The Vietnamese Laborers' Intention To Return To Urban Areas For Work In The Covid-19 Pandemic: A Push – Pull – Mooring Approach

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Abstract: *Using the push-pull-mooring model and the PLS-SEM method, this study examines the intention to return to urban areas of nearly 600 Vietnamese laborers who have come back to their hometowns due to the widespread impact of the Covid-19 pandemic. Personal and socio-economic characteristics act as push factors forcing laborers to leave their hometown; urban attractiveness acts as a pull factor, attracting laborers to return for work; the cognition of the "Responding to the Covid-19" solutions and Rural development policies plays not only a moderating role in this model but also a mooring factor keeping laborers in their homeland. This study's findings can be used by policymakers to develop strategies to help attract and retain Vietnamese migrant laborers in the Covid-19 pandemic.*

Keywords: *Covid-19; Vietnamese laborers; intention to return to urban areas; PPM model*

I. Introduction

Migration is an unavoidable trend of the labor division of the development process, which occurs frequently when there are differences in opportunity, social variables, and the network of connections between the origin and destination countries (General Statistics Office of Vietnam and United Nations Fund Population Agency, 2016). This is also an important factor contributing to socio-economic development, especially domestic migration. In the face of adversity, such as the Covid-19 pandemic, migration is not only a necessity, but also an unavoidable option for the majority of laborers. According to Mukhra et al. (2020), when a government enforces social separation, movement restrictions lead to a higher rate of job loss and the fear of an unstable future economic existence, causing laborers to return to their hometowns. This causes a labor surplus in rural areas and a labor shortage in urban areas (Singh & et al., 2020).

Lee (1966) was the first to establish a migration rule based on push-pull factors, building on Ravenstein's foundational theory of migration (1885). Pull factors at the destination are identified that motivate people to move, while push factors at the origin are identified as the force that drives them to leave. According to Moon (1995), the push-pull theory does not fully describe all the factors that directly affect individual migration, whereas migration is also influenced by mooring factors. These factors are determined by the following aspects: culture-society, habitat; creating favorable conditions or hindering the decision to migrate. Therefore, this study chose to use the push-pull-mooring (PPM) model that considers the laborers' intention to return to the urban areas.

Most migration studies are solely concerned with first-time migration but with no mention of return migration (second-time migration). In particular, in the Covid-19 pandemic, Vietnamese migrant laborers from urban to rural areas account for a large proportion of the population, making the study of the intention to return to urban areas for work becomes a new urgent issue. According to the results of the quick summary of reports of provinces and municipalities, on December 15, 2021, the country had about 2.2 million migrants, including up to 80% of Vietnamese laborers from big cities such as Hanoi, Ho Chi Minh City and others returning to their hometowns due to the pandemic's impact, resulting in a severe labor shortage in urban areas and a labor surplus in rural areas (Ngan Anh, 2021). Therefore, the study's finding can be used as a foundation for managers planning to rehabilitate Vietnam's labor market in the wake of the Covid-19 pandemic.

As a result, the authors expect to use the PPM model to propose and validate a model for examining the relationship between push factors (personal and socioeconomic characteristics), pull factor (urban attractiveness), mooring factor (the cognition of the "Responding to the Covid-19 Pandemic" solutions and Rural development policies) to the intention of Vietnamese laborers to return to urban areas to work. We also hope that the findings will help policymakers implement measures to help retain and attract migrant laborers back to urban areas in the case of the Covid-19 pandemic.

II. Material and Methods

2.1. Foundation theory

2.1.1. Push – Pull – Mooring (PPM) model

The movement of people from one geographic location to another or from one territory to another over a temporary or permanent period of time is referred to as migration (Mangalam & Morgan, 1968). Many studies have confirmed that migrant intention plays an important role in the process of reviewing overall migration decisions and predicting future migration flows and is the main indicator of actual migration behavior (De Jong, 2000; Van Dalen & Henkens, 2007). It's reasonable to assume that the intention to return to urban areas refers to laborers' desire to leave their hometowns and come back to cities where they previously lived and worked. As mentioned above, in this study we used the PPM model instead of the usual push-pull model, so next, we will further clarify the effect of the three factors in the PPM model (push-pull-mooring) on the Vietnamese laborer's intention to return to urban areas.

