (Ramadan R. &.-S., 2021) Video conferencing on working remotely provides a tremendous chance during the COVID-19 pandemic with minimal danger of human transmission, and such remote tools provide a benefit over it, but cyber threats and cyberattacks have occurred, raising severe concerns about cyber security and data privacy. As a result, Kenneth Okereafor conducted study on the cyber security incidents and challenges related to telecommuting and video conferencing, as well as the resulting implications, risk, vulnerabilities, and threat (Kenneth, 2020).

Furthermore, extra obstacles arise while employing telecommuting, such as power usage, as the flow of electricity in the majority of Nepalese locations is unreliable and cuts regularly, causing technical issues with connectivity. Similarly, if internet access is disrupted, the service provider's response time is too long, causing real-time connectivity to suffer.

Covid-19 causes the majority of organizations and businesses to abruptly pursue the work from idea utilizing available technical resources, resulting in both benefits and obstacles in adapting to new scenarios. On the basis of the technological acceptance model, Pérez has gone over the details of the WFH modality (TAM). Similarly, the other model focuses on adaptation of telecommuting primarily where multiple organizational structures like human resource, organizational resources, technological readiness etc. have directly influenced the acceptance of technology and its use.

The technology acceptance model concisely illustrates the possibility of the users that how they can accept technology based on their needs, and customers can gain benefits from its use and regulate the technology's goals. On the specific telecommuting modality, the model fills in the research gaps and offers numerous theoretical viewpoints on the many subject matters to embrace telecommuting.

2.3 Attributes and characteristics of Teleworking

Teleworking, according to a broad definition, is more common than most people think. Is telework, on the other hand, technologically driven? This is demonstrated using data from various surveys around the globe. Telework appears to represent existing occupational practices rather than a dramatic technical revolution, as the definition's elements include distinct social aspects.

In general, it appears best not to predetermine any precise intensity threshold when defining telework, but rather to study how different forms of home or telework vary in intensity in practice. One issue in terms of technology is the extent to which information and communication technologies (ICTs) are a significant, strategic, or necessary aspect of telework. The nature of the telecommunications link is the technology issue that we address in our empirical investigation. Location is a second important factor in debates over telework definitions. Time is the final component of any definition of telework. Some people work primarily in an office setting but also WFH in the evenings or on weekends.

There are no conclusive statements about the scope of teleworking with a flexible classification scheme of home and telework categories, which will be examined below. Rather, we can say that telework varies depending on the various components of the term that we are now interested in.

2.4 Technology integration and adaptation to operate WFH

In practice, the government and commercial sectors have different rules for implementing WFH. WFH activities include things like running and attending meetings, doing administrative work like writing reports and doing things related to promotions for higher positions, teaching, becoming a webinar resource person, becoming a webinar participant, doing things related to research, developing digital products, monitoring activities, examining students, conducting research studies, analyzing data and publications, and creating website content. Meanwhile, the usage of meeting and messaging services such as Zoom, Google Hangouts, Webex, and WhatsApp is designed to keep the WFH system running.

Teleworkers, in addition to having space and time to work, require technology and communication. This was especially true for WFH practitioners during the COVID-19 pandemic. It encompasses the usage of hardware, software, and the Internet in the context of ICT. According to the survey's findings, 95% of respondents supported WFH using laptops and cell phones as their hardware. PCs, tablets, and home telephones were used by only 5% of respondents. Despite the fact that that hardware must be available at home, 83 percent of respondents claimed that they were their own personal goods, not those provided by their workplace. Employee performance is impacted by differences in hardware quality, such as delayed reaction, rapid heating, and so on. Because certain aspects cannot be carried out optimally, they can be a constraint for occupations. Furthermore, some respondents believed that WFH caused them to lose focus on what they were doing due to a poor Internet connection and insufficient resources. At least 60% of those polled agreed that internet access could be a stumbling block and that they would be unable to focus on work during WFH.

The mobile cell ICT can also assist work wherever it is desired, meaning that work can be done anywhere a mobile phone signal is accessible. When it comes to WFH during the COVID-19 outbreak, however, it focuses more on employees who WFH and do so via mobile ICT.

In addition to technology, software, such as messenger and virtual conference apps that allow individuals to meet online, is critical in WFH. To support the performance of both the hardware and software, you'll need good Internet access. In reality, people who must perform WFH primarily rely on WiFi, with mobile data and tethering following closely behind.

