Latin American and Caribbean Internet Addresses Registry

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Research Project Report

IMPACT OF QUALITY INTERNET ISSUES ON REMOTE WORKER'S
PRODUCTIVITY IN HAITI

by
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Mentored by
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Research theme: The Internet and Productivity

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Disclaimer

About the Researcher

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Holds a bachelor's degree in education sciences from the Adventist University of Haiti; certified Agile Scrum Master, Project Manager and Communication Manager,

His professional experiences testify to a career straddling the field of education and information and communication technologies.

Educator but passionate about technology, he is an Ambassador of Digital Grassroots, has been a trainer for Digital Grassroots twice for the initiation of young people to Internet governance, a trainer on the management of online privacy and introduction to cybersecurity since 2018, youth trainer on digital citizenship, very active member of the Internet Society (ISOC) chapter in Haiti, member of the task force committee of the Caribbean Risk and Disaster Management Youth Platform (CARIDIMA). He believes in building the capacity of young people, for a resilient, inclusive and active community that leads to a more open internet, accessible to all.

Acknowledgements

Abstract

A multiplicity of studies have already been carried out concerning cyberaddiction in certain regions of the world, and despite the diversity of views in the consideration of this phenomenon, an assertion always returns: the Internet has an influence on our daily lives. This mixed research, aimed at studying the impact of quality internet issues on remote worker's productivity in Haiti is of paramount importance, both for professionals, for decision-makers and for anyone who will be interested in the subject. A sample of selected people, made up of professionals working remotely and in other sectors were interviewed; Socio-demographic data as well as open and semi-open questions were asked, thus providing elements that can help answer the research questions related to the variables: quality and productivity. It is noted that the results obtained are of significant importance, insofar as the majority of the respondents live in urban areas, but nevertheless face problems of connection speed, and have on average lost contracts twice a year because of the poor quality of the internet.

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CHAPTER I

INTRODUCTION

With the advent of COVID 19, the world is experiencing a transformation that is radically changing the way we produce and work. This had the effect of catalyzing a revolution that was already underway: remote work. The common denominator of remote work is the Internet, a tool that has changed our way of communicating, our social relations, our economy, but above all our way of working.

Our society, companies, and individuals use a key element to evaluate their progress, their performance, the quality of their work but above all their impact; it is productivity.

A document from the International Chamber of Commerce (2009) states that there's a proven positive correlation between economic growth and investing in the Internet and other Communication Technologies Information and Communication (ICT); further, Early in 2009, A World Bank report was already suggested that the access to telecommunications and the Internet stimulates global economic growth and, for countries developing, with every 10% increase in high-speed internet connections corresponds to a 1.38% increase in economic growth.

We are living in a world of competition where the success of a company, an institution, or a professional depends greatly on his ability to transmit and retrieve

information; create products and respond quickly to certain messages and instructions. Professionals in general, especially remote workers, rely heavily on the quality of the Internet to carry out their work efficiently. During the period of COVID 19, many institutions and companies have allowed their employees to work remotely in order to reduce the risk of spreading the virus and thus continue to produce. However, since the reality is not the same for everyone with regard to the quality of the Internet connection at home, the work of some professionals has been more difficult than others; The use of certain web applications, downloading, uploading, videoconferencing, were very difficult and this affected the productivity of several professionals.

Research problem

Hootsuite and We Are Social (2022) stated at the very beginning of 2022, the population of Internet users in Haiti was 4.81 million, and the internet penetration rate was 41.4 percent. According to Ookla (2022), a web service that provides an analysis of Internet access performance, i.e. connection speed and latency, the average mobile internet connection speed was up to 10.66 Mbps, and fixed connection up to 13.46 Mbps.

From September to October 2022, Haiti experienced a long period of Internet shutdowns due to a shortage of fuel that have caused the inability of mobile operators to supply their antennas in order to continue to offer services to users. A report of the Office of the High Commissioner For Human Rights (OHCHR, 2022) talks about the dramatic impact of this situation on lives and human rights in Haiti.

Haiti is a developing country (World Bank, 2022), where the current socio-economic situation is very precarious. Compared to other countries in the Caribbean

region telecommunications structures and infrastructures have some work to catch up on; 134th in the world ranking for broadband connection, 123rd in the world ranking for mobile connection (World datas, 2022).

There are many professionals who rely on a good internet connection to do their job properly, earn a living, protect and save lives: doctors, paramedics, IT companies, teachers, technical support services, developers, small and medium-sized businesses, content creators and so on.

