Remote Working Intention of Gen Z in Vietnam

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Abstract:
Remote working is a way of working that creates flexibility for both employees and organizations when supported by the development of technology, which has been specially chosen by many agencies, organizations, and businesses in the wake of the Covid-19 pandemic. This research aims to identify the factors that influence Gen Z's intention to choose remote working at Hanoi (the capital of Vietnam). The theory research model was suggested based on the theory of TPB, TRA, TAM. The linear structure modeling (SEM) method was used to analyze the data of a sample with 400 observations collected by questionair survey in March and April 2021. The results show that two factors: "perceived behavioral control", and "social norms" have a positive and statistically significant impact on Gen Z's intention to work remotely in Vietnam. While the "attitude towards remote working" factor was impactful but not statistically significant.

Keywords: Intention, Gen Z, Social norms, Attitude, TPB, Technology

1. Introduction
Remote working plays a significant role in the process of optimizing workers' productivity, enhancing the supply of human resources [1]. Remote work has been studied and evaluated by many scholars [2], [3], [4], pointing out its potential benefits such as: positive impact on the environment, increased productivity, and reduced costs. Now, technology has opened up more opportunities for remote work, going beyond the traditional concept of an office. In fact, remote work has existed before, but has become more popular and grown stronger after the Covid-19 pandemic. According to a report by Flex Jobs between 2015 and 2016, only 100 out of 40,000 companies globally have implemented remote work. After Covid19, remote work was a top priority for 87% of the 25,000 workers McKinsey surveyed in 2022. Buffer's "State of Remote Work 2023" report found that 91% of survey participants prefer to work remotely, and flexibility was cited as the biggest benefit.

Remote work has been thoroughly studied by many researchers, and studies agree that remote work is an effective way to work, and it depends on many different factors. The results of one paper pointed out that "behavioral control hatred" is an important factor for tech workers in South Africa, influencing their intentions to work remotely [5]. Meanwhile, the research of [6] also identified 7 factors that impacted the implementation of remote working in organizations in South Africa prior to the COVID-19 pandemic, including factors such as "job characteristics", "communication" and "senior management support". One research went on to identify 4 factors that influenced remote working during COVID-19, including personal and organizational factors [7]. Research by Nakrošienė on "characteristics and outcomes of remote work" also indicates that "the suitability of the work-from-home location" and "reduced communication time with colleagues" are the most important factors influencing remote work results [8].

Digital transformation is taking place positively in Vietnam, especially in the context that the Government is promoting the development of the digital economy. With a significant increase in Internet usage, as of January 2024 with access to 79.1% of Vietnam's total population using the Internet (We Are Social and Meltwater), Vietnam becomes an ideal environment for remote work adoption. However, although the potential is huge, much effort is still needed to promote and optimize this form of work. Literature and research on remote working in Vietnam is still limited, however, the studies conducted have provided some important information focusing on the factors affecting remote work from home in Hanoi.
during and after the COVID-19 pandemic [9]. Meanwhile, others focus on factors that affect productivity and work efficiency when working remotely [10].

The team discovered important gaps in the reviewed literature. Although research on remote working has taken place in many countries, focusing mainly on organizations or individuals in different cultures, it has not been specifically focused on Gen Z. In Vietnam, research on remote working is also rare, especially for Gen Z, even though they are an important part of the future workforce. Focusing on remote working intentions of young people, especially Gen Z, is important to better understand Vietnam's future labour trends. This study not only provides important information about the new labor model, but also recommends development strategies to encourage and support the expansion of remote work for Gen Z.

The study also highlights the important role of remote working in the context of urban overcrowding and overpopulation in Vietnam, especially in Hanoi. Remote working is seen as a potential solution to alleviate pressures on urban environments and improve quality of life.

In addition, the role of the profession in remote working is also appreciated. However, specific studies on remote working in various occupations in Vietnam have not yet been conducted. This is considered necessary and can provide important suggestions for future development and adoption.

2. Literature reviews
Research on Gen Z's remote working intentions is based on three main theories: Consolidated Behavior Model (TRA) [11], Plan-Based Behavior (TPB) [12], and Technology Acceptance Model (TAM) [13]. TRA focuses on predicting and explaining behavior based on the individual's intentions, with social attitudes and norms being the two main elements. Attitudes are positive or negative judgments of particular behavior, while social norms are pressure from the social environment or support from others. TPB extends from TRA by adding an element of "behavioral control awareness," which impacts behavioral intent. Intention is determined by attitude, the influence of the social environment, and the perception of the ability to control behavior. TAM explains and predicts information technology usage behavior based on two variables: "feel is useful" and "feel is easy to use." If users find the technology useful and easy to use, they have a higher intention to use it.