3 Research Methodology

Because it is perceived as being able to facilitate employees, the use of ICT, both hardware and apps, to support the success of WFH is a need. The COVID-19 epidemic, which is pushing individuals to WFH with ICT, is also boosting the use of IC The research technique is the conventional framework used by the researcher to construct a logical theme based on the researcher's beliefs, values, and argument choices on specific subjects in order to achieve the desired end.

The mixed method approach was used in this study. Both approaches have components that are employed simultaneously. It's simple to examine and refer to the influence from both perspectives when using the mixed method. This strategy was first utilized by social scientists and subjective researchers, but it has since been adopted by other researchers. The data synergy gives a detailed result by combining the quantification of the outcome with the subjective description. Further discussion on the method's application has been placed. The mixed method is defined as the integration and blending of both quantitative and qualitative methodologies utilized in the same investigation.

3.1 Data collection method and Tools for Data Collection

The study used a blended method, which included scholarly publications from prior researchers as well as case studies from various countries. The major aim of this research was to analyze and review the implementation and adaptation of the WFH concept at the crisis situation and identify the various technical challenges along with the gaps associated while using it for FIs workers. Taking the survey with the implementer and employees who utilize the WFH idea in their day-to-day work flow has the advantage of assuming the duties and responsibilities of communicating with global viewpoints.

The online survey forms were utilized to collect data for the research. All of the polls are conducted online, rather than on paper, and are limited to countries with a presence in Nepal. This is why the researchers chose to employ a structured questionnaire created with Google forms. The interview was semi-structured in order to obtain as much information and viewpoints from the interviewee as possible. The semi structured questionnaire served as a guide for the interviewer, allowing researchers to perform the interview while keeping the research goal in mind.

The sample questions for the online survey are listed below as:

1. Age: 19-29, 30-40
2. Gender: Male, Female, Others
3. Technical Issues persist: Connectivity, Quality, Power etc.
4. Investigate and dig down the technical challenges associated with implementation of WFH with the Likert responses.

3.2 Sample Selection

The study's participants were chosen from the personnel of several financial institutions in Nepal, and survey samples were given to roughly 400 people via the internet where 319 participants responded to the survey.

3.3 Sampling Method

The data was collected using the Snow Ball sampling method from several FI employees in Nepal. Snowball sampling is a referral-based strategy for gathering data for a research study (Naderifar, 2017)The questionnaire was given to WFH employees. The participants were given Google forms to fill out in order to collect information about the qualitative and quantitative research methods.

3.4 Data Validity

The research was conducted using online survey forms as the data collection method. The forms were disseminated among networks of financial sector employees, stakeholders, implementers, and other

associated individuals. The information gathered is from credible sources, and the information presented has been validated.

WFH staff email addresses were obtained from reputable sources and were legitimate FIs domains. The scholarly papers for this review were all published in 2015 or after that.

4 DATA ANALYSIS AND INTERPRETATION

The survey questionnaire that was sent to a random sample of the employees of the FIs in Nepal. The researcher analyzes and describes the approach used to examine the data, including data cleaning, analysis, and statistical findings using SPSS software in this chapter. The survey's questions are all aligned with the study's goal. The data was analyzed using SPSS; however, before the study began, the data were structured in such a way that the format could be easily fed into the system. All of the results have been linked to the research objectives based on the questions answered. This is necessary to discover and conclude in order to determine whether or not the study objective can be met.

4.1 Reliability Testing (Cronbach's Alpha Reliability Test)

The reliability testing method determines the relevancy of measuring the variable established during the questionnaire during the survey. We're trying to figure out the benefits and drawbacks of introducing a remote working culture in FIs during the COVID crisis in Nepal through this survey. The survey also inquiries about the tools that members use to connect with other members of the community, such as Telegram, Confluence, and Slack. So, based on the results of the survey, you should be able to see how the community is doing in terms of collaboration and the tools they use to connect with one another. The survey's output has provided reliability testing and has assisted in determining the quality of the questions asked in the survey. Cronbach's alpha is used to determine the consistency of the variable and the result, as well as to check whether it follows the correct approach or not, and the data is analyzed accordingly.

