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## Effects of Demographic Characteristics on the Attitude to Participate in Voluntary Social Insurance of Digital Platform Workers in Vietnam

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**Abstract**

The COVID-19 pandemic exposes risk and inequities for workers, especially those working on digital platforms. Accordingly, the challenges for background employees relate to working conditions, job regularity, and income. In addition, the fact that algorithms are increasingly replacing humans in allocating and evaluating work, managing, and monitoring workers has left workers' rights unprotected. Meanwhile, the lack of access to social protection, freedom of association, and the right to collective bargaining has made this group of workers vulnerable in the current context (Behrendt et al., 2019) [4]. Social security agencies in many countries are making efforts to expand social insurance coverage for this group of people. While policies on compulsory obligations and benefits are being reviewed and finalized, in the current context, participating in voluntary social insurance is a viable option for employees working on digital platforms. Accordingly, this study aims to investigate the attitudes of these subjects towards participating in voluntary social insurance in the current context in Vietnam.

## 1. Introduction

As the world of work evolves, shaped by global trends such as digitization, automation, and globalization, social protection systems will need to adapt to changing contexts and needs (ILO, 2021) [11]. While some of the more traditional forms of employment are disappearing or transforming through automation and digitization, the new forms of work have emerged in various industries and sectors, such as the platform economy and non-standard employment. These bring opportunities and challenges to the labor market and social protection (Behrendt and Nguyen, 2018) [3]. These new forms of engagement include work provided locally by digital platforms (such as ride-hailing or delivery services offered through some e-commerce platforms or carriers or online jobs based on web platforms, social networks, etc.).

Accordingly, complete and comprehensive social protection systems are more important than ever. However, 55% of the world's population remains unprotected, while a significant portion is only partially protected by social protection schemes (ILO, 2016) [9]. Furthermore, many social security systems must be better equipped to address the challenges associated with automation and digitization.

In that context, voluntary social insurance is a solution for employees to have additional financial resources to face the risks and incidents in life. After many revisions of legal regulations on social insurance, voluntary social insurance is mainly reserved for the informal sector. However, the participation rate of this type is still low. Therefore, giving suggestions for solutions to change attitudes and promoting the intention and behavior of employees to take part in social insurance in this area contributes to promoting social security is very necessary. This study explores attitudes towards voluntary social insurance based on a survey of digital platform workers in Hanoi, Vietnam.

## 2. Literature Review
### 2.1 Digital Platform Workers

The digital workforce is a particular part of the digital economy (Behrendt et al., 2019) [4]. The peculiarity of foundation-based labor is the technology-based operating process (ILO, 2021) [11]. The concept of technology-based workers is a very new concept with particularly hostile fundamentals (ILO, 2016) [9] such as:
1. The nature of labor is heterogeneous.

2. It can be workers in the real world or on the network (virtual/virtual) platform.
3. The operating facility is operated on the network platform through algorithms.

Given the implications for the future labor market, digital labor platforms can be classified into two broad categories: online web-based platforms (commonly referred to as community-based work) and local-based labor platforms where work is distributed through software applications (location applications) (ILO, 2021) [11].

## 2.2 Voluntary Social Insurance

Voluntary social insurance is a type of social insurance in which employees voluntarily participate, can choose to pay taxes, and pay methods under their income to enjoy social insurance benefits based on general regulations of the State. Accordingly, this is an additional form of compulsory social insurance in the condition that compulsory social insurance for all employees has yet to be implemented. This policy allows participants to have another financial security method against life risks and incidents.

## 2.3 Attitude

Attitude is an expression of mental feeling that reflects negative or positive evaluations of an object (brand, product, service, etc.). As a result of psychological processes, attitude cannot be directly observed, but it can be inferred from a person's words or behavior (Schiffman et al., 2008) [12]. In marketing, consumers can develop attitudes towards any

product or service or any aspect of the marketing mix, which will influence behavior (Brassington and Pettitt, 2003) [6]. Knowing the customer's attitude towards a particular product will help us infer the customer's reaction to that product.