Barrero, Bloom and Davis (2021), argue that universal [internet] access would raise productivity, and it would promote greater economic and social resilience. This correlation between internet access and productivity mentioned by these authors; the difficult socio-economic context of haiti colored by poor telecommunication infrastructures, electricity problems; this study will focus on helping understand the impact of quality internet issues on remote worker's productivity in Haiti.

Significance and objectives of the study

- This present study will contribute to increasing the academic literature available on the subject.
- Draw the attention of Haitian public and private institutions and international institutions constituting stakeholders that can help improve the quality of the Internet on the need to act urgently.
- Show through the data collected in the interviews the economic benefits that a good internet connection can have for remote workers as well as for Haiti.

Research Questions

- What is the current state of internet quality in Haiti?

- What issues do remote workers underline regarding how the quality of the internet affects their productivity?

Limitations

During the realization of this study, many difficulties arose in limitations. Electricity problems, internet shutdowns and the inability for the researcher to travel to conduct interviews. It was extremely difficult to have all the respondents for the interviews as we have planned at least to talk to 10 persons. About 30 days of fuel shortage and lockdown and Haiti from September to October have made the conduct of this research very hard.

CHAPTER II

LITERATURE REVIEW

Importance of the internet and how it has revolutionized the way we work

According to Gadille and Amabile (2002), the use of the Internet favors achieving productivity gains, reducing costs, shortening production and transaction delays or, even, the improvement of quality. The Internet utilization, particularly, has made it possible to access information that a company could hardly obtain before (idem).

The Internet has touched various aspects of our daily lives, this transformative feature pushes the boundaries of what we think we can and can't do with the internet; for a long time now we have had the internet at our disposal in our workspaces; however, certain modalities are added today and have modified our way of perceiving and conceiving them.

Broadband Search (2022) have listed several ways the internet changed the workplaces, here's what we consider the most important:

- The internet has led us to ***think digitally***: It becomes essential for a person to have a set of digital skills to be able to work effectively; It is also possible to have a business that works properly without renting any physical space.

- The ***location*** as an aspect of the working place is no longer required. A person can choose between work onsite or remote; There is no longer any geographical

barrier, companies may well hire someone from another continent, from different culture or time zone.

- *Hours* of working have changed. Today someone can choose to work from anywhere and anytime.

- *Communication* and *Collaboration* has become essential, and the internet changed the way meetings are held, the way we talk to each other both personally and in the business environment., the way we plan and execute projects.

Historicity of remote work

It all started in the United States in the 1950s with Norbert Wiener, the founding father of cybernetics who supervised the work of an American building while being in Europe via all kinds of means of data transmission.

A simple sketch that will solidify in the 1970s by the appearance of the fax and the telephone, much more practical means of communication. It was at the same time that the English term "Telework" was born, first appearing in an article in the Washington Post in 1972.

It is with the advent of the NTIC (New Technologies of Information and Communication) of the 90s that the phenomenon is accelerating. It is now possible to work from home simply with a computer and an Internet connection. In 2020, the COVID 19 have explode with this phenomenon which is becoming more and more common and more practical for many institutions. In France, during the first

confinement around 48% of the active population worked at least once at home compared to only 22% in 2019 (at the same period) (La Tribune, 2021).

Productivity: Definitional attempt

The concept of productivity, generally defined as the relation between output and input, has been available for over two centuries and applied in many different circumstances on various levels of aggregation in the economic system. It is argued that productivity is one of the basic variables governing economic production activities, perhaps the most important one (Tangen, 2002). Nevertheless, Da Silva and Santugini (2009) consider physical and technological capital as the best determinants of productivity.

Remote work in Haiti: Challenges and Opportunities

In Haiti, professionals have to juggle between frequent power cuts and cuts in their Internet connections for various reasons. A responder stated: "For electricity, we use some palliatives such as solar energy, but for the Internet connection we cannot escape it."

Since almost all Haitians have only two telecom operators who offer the same services and sometimes have the same problems. These operators are highly concentrated in urban areas, which becomes very difficult for people living in rural areas. Meeting deadlines imposed by companies, working efficiently and producing without constraint is almost a dream.

Haiti has a population with an average age of 26, a population of digital natives, it is a force that could actively participate in boosting the economy; and this young population only asks to have electricity and a good internet connection. Many foreign

institutions are hiring remote-workers but many of them also do not want to hire a Haitian because of the problems listed above.