Cronbach's alpha is computed by comparing the variance for all of the individual items assessed in the survey to the correlation of the score for each scale item with the overall score for all of the observations. The Alpha coefficient of reliability has a range of 0 to 1, and most techniques advocate a minimum of 0.6 and 0.8 as the higher value, with the 0.5 range being unacceptable, especially for unidimensional data. The reliability test was checked in using the SPSS platform. The figures that were obtained during Cronbach's Alpha are listed below.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.810	.803	17

Figure 1: Reliability Statistics (Cronbach's Alpha)

4.2 Descriptive Analysis

The descriptive statistics terms refer to the process of assessing all of the data that has been presented. The descriptive objective's primary goal is to summarize the sample in terms of the measures. From the perspective of quantitative analysis, simple visualization can provide a thorough description of the data and activities. The analysis uses the mean, median, and mode to provide a full description of the data based on the variables utilized in the data collection. All of the descriptive data will be used for statistical analysis on additional tests such as the chi-square and t-test.

4.2.1 Gender of Participants

Gender based distribution is one of the demographic variables which consist of the gender and according to the outcomes shows that the majority of the genders that is male took part in the survey and the minority of the respondent as Female around 70.2% and 29.2% respectively. The frequency distribution figure 2 shows the values as:

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	224	70.2	70.2	70.2
	Female	93	29.2	29.2	99.4
	Prefer Not To Say	2	.6	.6	100.0
	Total	319	100.0	100.0	

Figure 2: Gender Based Distribution Percentage and Frequency

4.2.2 Age Group

In the survey the age group is taken as the independent variable and the survey was conducted from different age groups of employees from FIs with respect to the deployment of WFH in Nepalis context. This type of the variables provides the opportunities, feasibility and technical challenges on implementing WFH modality at the crisis time like pandemic. Covering all the age groups in the survey is very critical to identify the actual respondents in which categories and provide the necessary response accordingly. As per the findings shows that the majority of employees lies in the 30-40 and gradually reduced as 19-29 and above 41 respectively. This age group distribution suggests that more mature age groups were the part of the WFH and FIs employees more often around the same group as per their experience and roles.

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19-29	97	30.4	30.4	30.4
	30-40	209	65.5	65.5	95.9
	41 and above	13	4.1	4.1	100.0
	Total	319	100.0	100.0	

Figure 3: Age Group Distribution and Frequency

4.2.3 Education & Department specific distribution on the survey

Working culture has been drastically changed after the pandemic hit the countries badly due to COVID and adopted alternative ways to carry out the

		Department			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Central Departments Employee	86	27.0	27.0	27.0
	Branches Employee	195	61.1	61.1	88.1
	Executives	38	11.9	11.9	100.0
	Total	319	100.0	100.0	

		Education			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	1	.3	.3	.3
	Bachelor	86	27.0	27.0	27.3
	Masters	230	72.1	72.1	99.4
	Above Masters	2	.6	.6	100.0
	Total	319	100.0	100.0	

operation continuously so FIs are also adopting the WFH concept to facilitate their services. Mostly the WFH concept or the teleworking concept is widely used by the organizations where they are located at different places and need that mechanism to connect each other. As per the respondents from the different educations have taken the WFH services and found that 27% of the total participants carrying Bachelor degree, around 72% carrying Masters and less than 1% carrying above masters. Similarly, the majority of the employees are from branches at 61.1% and followed by central department's employees 27% and executives 11.9%.

4.2.4 Adaptation of WFH based on relevance, challenges, implementation

As the COVID-19 impacts continuously growing for the daily workers which are encouraged to adopt the WFH technology and this new form of technology is only implemented based on relevance, challenges, implementation factors and the productivity it generates. The survey was carried out based on these parameters and the mean value was observed at 2.81 for the LP4 as maximum and 2.63 for LP3 as minimum which shows that the availability of such LP4 is more concerned over adopting the WFH.

		Statistics			
		LP1	LP2	LP3	LP4
N	Valid	319	319	319	319
	Missing	0	0	0	0
Mean		2.68	2.66	2.63	2.81
Median		3.00	3.00	3.00	3.00
Mode		3	3	3	3
Std. Deviation		.511	.501	.496	.410

Totally a new technology has been introduced due to severe circumstances caused by COVID-19 and the familiarity index for the technology being used is also new for the employees and the implementer itself by considering the fact of technology, rules and the driven policies. The output shows that the mean of 2.67 are not aware of the technology being used and 1.97 aware of the formal telework rules, policies and guidelines as out of 319 participants among different departments and education groups in the FIs.