Accordingly, using basic demographic variables as the basis, the focus of this study is to investigate the attitudes of digital platform workers towards participating in voluntary social insurance in the context that there are no policies to ensure comprehensive social security for them.

## 3. Methodology

Based on a review of empirical studies on the attitude towards participating in voluntary social insurance, this survey focuses on labors working on digital platforms in Hanoi city, such as the shipper, grabbers, and technology drivers, in the form of face-to-face interviews. The main research objective of this study is to fact-check some demographic characteristics related to attitudes toward participating in voluntary social insurance. This research used a small survey questionnaire with questions about demographic characteristics such as gender, age, and income of subjects. In this survey, the attitude was measured by a scale based on the scales of Ajzen and Fishbein (2000) [1], Argento et al. (2015) [2], Brahmana et al. (2018) [5] and adjusted to fit the study. The scale is rated according to Likert 5, from 1 = "strongly disagree" to 5 = "strongly agree." These scales are presented in Table 1.

**Table 1:** Scale of Attitution

| Code | Description | Sources |
|------|-------------|---------|
| ATT1 | Participating in Voluntary Social Insurance is necessary. | (Ajzen and Fishbein, 2000, Brahmana et al., 2018, Argento et al., 2015) [1, 2, 5] |
| ATT2 | Participating in Voluntary Social Insurance is the right thing to do. | |
| ATT3 | You can put your trust in the Voluntary Social Insurance policy's benefits. | |
| ATT3 | Participating in Voluntary Social Insurance is a way to accumulate in life in the future. | |

The research team surveyed 160 persons, but we got only 154 responses qualified. Data after being cleaned were processed by SPSS 22.0 software with descriptive statistical analysis techniques, Cronbach alpha reliability analysis, EFA factor analysis, and ANOVA test to analyze the difference in attitude to participants to voluntary social insurance among different worker groups.

## 4. Results
### 4.1 Descriptive Analysis
As the information on demographics is collected in the first part of the questionnaire, it is analyzed into general statistical form to see the breakdown of frequency and percentage of each control variable. Descriptive analysis is applied to aggregate the overall responses' profiles. Table 2 gives information on the descriptive analysis.

**Table 2:** Demographic characteristics of respondents

| Variables | Category | Frequency | Percentage (%) |
|-----------|----------|-----------|----------------|
| Gender | Male | 105 | 68.2 |
| | Female | 49 | 31.8 |
| Age | 20 – 30 | 62 | 40.3 |
| | 31 – 40 | 35 | 22.7 |
| | 41 – 50 | 31 | 20.1 |
| | above 50 | 26 | 16.9 |
| Educational | Other | 24 | 15.6 |
| | High School | 54 | 35.1 |
| level | Graduation | | |
| | College | 40 | 26.0 |
| | University Graduation | 36 | 23.4 |
| Income | Under 9 milion | 51 | 33.1 |
| | 9 - under 12 milion | 53 | 34.4 |
| | 12 – under 15 milion | 23 | 14.9 |
| | Above 15 milion | 27 | 17.5 |

From the descriptive analysis, it can be seen that there is much difference in gender between the survey subjects. Most of the subjects surveyed in this study do delivery and passenger transportation jobs, so male workers account for a larger proportion of 68.2%. In addition, the survey subjects mainly focused on the group of young workers aged 20 -30, accounting for the most important proportion with 40.3%. The second group was 31-40 years old, with 22.7%. Workers over 50 make up a percentage.

In terms of income people, the group with an income under 12 million accounted for the most significant proportion, with a total of 68.5%. This result is consistent with the current report on the employment and income situation of the urban districts of Hanoi.