Theory of Reasoned Action (TRA) is a theoretical model developed by Ajzen and Fishbein, one of the theoretical models about human behavior and decision-making [11]. TRA focuses on predicting and explaining behavior based on an individual's intention. Behavioral intention is seen as a central factor in performing a specific action and is determined by two main factors. Attitude is the individual's positive or negative evaluation of that specific behavior. If an individual has a positive attitude towards the behavior, their intention to perform that behavior will also be higher. Subjective Norms refer to the extent to which an individual perceives pressure from the social environment or support from others regarding that specific behavior. The influence of others can impact an individual's intention. TRA explains that an individual's intention to perform a behavior is determined by their attitude and the influence from the social environment.

Theory of Planned Behavior (TPB) by Icek Ajzen extends from TRA and includes variables such as "attitude," "subjective norms," and "perceived behavioral control" to predict an individual's behavioral intention [12]. A new factor added is "perceived behavioral control," which influences behavioral intention. TPB states that an individual's intention to perform a behavior is determined by their attitude, the influence of the social environment, and perception of their ability to control that behavior.

Technology Acceptance Model (TAM) is a theoretical framework used to explain and predict users' behavior towards information technology by Davis [13]. Perceived usefulness (PU) is the extent to which users believe that using technology will help them improve performance or complete tasks efficiently. Perceived Ease of Use (PEOU) is the extent to which users believe that using technology will not be difficult or complicated. According to TAM, perceived usefulness and perceived ease of use of technology will influence users' intention. If they perceive technology as useful and easy to use, they will have a higher intention to use it. TAM specifically focuses on predicting and explaining the acceptance and use of technology. TAM replaces TRA's attitude measures with two technology acceptance measures - ease of use and usefulness.

3. Research models and hypotheses
Based on the combination of TRA, TPB and TAM models and calibration, the authors proposed a new
The TAM model has indicated that the subjective probability of potential users that the specific use will increase their work efficiency within the organizational context. Therefore, this hypothesis was proposed.

**H1: Perceived usefulness affects attitudes toward using email when working remotely in gen Z**

According to the TPB attitude is defined as the degree of ease or difficulty in performing a behavior and is believed to reflect past experiences as well as anticipated obstacles and facilitators [4]. Meanwhile, according to the TAM there are two different antecedents that influence attitude: perceived usefulness and perceived ease of use [11]. According to the TRA and TAM, Attitude is a favorable or unfavorable evaluation of a certain behavior and directly influences the intention to perform that behavior. From there, these hypotheses were proposed.

**H2: Attitude towards remote work positively influences the intention to work remotely in gen Z.**

In the TRA theory, Social Norms (SN) are defined as an individual's perception influenced by important others regarding whether or not to perform a particular behavior. According to the TPB refer to perceived social pressure related to performing a normative behavior that affects the intention to work remotely [4],[2], [32]. Family is one of the factors influencing an individual's subjective norm about their intention [18]. Colleagues have been shown to influence an individual's subjective norm about their intention to work remotely [18]. Friends have been demonstrated that are an important factor influencing career decisions [2] & [32]. Industry factor is a very important factor influencing the decision to work remotely [4], 27]. The prevalence of remote work by sector in the EU indicates that remote work varies significantly across sectors and professions, especially in technology and knowledge sectors [1]. The prediction of the group is that depending on the industry, young people's inclination to work remotely will
be influenced. Also, Parents are one of the individuals influencing career decisions [2] & [13]. Therefore, these hypotheses were proposed.

H3: Family positively influences Social norm of work remotely in gen Z.
H4: Friends positively influence the intention to work remotely in gen Z.
H5: Industry positively influences the intention to work remotely in gen Z.
H6: Social norms positively influence the intention to work remotely in gen Z.