4.2.5 Internet connectivity used for establishing remote connection to join workstation

Internet connectivity is the key to implementing a remote telework model where the office workspace is connected over the cloud. Nepal has continuously grown the internet market day by day and even bigger utilization at pandemic period from both broadband and Mobile network. As per the research

proceeds, most of the remote employees use the Broadband connection to their home less than no of employees are from Mobile connectivity.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Broadband (DSL/ADSL)	181	56.7	56.7	56.7
	Mobile	19	6.0	6.0	62.7
	Other	119	37.3	37.3	100.0
	Total	319	100.0	100.0	

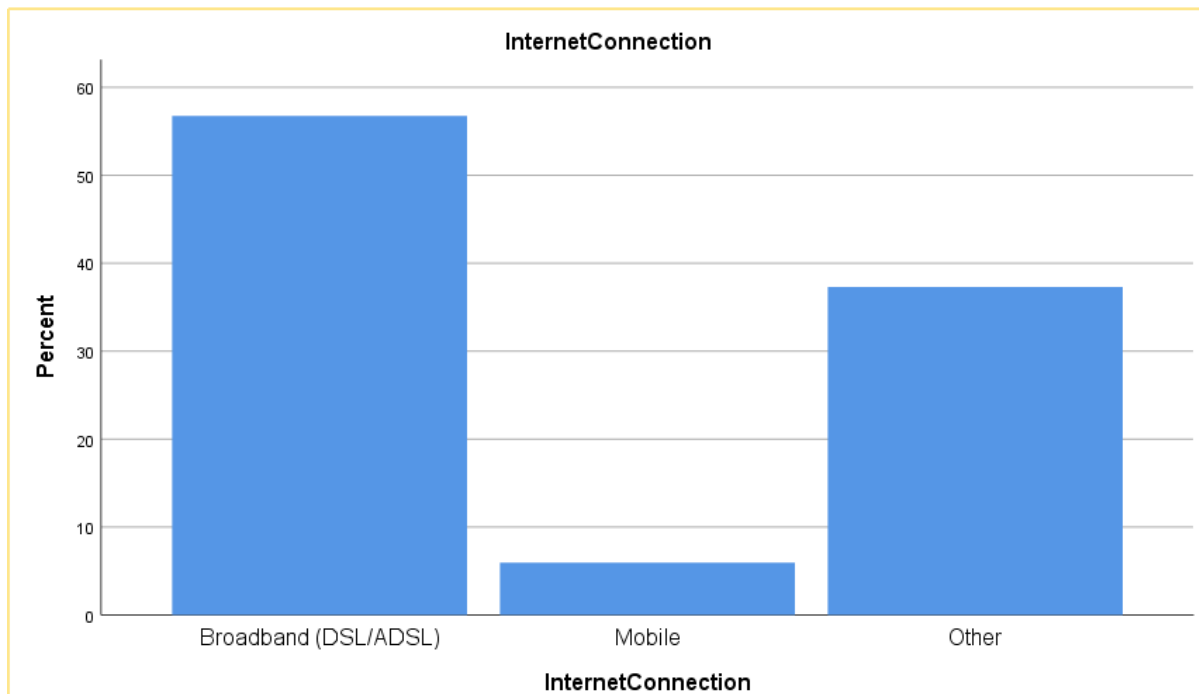


Figure 4: Internet Connectivity used by WFH employees

5 CONCLUSIONS AND RECOMMENDATIONS

The key consistency of any form of product deployment is associated with each and every stakeholder present and the supported government which provided the appropriate policies and guidelines to carry the product in the right direction. At COVID-19 pandemic time, most of the organizations experienced the issues of operating their daily business to provide services for their customers due to limitation of the working culture during the pandemic. Financial sector of Nepal is the key component of the country to deliver economic sustainability and need to carry out their daily business by taking necessary precautions at adverse circumstances. The new concept emerges to continue the working process from home by alleging the technological facilities and most of the FIs in Nepal have adopted the WFH modality without having any pre-planning for its development and implementation. So the effect has shown for many technological difficulties and challenges to implement and adopt the new form of working model. There are various technological challenges like user awareness in the new form of technology, operational huddles due to technology embedded, technological resource management by the employees, supported technological qualities, organizational readiness on technical infrastructure,