### 4.2 Cronbach's Alpha – Reliability
In order to conduct the reliability test, Cronbach's Alpha is

used as the most popular and effective tool in SPSS analysis (Hair *et al*., 2010)[7]. In this research, the Cronbach's Alpha test is applied for one dependent variable and two independent variables. Table 2 demonstrates the result of Cronbach's Alpha test. Hair *et al*. (2010) [7] also note that the Cronbach's Alpha result should be equal to or higher than 0.7 (≥0.7) to be reliable enough for research. The Cronbach's Alpha results in Table 2 all meet these standard requirements, which means that every item in the questionnaire has a good level of reliability and can be accepted to use for this research.

**Table 3:** Cronbach's Alpha Analysis

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted | Cronbach's Alpha |
|---|---|---|---|---|---|
| ATT1 | 7.44 | 9.555 | .830 | .851 | |
| ATT2 | 7.40 | 9.626 | .742 | .885 | 0.900 |
| ATT3 | 7.35 | 9.353 | .857 | .840 | |
| ATT4 | 7.34 | 9.903 | .689 | .899 | |

### 4.3 KMO and Barlett's Test

In this research, the KMO and Barlett's Test for dependent variable is conducted as the result is illustrated in the Table 3. As shown, the KMO value is 0.798 (0.5 < 0.798 < 1) and the sig. value is 0.000 (<0.05), that means these values satisfied the conditions in the study (Hair *et al*., 2010) [7]. In addtion, after implementing the matrix, we got the followings: every determinant with factor load > 0.5, and the

Variance explained = 77.081 %. It demonstrates that the factor analysis of the research data is appropriate. These statistics demonstrate that research data analysis for factor discovery is appropriate.

**Table 4:** KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .798 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 406.901 |
| | Df | 6 |
| | Sig. | .000 |

**Table 5:** Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.083 | 77.081 | 77.081 | 3.083 | 77.081 | 77.081 |
| 2 | .494 | 12.346 | 89.427 | | | |
| 3 | .233 | 5.832 | 95.259 | | | |
| 4 | .190 | 4.741 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

### 4.4 Independent T- test

Independent Sample T-Test is often applied to test the mean difference in the case of qualitative variables with two values (Hair *et al*., 2010, Hoàng Trọng and Chu Nguyễn Mộng Ngọc, 2005) [7, 8]. A comparison of assessment results on attitude of digital platform workers of a different gender is presented in Table 6.

**Table 6:** Independent Samples Test

| | | Levene's Test for Equality of Variances | | T-Test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| ATT | Equal variances assumed | .417 | .520 | -.434 | 152 | .665 | -.07449 | .17172 | -.41376 | .26478 |
| | Equal variances not assumed | | | -.422 | 87.697 | .674 | -.07449 | .17655 | -.42537 | .27639 |

According to Table 6, Sig Levene test = 0.674> 0.05, so variance between the ages did not differ. sig value of T-Test = 0.422 > 0.05; no statistical significance. Therefore, there is no difference in customer orientation behavior of survey subjects with different gender (Hair *et al*., 2010) [7].

### 4.5 ANOVA

ANOVA helps to solve the problem of the Independent Sample T-Test. This method helps us to compare the mean of two or more groups. Therefore, the ANOVA analysis technique is applied. First, the Homogeneity of variance test will be performed to give the results of testing the difference in the variance of the groups by the Levene test coefficient (Hair *et al*., 2010) [7].

### Results Anova for age groups

It is necessary to perform an ANOVA test to compare the attitude of digital platform workers. The results show a

difference between the attitude to participants' social insurance of digital platform workers among four groups of subjects of different ages. The detailed results are shown in the following table.

**Table 7:** Results Anova for age groups

| Levene Statistic | df1 | df2 | Sig. | |
|---|---|---|---|---|
| 16.843 | 3 | 150 | .000 | |
| **Robust Tests of Equality of Means** | | | | |
| | Statistic[a] | df1 | df2 | Sig. |
| Welch | 11.439 | 3 | 60.719 | .000 |
| **ANOVA** | | | | |
| | Sum of Squares | df | F | Sig. |
| Between Groups (Combined) | 38.434 | 3 | 17.235 | .000 |
| Within Groups | 111.500 | 150 | | |
| Total | 149.934 | 153 | | |

a. Asymptotically F distributed.