2.1.2. The impact of push factors on the intention to return to urban areas

The push factors are the physical or mental conditions that force people to leave their current homes, such as poverty, rapid population growth, outdated facilities, natural disasters, and fears of political persecution (Lee, 1966). In rural-urban migration, laborers' migration decisions are influenced by push factors in rural areas, specifically: personal, family characteristics, land-housing and socio-economic situations (Jedwab et al., 2017).

Many scholars have used the push factors to investigate the factors that influence migration decisions all over the world. According to Zhu and Chen (2010), young, well-educated migrants will have a lot of relevant knowledge and abilities for urban job requirements, therefore these traits will encourage them to live and work in cities. In another study, due to the constraints of household registration difficulties in China, Li & Et al. (2014) observed that when families have a large percentage of children, members of the household are less likely to engage in non-farm activities far from home. However, the ability of homes with elderly relatives (grandparents) to care for youngsters will encourage those of working age to relocate. Apart from personal and family characteristics, Fan and Zhang (2019) claimed that socio-economic situations were also an important and impactful aspect of pushing migrant laborers such as income, net income, ... In addition, the condition of farmers' land and farms, as assessed by land quality and total land size, plays a crucial impact in migration decisions (Guo & Ge, 2017).

Because this study concentrated on laborers in Vietnam during the Covid-19 outbreak, it is different from the study of Jedwab et al. (2017), which looked at farmers working on Chinese fields. Hence, we opted to examine the impact on Vietnamese laborer's intention to return to the urban areas using personal characteristics and socio-economic situations as push factors, ignoring family characteristics and land situations.

2.1.3. The impact of pull factors on the intention to return to urban areas

The pull factors refer to the positive characteristics of the destination that entice people to move there (Lee, 1966). According to him, these features can include: job opportunities and better living conditions; modern infrastructure; properly equipped health care and education system, as well as political/religious freedom and a safe living environment in urban areas.

Based on the ideas presented above, Ullah (2004) conducted a random survey of 197 migrant workers from the slums of Dhaka, Bangladesh, and found that urban attractiveness is the main pull factor, which has a significant impact on laborer's migration from rural to urban areas. Urban attractiveness includes: (1) easy access to the informal sector, (2) positive information about the city, (3) the probability of having a higher income, and (4) joining relatives/families; especially, for migrant laborers, easy access to the city's informal economy is the most important factor. Expanding on Ullah's (2004) research, Fan & Zhang (2019) used urban attractiveness (housing conditions, occupations of farmers here) and the ability to adapt to urban areas (skills, habits to life here) as pull factors when studying the willingness of Chinese people to leave their farm – first-time migrants.

However, given the main focus of our research is Vietnamese laborers who returned to their hometowns due to the Covid-19 outbreak and wished to return to their former jobs in cities, so we chose to consider urban attractiveness as the only major component of the pull factor in the analysis of Vietnamese migrant intention.

2.1.4. The impact of mooring factors on the intention to return to urban areas

The difference between the PPM model (Moon, 1995) and the push-pull theory (Lee, 1966) is the impact of mooring factors. When developing the PPM model, Moon (1995) mentioned habitats and cultural issues as intervention variables, facilitating or hindering migration decisions. These are the mooring factors in the PPM model, which are widely regarded as the most comprehensive explanation of migration in the literature (Bansal et al., 2005).

However, most scholars have not yet to approached migration in terms of mooring factors. When analyzing farmers' inclination to leave the farm, Fan & Zhang (2019), one of the few texts available in the Chinese context, not only acknowledges the impact of the push-pull factors, but also underlines the function of the mooring factors (which play a direct impact role, it also regulate the effects of the two push-pull factors on migration). These elements may be disregarded in the traditional push-pull paradigm, according to Fan & Zhang (2019), but including them in migration research would provide more credible data for policies. In Fan & Zhang (2019) study, the mooring factor was considered to be the cognition of the farmer. The authors hypothesized that people who had a good grasp of home/land ownership or rights were more willing to migrate, and vice versa.