cyber security concern on data processing and lack of appropriate governance policy occurred during the implementation and adaptation of WFH remote working methods. All of the available indicators reflect on the productivity and even operability of the WFH employees which impacted the organizational business process. The role of the stakeholder is to prepare the infrastructure to adopt the technology very quickly and run the operation smoothly even at the crisis time. Information technology is one of the important sectors to support the WFH modality for both employees and employers and the global trend also suggests the same. Nepal is still growing the technological sector so the technological challenges can be eliminated gradually. According to the findings carried out by the study, the persistent technological challenges can be treated dynamically to adopt the WFH during COVID-19. Not only giving the challenges associated but also provides the significant number of opportunities to fulfill the gap and covers the business process continuity at pandemic. Under proper guidance, planning and strategic influence in the technological aspect can mitigate the risk involved in it and easily be deployed at any circumstances. To mitigate the technical challenges for providing the sustainable solutions on implementation of WFH can be reliable and quality internet connectivity, backup plan for setup both connectivity and electricity, mitigate the security risk involved, proper technology setup, providing appropriate hardware and software, periodic review and monitor the operation including setup proper long-term strategy to satisfy the WFH employees. The methodology followed in the research concluded that the result came for adopting and deploying WFH concept having numerous technical challenges associated with it which carries the significant disadvantages over organizational business continuity and providing the opportunities in future by treating such challenges by eliminating and addressing them in the proper ways.

5.1 Recommendation

Appropriate implementation of WFH integrated with the technological surrounding which always plays a significant role for providing the adaptation of remote working culture. Without the proper use of technology, we cannot achieve the goal of teleworking which is one of the necessary and emerging concepts during COVID-19. Lack of technology adaptation does not fulfill the aim to provide the digitalization of working culture. The organizations like FIs desperate need of adopting the alternative ways to carry their business in pandemic and remote working method is the suitable alternative to adopt but lack of preparedness in the field before makes them trouble getting optimum result from it. WFH gives the leverage on working procedure for the employees and employers too if proper technology is implemented which reflects on the research model where multiple stakeholders are tightly working together to make this happen. To better address the technological challenges on WFH, the following tasks have to be carried out by involving various stakeholders like organization, IT, service provider, CISO, technological strategy, compliance etc.

1. Lack of organizational readiness can cause the negative influence on implementing and adopting WFH which directly drives from organizational resources and technological strategy and these things need to be correctly addressed before developing the implementation plan.
2. Organization resources mainly focuses on strategic management of financial resources, information resources and physical resources in which technology comes into direct relationship with these factors so proper financing on technology, technological resource management and physical hardware resources need to be managed for proper implementation of WFH.
3. Technological resources and strategy consist of various objectives and tactics being used to handle the proper alleging of technology to implement WFH and these factors like rules and regulatory compliance body, monitoring and surveillance mechanism, multiple service providers and vendors and their quality of services need to be maintained in such a way that can achieve organizational goals.

4. Monitoring and surveillance mechanisms can be built for tracking the employee's activity during the remote working time which can improve productivity and for this different tool like virtual remote assistance from Salesforce and Zscaler can be used to track the activity, time and event management of WFH employees.
5. Rules, guidelines and regulation comes to support an appropriate and feasible technology deployment for the WFH infrastructure so the organization need to develop the internal policy for remote connectivity align with IT policy and Central Bank policy
6. Internal policy prepared by FIs also gives the benefits of deriving the service level agreement and non-disclosure agreement with third party service providers to maintain compliance with vendors.
7. WFH needs reliable connectivity to connect the remote workspace and unreliable connectivity may hamper the operation so need to have broadband connectivity by both the WFH employees and the organization data center.
8. If possible then both the employees and organizations need to plan for the backup link in case of any link failure and maintain the high availability of adopting WFH.