Table 7 shows that the Sig Levene statistic is the Sig Levene test equal to 0.000 < 0.05, and there is a difference in variance between age groups. We will use the Welch test results in the Equality of Means Strong Test. The Welch or Brown-Forsythe coefficient provides the results of testing the mean difference in case there is a difference in variance between the groups of values (Hoang Trong and Chu Nguyen Mong Ngoc, 2005) [8]. In this case, Sig's Welch test = 0.000 < 0.05 demonstrates that there is a significant difference in attitude to social insurance participation between groups of subjects of different ages (Hair *et al.*, 2010) [7]. Research results show that the older the age group, the better the respondents' attitude to social insurance participation. This can be explained by the fact that older people are often more careful when worrying about the future. Therefore, they think more about the need for financial security in old age. The detailed illustration is shown in Fig 1 below:
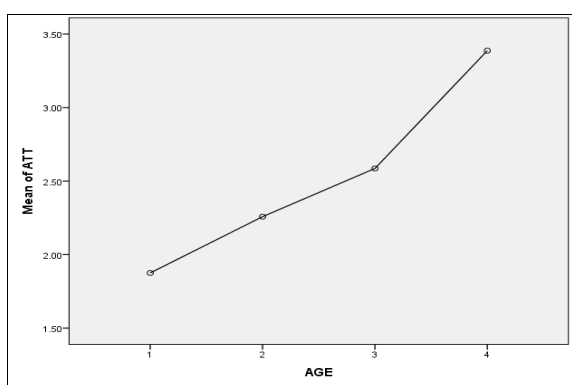


**Fig 1:** Mean plots of attitude between age groups

***Results Anova for educational levels***
Accordingly, the research team continued to perform ANOVA analysis with survey subjects at different educational levels. The detailed results are shown in Table 8 below:

**Table 8:** Results Anova for educational Level groups

| Levene Statistic | df1 | df2 | Sig. | |
|---|---|---|---|---|
| 39.444 | 3 | 150 | .000 | |
| **Robust Tests of Equality of Means** | | | | |
| | Statistic[a] | df1 | df2 | Sig. |
| Welch | 9.640 | 3 | 74.339 | .000 |
| **ANOVA** | | | | |
| | Sum of Squares | df | F | Sig. |
| Between Groups (Combined) | 8.000 | 3 | 2.818 | .041 |
| Within Groups | 141.934 | 150 | | |
| Total | 149.934 | 153 | | |

Sig test Levene is equal to 0.000 < 0.05, which means that is a variance difference between different educational attainment groups. The study continues to use the Welch test results in the Robust Tests of the Equality of Means table. Sig's Welch test is equal to 0.000 < 0.05, which means that there is a mean difference in attitude to social insurance participation between different educational groups (Hoàng Trọng and Chu Nguyễn Mộng Ngọc, 2005) [8]. Thus, there are differences in attitude to social insurance participation among different educational groups. The detailed results are shown in the following figure:
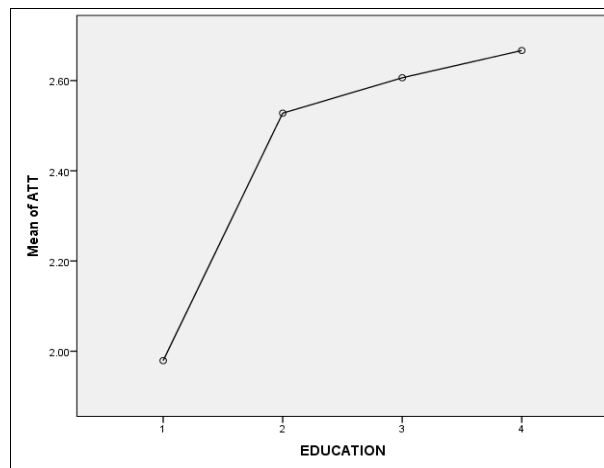