The initial premise of the Theory of Planned Behavior is that behavioral control refers to attempting to perform a certain behavior rather than actual performance [3]. And according to the TPB, an intention to behave can only be expressed in behavior if the behavior is under perceived behavioral control. The structure of perceived behavioral control includes environmental factors similar to the concept of perceived conditions and perceived resource concepts [4], [31];[21], as well as internal factors of individual effectiveness [6]. The main factors impacting this are space, individual, support, and technology. Workspace is a factor influencing an individual's perceived behavioral control [18]. Some organizations choose to establish satellite work centers in nearby localities [14]; [19]. Individual efficacy or a person's confidence in working without relying on others is very important for remote work [9] & [8]. The availability of communication technology has been shown to significantly impact the productivity and satisfaction of remote workers [8]. Therefore, these hypothesis were proposed.

H7: Workspace positively influences perceived behavioral control to work remotely in gen Z.
H8: Personal positively influences perceived behavioral control to work remotely in gen Z.
H9: Technology positively influences perceived behavioral control to work remotely in gen Z.
H10: Perceived behavioral control positively influences the intention to work in gen Z.

4. Research methodology
Measurement
The scale used in this study is the Likert scale 5 (1 - strongly disagree, to 5 - strongly agree) inherited from previous studies.

The scales "Attitude towards remote working", "Usefulness of remote working" are inherited from research [23]. The scale for "Social norms" influenced by "Family" and "friends" was inherited from research [19], in addition, the scale of the variable: "Industry" was added by authors. Inherited group of variables: "workspace", "personal", and "technology" factors inherited from the scale in the study [19]. The variable "perceived behavioral control" was inherited from [29].

Data collection
The sample size is determined based on the formula for calculating the minimum sample size, which is \( n = 5^*m \), where \( m \) is the independent variable, in determining the appropriate sample size for multiple regression. So, the minimum sample size is: \( 38 \times 5 = 190 \). To increase the accuracy of the model, the team decides to take 400 survey samples as data to run the model. The sample is approached through non-probability sampling method, specifically convenience sampling, sampling based on convenience or accessibility of the subjects.

Data is collected through a questionnaire constructed on a scale and implemented in 3 stages. Stage 1, Complete a pilot questionnaire with 20 samples, and perform adjustments to produce the official questionnaire. Stage 2, Collect preliminary data through Google Docs and conduct direct surveys by distributing printed questionnaires. Interviewees will answer the questions on a 5-point scale corresponding to each statement. Stage 3, Data processing and analysis.

For this study, the researchers employed a non-probability sampling technique, specifically convenience sampling, which involves selecting participants based on their accessibility or convenience. The target population consists of university students in Hanoi, making it easy to find participants for interviews by visiting universities in the capital city. Data collection was conducted from March 2021 to the end of April 2021, resulting in a total of 438 questionnaires. A total of 38 questionnaires were excluded due to not meeting the required standards (incomplete information, lack of objectivity, etc.).

The collected data will be synthesized into an Excel file in table format, removing samples that do not meet the standards. Then, the team will use SPSS 20 software to conduct Cronbach's Alpha test and EFA test to eliminate variables that do not meet the conditions. Next, the team will perform CFA and SEM analysis to examine the influence of the remaining variables on the intention to work remotely of young...
people in Hanoi through AMOS 24 software.

5. Research results and discussions
This study uses data collected from more than 400 survey samples of Gen Z in Hanoi with a variety of industries (Table 1).

5.1 Sample
The survey sample is mainly Gen Z aged 18-21, mostly from the delta, who want to work in Commerce, Finance – Banking, Technology and Engineering. Of those who worked, about 31.5% participated in remote work, indicating that the majority of Gen Z have been exposed to the labor market.

The results of the official quantitative sample are presented in Table 1 below:

<table>
<thead>
<tr>
<th>Table 1: Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic Category</strong></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td><strong>College Student</strong></td>
</tr>
<tr>
<td>First year</td>
</tr>
<tr>
<td>Second year</td>
</tr>
<tr>
<td>Third year</td>
</tr>
<tr>
<td>Fourth year</td>
</tr>
<tr>
<td><strong>Hometown</strong></td>
</tr>
<tr>
<td>Delta</td>
</tr>
<tr>
<td>Mountainous area</td>
</tr>
<tr>
<td><strong>Desired profession</strong></td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Technology</td>
</tr>
<tr>
<td>Retail</td>
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<tr>
<td>Healthcare</td>
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<tr>
<td>Education</td>
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<tr>
<td>Finance – banking</td>
</tr>
<tr>
<td>Digital</td>
</tr>
<tr>
<td><strong>Overtime status</strong></td>
</tr>
<tr>
<td>Have worked</td>
</tr>
<tr>
<td>Remotely worked</td>
</tr>
<tr>
<td>Never worked remotely</td>
</tr>
<tr>
<td>Haven’t worked</td>
</tr>
</tbody>
</table>