6 REFERENCES

- Lina Vyas & Nantapong Butakhieo (2021). The impact of working from home during COVID-19 on work and life domains: an exploratory study on Hong Kong, *Policy Design and Practice*, 4:1, 59-76, DOI: 10.1080/25741292.2020.1863560
- Furnell, S., & Shah, J. N. (2020). Home working and cyber security – an outbreak of unpreparedness?. *Computer Fraud & Security*, 2020(8), 6–12. [https://doi.org/10.1016/S1361-3723\(20\)30084-1](https://doi.org/10.1016/S1361-3723(20)30084-1)
- Rushina, Dr. (2020). Telecommuting: The Problems & Challenges During Covid-19 (2020). *International Journal of Engineering Research and*. V9. 10.17577/IJERTV9IS070432.
- Mariana, T., Leyland, P. (2121). Mindfulness and the challenges of working from home in times of crisis. *Business Horizons*, Volume 64, Issue 2, Pages 189-197, ISSN 0007-6813, <https://doi.org/10.1016/j.bushor.2020.09.004>.
- Aczel B, Kovacs M, van der Lippe T, Szaszi B (2021). Researchers working from home: Benefits and challenges. *PLOS ONE* 1 (3):e0249127. <https://doi.org/10.1371/journal.pone.0249127>
- Mahin Naderifar,1 Hamideh Goli,2 and Fereshteh Ghaljaie3 ,“Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research “https://sdme.kmu.ac.ir/article_90598.html
- Ramadan, Rabie & Aboshosha, Bassam & Alshudukhi, Jalawi & Alzahrani, Joharah & El-Sayed, Ayman & Dessouky, Mohamed. (2021). Cybersecurity and Countermeasures at the Time of Pandemic. *Journal of Advanced Transportation*. 2021. 10.1155/2021/6627264.
- Bick, Alexander & Blandin, Adam & Mertens, Karel. (2020). WFH After the COVID-19 Outbreak. Federal Reserve Bank of Dallas, Working Papers. 2020. 10.24149/wp2017r1.
- Pink, S, Hjorth, L, Horst, H, et al. (2018). Digital work and play: Mobile technologies and new ways of feeling at home. *European Journal of Cultural Studies* 21(1): 26–38. Google Scholar | SAGE Journals | ISI
- Messenger, J. C., and L. Gschwind. (2016). “Three Generations of Telework: New ICTs and the (r)Evolution from Home Office to Virtual Office.” *New Technology, Work and Employment* 31 (3): 195–208. doi:10.1111/ntwe.12073.
- Taherdoost, Hamed. (2019). What Is the Best Response Scale for Survey and Questionnaire Design; Review of Different Lengths of Rating Scale / Attitude Scale / Likert Scale.
- Lister, K. and Harnish, T. (2019). " Telework and Its Effects in the United States." In John C. Messenger (ed.), *Telework in the 21st Century*, Chapter 3 (pp: 128–170). Edward Elger Publishing, Inc., Cheltenham, United Kingdom.
- Marivic F. Flores (2019). Understanding The Challenges Of Remote Working And It's Impact To Workers

-
- Gajendran, Ravi & Harrison, David & Delaney-Klinger, Kelly. (2015). Are Telecommuters Remotely Good Citizens? Unpacking Telecommuting's Effects on Performance Via I-Deals and Job Resources. *Personnel Psychology*. 68. 10.1111/peps.12082.
- Carrion, Malwina & Madoff, Lawrence. (2017). ProMED-mail: 22 years of digital surveillance of emerging infectious diseases. *International Health*. 9. 177-183. 10.1093/inthealth/ihx014.
- Berger, A. N., Molyneux, P., & Wilson, J. O. S. (2020). Banks and the real economy: An assessment of the research. *Journal of Corporate Finance*, 62(101513).<https://doi.org/10.1016/j.jcorpfin.2019.101513>
- Aithal, Sreeramana. (2016). Working From Home - A Transition In The Concept Of Workplace. *International Journal of Current Research and Modern Education (IJCRME)*. 1. 244-249. 10.5281/zenodo.161110.
- Peter Holland & Anne Bardoel (2016) The impact of technology on work in the twenty-first century: exploring the smart and dark side, *The International Journal of Human Resource Management*, 27:21, 2579-2581, DOI: 10.1080/09585192.2016.1238126
- Douglas W. Diamond & Raghuram G. Rajan, 2000. "A Theory of Bank Capital," *Journal of Finance*, American Finance Association, vol. 55(6), pages 2431-2465, December.
- Andersen, Steffen, John Y. Campbell, Kasper Meisner Nielsen, and Tarun Ramadorai. 2020. "Sources of Inaction in Household Finance: Evidence from the Danish Mortgage Market." *American Economic Review*, 110 (10): 3184-3230. DOI: 10.1257/aer.20180865