**Fig 2:** Mean plots of attitude to social insurance participation between educational level groups

***Results Anova for income***
Sig test Levene is equal to 0.000 < 0.05, which shows a difference in variance between groups of workers with different income. The study continues to use the Welch test results in the Robust Tests of the Equality of Means table. Sig test Welch is equal to 0.000 < 0.05, so there is a mean difference in attitude to social insurance participant between different income groups (Hair *et al.*, 2010) [7]. The detailed results are shown in Table 9 below:

**Table 9:** Results Anova for income groups

| Levene Statistic | df1 | df2 | Sig. | |
|---|---|---|---|---|
| 10.675 | 3 | 150 | .000 | |
| **Robust Tests of Equality of Means** | | | | |
| | Statistic[a] | df1 | df2 | Sig. |
| Welch | 14.013 | 3 | 59.940 | .000 |
| **ANOVA** | | | | |
| | Sum of Squares | df | F | Sig. |
| Between Groups (Combined) | 52.842 | 3 | 27.212 | .000 |
| Within Groups | 97.092 | 150 | | |
| Total | 149.934 | 153 | | |

In addition, the graph analysis results show that the higher the income, the more positive the attitude of social insurance participants is and significantly increases in the group with income of 15 million or more. The detailed results are shown in the following figure:
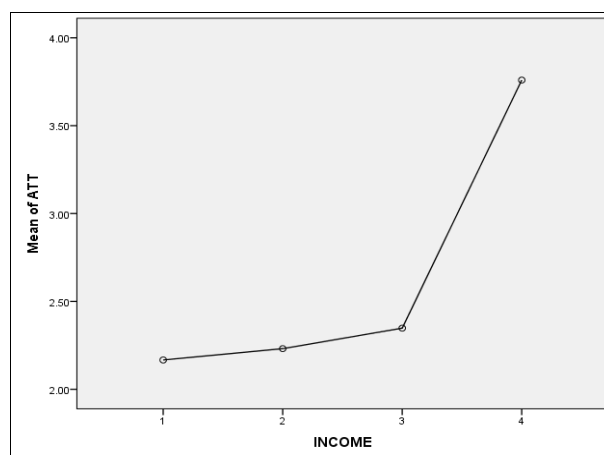


**Fig 3:** Mean plots of attitude between income groups

## 5. Discussion

The research results show that, although there are many social meanings, the people voluntary's attitudes show that they are not in participating in social insurance. As a general rule, standard employee social insurance policies are based on periodic contributions by both the employee and the employer set aside as a fixed percentage of the unit's salary or total payroll. However, with this non-standard form of labor, the labor relationship does not exist. Therefore, contributions can be made based on the automatic deduction system according to the participants' registration through integrating application features to encourage employees to participate in social insurance. This will significantly reduce the management costs of revenue and expenditure for the system. In addition, it also avoids arrears and evasion of payment of participants. Since the participant's income is tied to the platform, in the event of a change in income or operational status, the system can automatically adjust the fee or no fee.

In addition, simplifying or streamlining administrative and financial requirements and procedures can facilitate community worker coverage. Capital, the focal agency for collecting contributions can be fixed. In addition, it is necessary to establish and strengthen tax financing mechanisms. The construction of a social security system for new jobs can lead to pressures on contributions for workers, especially for those with low incomes. Therefore, in addition to building a contribution system, it is also necessary to strengthen tax-funded social protection mechanisms to ensure at least a basic level of protection for all–the social protection floor (ILO, 2017) [10] Many countries are strengthening the tax-funded elements of their social protection systems, such as tax-funded pensions or universal child benefits, to ensure at least some basic level of protection for all.

## 6. Conclusion

This study provides a perspective on workers' attitudes in the digital platform workers in participating the voluntary social insurance in Hanoi city with preliminary survey results and demographic variables. Although the study was conducted carefully, it was only a descriptive statistical analysis and did not consider the intrinsic relationship in the factors constituting the participants' attitudes. Further research may approach to clarify these issues.

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