CHAPTER III

METHODOLOGY

Description of the research type

This is a mixed exploratory research using the simple descriptive category because it aims to describe the impact of quality internet issues on remote worker's productivity in Haiti, by mapping some of the issues they are facing and these issues affect the daily work.

Study sampling type

A sample of selected people, chosen by their experiences and relevance to this present research made up of professionals working remotely and in other sectors were interviewed; Socio-demographic data as well as open and semi-open questions were asked, thus providing elements that can help answer the research questions related to the variables: internet quality and productivity.

Description of the measuring instrument

To carry out the study, the researcher used a questionnaire and telephone interviews with four socio-demographic questions as well as six open and semi-open questions that are relevant to the research objectives and questions.

Data collection process

In this present study, the data collection process includes:

- Agreement of the respondents

- The measurement instrument containing dichotomous, open and semi-open questions to collect socio-demographic information and data to measure the quality of the internet and its impact on the productivity of the respondents are presented to the respondents.

- Using SPSS for collecting and the analysis of the quantitative data.

- Considering the APA methodology for the writing.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

In this present chapter it will be a question of analyzing the socio-demographic data, the process and presenting the results, presenting the data collected during the interviews, analyzing them and presenting an interpretation.

From the socio-demographic data collected, a descriptive analysis was made presenting the maximum, the minimum and the standard deviation; Also, the numbers with their percentage.

Descriptives Statistics

	N	Minimum	Maximum	Mean	standard deviation
Sex of the respondent	6	1,00	2,00	1,3333	,51640
Profession exercised	6	1,00	6,00	3,5000	1,87083
Department of Haiti where the respondent is living	6	3,00	6,00	5,3333	1,21106
Area of living	6	1,00	2,00	1,1667	,40825
N valide (listwise)	6				

Table 1

Frequency tables and graphs

Sex of the respondent

|		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	M	4	66,7	66,7	66,7
Valide	F	2	33,3	33,3	100,0
	Total	6	100,0	100,0	

Table 2
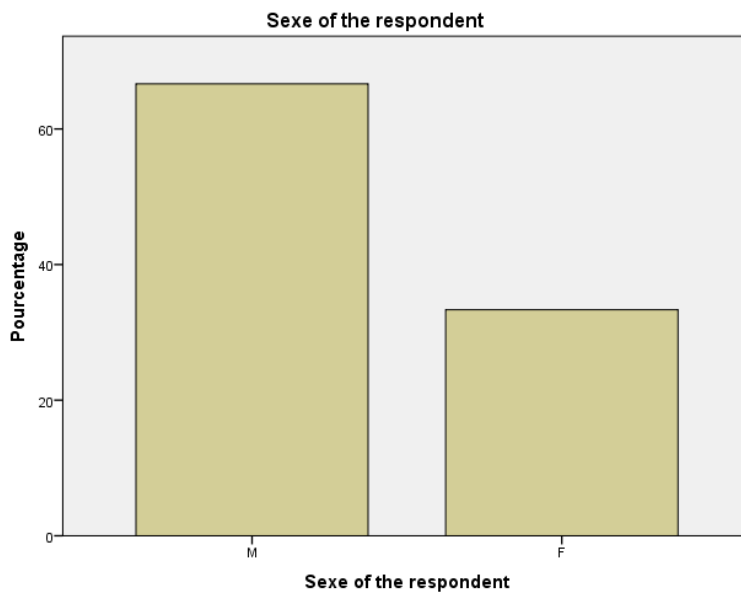
Of the respondents, 6.7 percent are male 33.3 percent female. This suggests that the remote worker environment in Haiti is dominated by masculine gender.