5.2 Testing Scales
The results of Cronbach’s Alpha reliability analysis showed that 2/3 of the “Family” variables were substandard with a Corrected Item-Total Correlation index below 0.3 and Alpha below 0.6, so the team decided to remove it. The remaining variables all have Corrected Item-Total Correlation coefficients greater than 0.5, and Cronbach’s Alpha coefficients are both high, from 0.692 to 0.926, indicating that the scale is highly reliable and qualified for analysis.

To enhance the reliability of the measurement scale following the application of Cronbach's Alpha and EFA, the research team employed confirmatory factor analysis (CFA) for further validation. The findings revealed a Chi-square/df ratio of 2.289, indicating a value below 4. The CFI and GFI values were 0.915 and 0.845, respectively. Furthermore, the RMSEA value of 0.057 fell below the threshold of 0.08. These results collectively provide evidence that the proposed model exhibits a good fit with the collected data. Additionally, all factors demonstrate convergence, as supported by the standardized regression coefficients exceeding 0.5 and the statistical significance of the unstandardized weights.

5.3 Testing hypotheses and research models
After running an SEM linear structure model (Figure 1) and testing Cronbach’s Alpha, the results showed that the H4 hypothesis was not confirmed with the data collected. The remaining hypotheses continued to be studied and obtained the following resulting indicators: Chi-square/df = 2.417, GFI = 0.834, CFI = 0.903, RMSEA = 0.060. This result shows that the research model is consistent with market data.
The factor usefulness of remote working also has no meaningful relationship with the variable attitude toward remote working since ($\beta = 0.0103; \ P = 0.059 > 0.05$), leading to the rejection of the hypothesis H1. Similarily, the effect of attitude toward remote working variable has no meaningful relationship with the variable Intention to remote working because the value ($\beta = 0.061; \ P = 0.194 > 0.05$) so makes the hypothesis H2 was rejected. Finally, the family factor also has no meaningful relationship with the Social norms variable because the value ($\beta = 0.114; \ P = 0.56 > 0.05$) made the hypothesis H3 rejected.

Figure 2: SEM analysis results

Note: NN - Industry; CM - Subjective Standard; BS - Behavior Control; Usefulness of remote working - HI; Attitude - TD;

The results in figure 2 and table 2 showed that every indicator of the relationships in the model reached a statistically significant level. Family, Friends, Industry were identified as the factors of Social norms. Among them, Industry has the strongest influence on the Social norms, with the Estimate index reaching 0.416. This means H3, H4, and H5 were acceted. Next, Workspace, Personal, Technology were found positive and significant effeted on Perceived Behavioral Control. Technology was found to have the strongest influence on Perceived Behavioral Control. Therefor, the hypothesis H7, H8, H9 were accepted.

Social norms and percieved behavioral control have a significant influenced on Intention to Remote Working because the ($\beta = 0.298; \ P < 0.05$) and ($\beta = 0.523; \ P < 0.05$) that lead to the accepted of H6 and H10 hypothesis. The impact of Perceived Behavioral Control and Social Norms variables on Intention to Remote Working was 0.523 and 0.298, respectively.

The direct and indirect impact tests are presented in Table 2 and Figure 2.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Beta</th>
<th>S.E</th>
<th>C.R</th>
<th>P - Value</th>
<th>Standard Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry --&gt; Social Norms</td>
<td>.361</td>
<td>.048</td>
<td>7.516</td>
<td>***</td>
<td>.416</td>
</tr>
<tr>
<td>Friends --&gt; Social Norms</td>
<td>.207</td>
<td>.055</td>
<td>3.766</td>
<td>***</td>
<td>.210</td>
</tr>
<tr>
<td>Relationship</td>
<td>Beta</td>
<td>S.E</td>
<td>C.R</td>
<td>P-Value</td>
<td>Standard Beta</td>
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<tr>
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<td>---------------</td>
</tr>
<tr>
<td>Technology --&gt; Perceived Behavioral Control</td>
<td>.257</td>
<td>.046</td>
<td>5.562</td>
<td>***</td>
<td>.303</td>
</tr>
<tr>
<td>Personal --&gt; Perceived Behavioral Control</td>
<td>.285</td>
<td>.052</td>
<td>5.514</td>
<td>***</td>
<td>.304</td>
</tr>
<tr>
<td>Social Norms --&gt; Intention to remote working</td>
<td>.315</td>
<td>.053</td>
<td>5.944</td>
<td>***</td>
<td>.298</td>
</tr>
<tr>
<td>Perceived Behavioral Control --&gt; Intention to remote working</td>
<td>.517</td>
<td>.052</td>
<td>9.949</td>
<td>***</td>
<td>.523</td>
</tr>
</tbody>
</table>