Based on the findings of Fan & Zhang (2019) research, we decided to use laborers' cognition as an important element, acting as a mooring factor in the research model and also playing a regulatory role in rural laborers' intention to return urban areas for work. In the context of Covid-19, the Vietnamese laborers' cognition in this study is considered in two aspects: cognition of Rural development policy and cognition of "Responding to the Covid-19 pandemic" solutions.

2.2. Methods
2.2.1. Research models and research hypotheses

The research model of the factors influencing Vietnamese laborers' intentions to return to the working city in the context of the Covid-19 pandemic is based on the PPM model (Moon, 1995) with the following hypotheses:

Hypothesis 1 (H1): Push factors positively affect the intention to return to urban areas for work.
Hypothesis 2 (H2): Pull factors positively affect the intention to return to urban areas for work.
Hypothesis 3 (H3): Mooring factors negatively affect the intention to return to urban areas for work.
Hypothesis 4 (H4): Mooring factors have a moderating role in reducing the influence of push factors on intention to return to urban areas for work.
Hypothesis 5 (H5): Mooring factors have a moderating role in reducing the influence of pull factors on intention to return to urban areas for work.
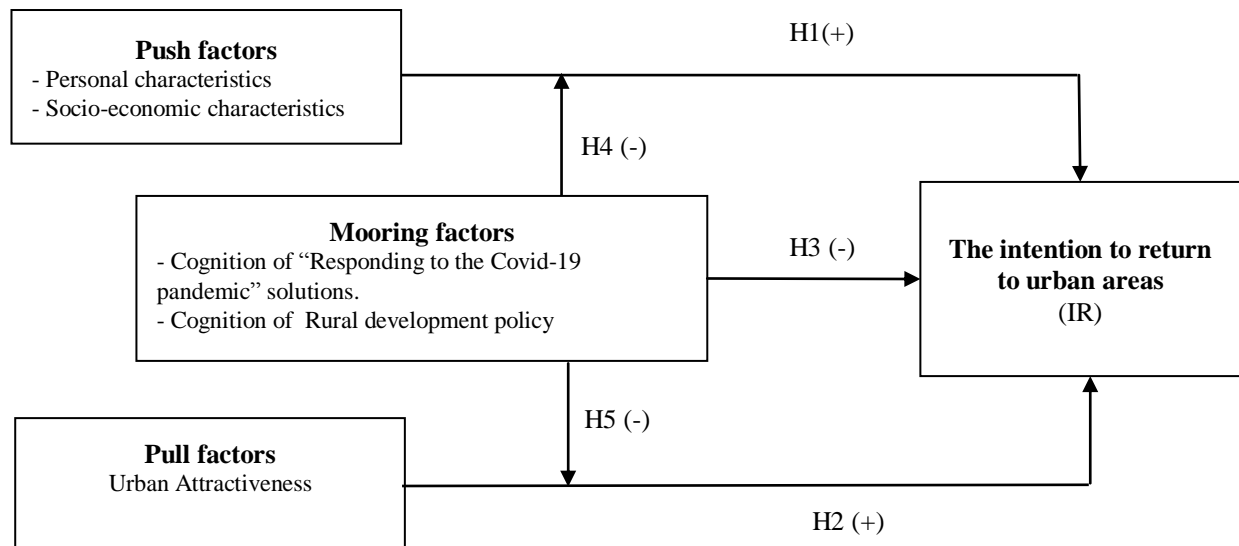
Source: The research model

2.2.2. Method of data collection.

Between November and December 2021, we performed a study of over 600 Vietnamese laborers who had relocated to the city for employment but now returned to their hometown due to the impact of the Covid-19 outbreak. Direct interviews and Google Forms placed on job groups such as National Employment in General Labor, Ho Chi Minh City Job Recruitment, Compatriots' Association Nghe An - Ha Tinh,... are used to collect data. After removing invalid responses, we gathered a sample of 498 observations for study.