Profession exerciced

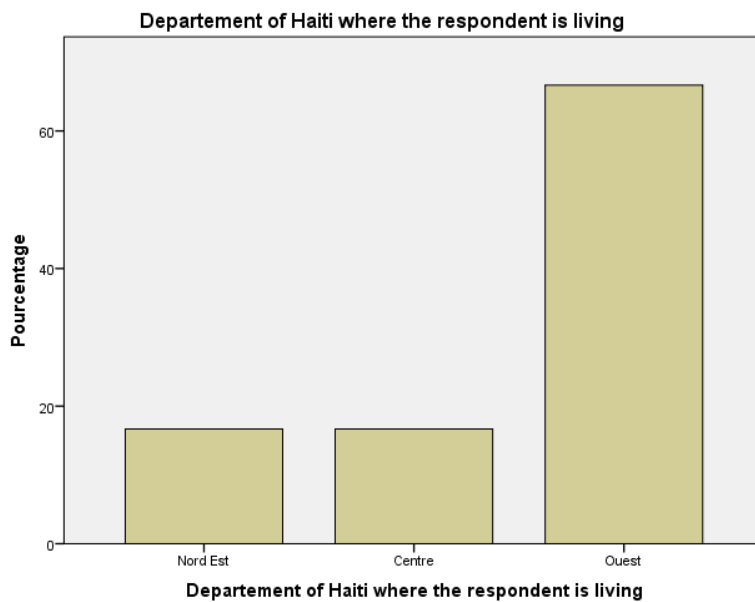|		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
	Graphic Designer	1	16,7	16,7	16,7
	Support Services	1	16,7	16,7	33,3
	Developper	1	16,7	16,7	50,0
Valide	Content Creator	1	16,7	16,7	66,7
	Teacher	1	16,7	16,7	83,3
	Translator	1	16,7	16,7	100,0
	Total	6	100,0	100,0	

Table 3
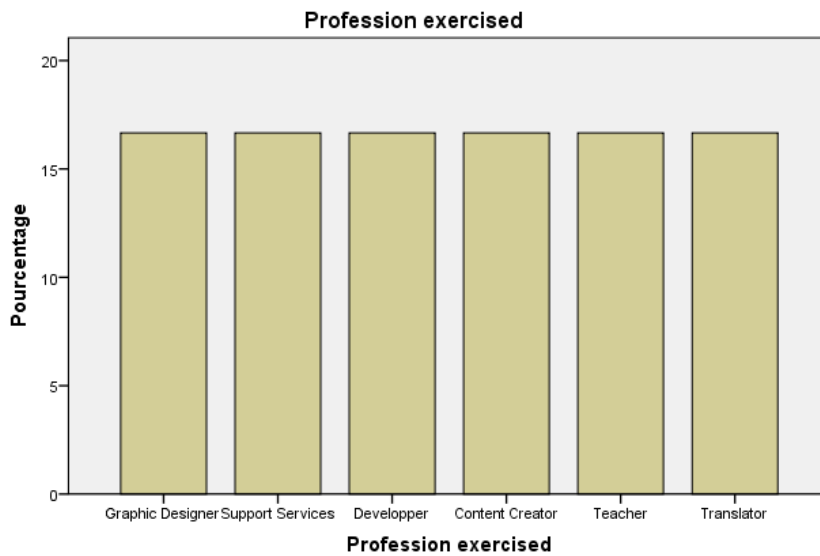
Among the professions exercised, we had a respondent for each profession. This is

certainly not an exhaustive list, but it gives an idea of the range of jobs that currently

require a good internet connection, otherwise they will not be able to work well.

Department of Haiti where the respondent is living

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	Nord Est	1	16,7	16,7	16,7
	Centre	1	16,7	16,7	33,3
	Ouest	4	66,7	66,7	100,0
	Total	6	100,0	100,0	

Table 4

Departement of Haiti where the respondent is living
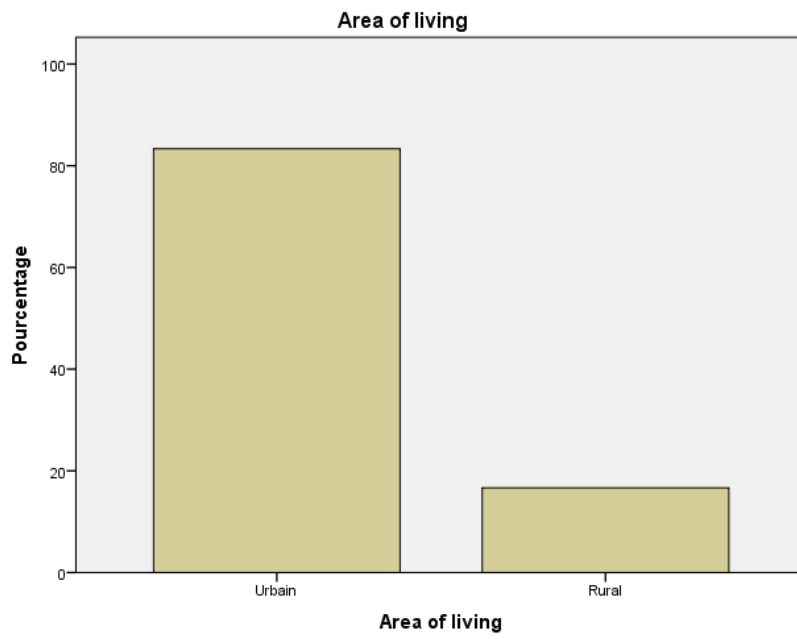
66.7 percent of respondents live in the West Department of Haiti, and 16.7 percent respectively for the North and North East departments.