P: significance level; = p < 0.001

5.4 Discuss research results

Compared to research of Khalifa & Davison [25], the factors influencing "Remote Work Intentions" are different. The "Attitude" factor has no influence, while the "Behavior Control" factor has the strongest impact. "Personal" and "Technology" factors both affect "Behavior Control." Meanwhile, the "Friends" and "Industry" factors also affect Gen Z's "Remote Work Intentions", but this level is not high. As for "Attitude," "Usefulness" doesn't have a major impact on remote work intentions, likely due to a lack of awareness of the benefits of remote working. "Subjective norms" are influenced by "Friends" and "Professions" factors, but not to a high level. Meanwhile, "Cognitive Control Behavior" is influenced by "Individual" and "Technology" factors, but "Individual" factors have a weaker influence.

**Attitude towards remote working:** This study uses an expanded TAM model, which includes a usefulness factor in addition to the factors used in the model of [25]. However, the survey results show that the usefulness of remote working does not significantly affect students' attitudes and intentions to work remotely. This difference may be due to: Students are not fully aware of the benefits of working remotely; Remote working in Vietnam before the Covid-19 pandemic was not common; The rights and policies to protect remote workers have not been given adequate attention. Compared with the study [25], the telecommunications network disconnection attitude toward remote working has a moderate impact on Vietnamese students.

**Subjective norms:** This results show that friends have a moderate impact on students' subjective norms towards working remotely [25]. In contrast, family factors do not affect this subjective norm. This may be due to: Independence culture in America, where children are encouraged to leave home early; Traditional family culture in Vietnam, where children often live with their parents and receive their support. Overall, subjective norms were weakly correlated with students' intention to adopt remote work.

**Perceived Behavioral Control:** This study identifies these factors: individual and technology, influencing factors perceived behavioral control for remote working. Differences from Khalifa and Davison's study which include the "support" element [25], but this factor was not found to have a significant impact on PBC in this study. This may be due to cultural differences. The culture of remote work in the United States has been established for much longer, leading to greater personal confidence and less dependence on support. The technology infrastructure in the United States is more developed, reduces its perceived importance. In Vietnam: Working remotely is a relatively new concept, causing technology to become a more important factor for PBC; Students may lack confidence into working remotely, leading to a lower impact of personal factors for PBC.

6. Conclusions

In Vietnam, the assessment of remote working methods is still limited. A new study measured the remote work intentions of young workers to better understand future working trends and make appropriate recommendations. To improve students' attitudes towards remote work, it is necessary to establish specific policies for employees working remotely and integrate technology elements and knowledge of remote work into the curriculum. This helps to better prepare for possible challenges in the future. Enhance students' intention to work remotely in certain occupations by suggesting potential future careers such as information technology, education, finance, and others. Improve awareness of behavior control to remote work.
intentions by enhancing personal efficiency and using technology effectively. It is proposed to apply remote working for employers and state agencies by training and recruiting human resources capable of applying technology and flexibly responding to new working trends.

Although positive results have been achieved, the study has some limitations such as: limitations in the study subjects, the correlation between students' intentions and remote working behavior after graduation, and not delving into factors affecting each specific industry. Follow-up studies are needed to track changes over time, reflecting changes in technology and state policy.

References

Author Profile

**Ha Nguyen Thi Viet** have been a main lecturer with many years of experience in teaching and scientific research at the Banking Academy of Vietnam since 2010. I research interest areas include innovation, knowledge management, and social behavior. I have published papers in many journals such as The Journal of Organizational Behavior Research, the Journal of Asian Finance, Economics and Business (JAFEB), The International Journal of Business Management and Technology.

**Hien Nguyen Thi** is a student at Vietnam Banking Academy from 2018-2022. I research areas include innovation, human resource management (specifically recruitment and training) and social behavior. I have an award for student scientific research.