Area of living

		Effectifs	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	Urbain	5	83,3	83,3	83,3
	Rural	1	16,7	16,7	100,0
	Total	6	100,0	100,0	

Table 5

Area of living

The majority of respondents, 83.3 percent, live in urban areas, compared to only 16.7 percent in rural areas.

Questions of the interview and body of ideas and data obtained during the interviews

Question 1: What is the speed of the Internet connection you have at the moment?

Question 2: In your field, do you work 100% remotely?

Question 3: In order for you to work, do you use a mobile internet or a broadband connection?

Question 4: What internet speed would be better for you to work properly without constraints?

Question 5: Have you ever lost a job or contract because of poor internet quality? And how much did it cost you?

Question 6: How much do you spend for the internet connection you have?

There are several operators playing the role of Internet access provider currently in Haiti, but the respondents use the services of Natcom, Digicel and Access Haiti. They are paying from 60 USD to 300 USD for a broadband connection. This connection depending on some reasons at its lowest can be at 900 kbps and 30 Mbps at its highest, even if they pay for 35 Mbps for download/ 15 Mbps for upload plan.

The work modality varies from each one, 25% remote and 75% onsite or vice versa. The required internet connection for their works might be a broadband connection with at minima 60 Mbps for download and 30 Mbps upload.

Two of them have already lost contract, jobs because of the poor internet quality or face the issue of delaying a project for the same reason. "3 or 4 times a year I lost contract and jobs from 2020 at this day" replied one of the respondents.

In light of these data, it can be seen that a good Internet connection plays a major role for professionals in various sectors, especially for remote workers. A respondent added: "Sometimes when I need to find out about something, internet issues can ruin my vibe. When I have to follow and mandatory training session, the poor internet connection makes me lose my focus."

Since their productivity, what their employer expects as performance can only be achieved if they have a good connection. In addition to the internet, it has been noted that electricity can also be a major constraint that hampers the productivity of the remote worker. Some use solar energy, and others depend solely on the energy provided by the Electricity of Haiti (EDH), a company providing electricity to the Haitian households.

CHAPTER V

DISCUSSION OF RESULTS, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

Socio-demographic data as well as that collected through interviews, we have shown that the profile of remote workers are multiple, predominantly male and living in urban areas. However, the types of problems encountered with their Internet connections are the same.

In the literature review, we saw how a good internet connection can have a major impact on productivity, although it is not the only variable to consider and both human and technological capital is decisive for the economic growth of a country, a unique opportunity that Haiti will have to seize, considering its very young population of digital natives.

Considering these results, the researcher would recommend:

- To the internet providers the updating of telecommunication infrastructures in order to guarantee a better internet connection to professionals; To extend their access point to rural areas in order to give more possibilities to remote workers.

- To regulatory bodies, to put in place policies that can promote accessibility to the Internet, which is closely linked to the right to freedom of expression, information, health and various other essential services.

- To organizations of the civil community, to promote the creation of organizations fighting for consumer rights, and participate in the promotion of the community internet in order to reduce inequalities in terms of access to the internet.

Conclusions

This mixed research of an exploratory nature wanted to see what impact the internet quality issues could have on the remote worker's productivity in Haïti. To respond to the research questions:

- What is the current state of internet quality in Haiti?
- What issues do remote workers underline regarding how the quality of the internet affects their productivity?

We have seen that the internet quality in Haïti is really poor compared to some other countries in the Caribbean region or even other countries in Europe and North America. While the majority young population is in search of opportunity and competitiveness that the Internet could offer around the world, the problem of the Internet happens to be a handicap to their economic growth and their social development. Also, in addition to the difficulties related to electricity, having access to a stable high-speed internet to perform complex tasks requiring broadband is very rare.

Solutions have been proposed by the Internet Society and some civil initiatives for the promotion of Internet Community Networks and Low Orbit Satellites. But, these projects do not yet have the desired impact, especially for remote workers.

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