The survey questionnaire is divided into four pieces. Except for the first section, the rest used a five-point Likert scale ranging from 1 to 5, with 1 representing "completely disagree" and 5 representing "completely agree". The first part consists of questions about personal characteristics and socio-economic characteristics. The second part comprises questions concerning the survey subjects' cognition of rural development policies built on the development of the scale of Do et al. (2020) and the cognition of government's "Responding to the Covid-19" solutions built on the development of the measuring scale by Wang et al. (2021). The third part of the survey focused on the level of Vietnamese laborers' assessment of urban attractiveness was developed based on the scale of Kourtit et al. (2021). The last component, which examines laborers' intention to return to urban areas in the future, draws on the scale of intentions developed by Sandu & De Jong (1998), Van Dalen & Henkens (2008), and Tam & Khuong (2015).

2.2.3. Data processing method

In the structural equation model (SEM), there are two main approaches to estimating relationships: CB-SEM and PLS-SEM (Hair et al., 2011). CB-SEM is also known as variance structural analysis or causality model, and it is primarily used to prove (or disprove) theories. PLS-SEM, on the other hand, is also known as the path model and is primarily used in discovery research for theoretical development (Hair et al., 2017). PLS-SEM is a better fit for research that focuses on theoretical discovery rather than assertion. PLS-SEM also has the advantage of being able to handle not only complex model with multiple relationships but also causal or structural measurement model (Hair & et al., 2014). For the reasons described above, we decide to use the PLS-SEM model, process on SmartPLS software to test the hypotheses in order to predict the willingness of people to leave their homeland and return intention to urban areas for work in the Covid-19 pandemic.

III. Result

3.1. Descriptive statistics

Table 1: Characteristics of the survey sample

Criteria		Frequency (people)	Percentage (%)	Criteria		Frequency (people)	Percentage (%)
Age	Under 15	12	2.4	Education level	Not yet graduated from elementary school	17	3.4
	15 - 19	50	10.0		Elementary school graduation	29	5.8
	20 - 24	79	15.9		Secondary school graduation	41	8.2
	25 - 29	106	21.3		High school graduation	135	27.1
	30 - 34	88	17.7		Vocational primary graduation	55	11.0
	35 - 39	52	10.4		Vocational intermediate graduation	51	10.2
	40 - 44	49	9.8		Vocational College graduation	83	16.7
	45 - 49	29	5.8		Graduated from University and Postgraduate	87	17.5

				Current employment status	Have a full-time job	190	38.1
	50 - 54	20	4.0		Have a full-time job	190	38.1
	55 - 59	8	1.6		Have a part-time job	168	33.7
	60 +	5	1.1		No job	140	28.2
Gender	Male	295	59.2	Average monthly income	< 4.5 million VNĐ	119	23.9
	Female	203	40.8		4.5 million VNĐ ~ less than 7.5 million VN	165	33.1
Marital status	Married	168	33.7		7.5 million VNĐ ~ less than 11 million VNĐ	96	19.3
	Unmarried	228	45.8		11 million VNĐ ~ less than 15 million VNĐ	56	11.2
	Widow	32	6.4		≥ 15 million VNĐ	62	12.5
	Divorce	52	10.4				
	Separation	18	3.6				

Source: The author group's calculation

Males account for 59.2% of the 498 valid observations, while females account for 40.8% respectively. The most common ages are 25-29, 30-34, and 20-24, with rates of 21.3%, 17.7%, and 15.9% in turn. In terms of marital status, unmarried people made up 45.8% of observations, while married people made up 33.7%. Besides, 27.1% of those who responded were high school graduates, 17.5% were university and postgraduate graduates, and 16.7% were vocational college graduates. The average monthly income of less than 7.5 million dong accounts for the majority (57%) of the total, while income levels of 15 million or more account for only a minor portion (12.5%) of the whole.

3.2. Test the reliability of the scale

For the following reason, we used Cronbach's Alpha (α) and Fornell's Composite Reliability (ρ) to assess the reliability of the PLS-SEM model (table 2): Cronbach's Alpha is sensitive to the amount of variables seen in the measuring scale, and it frequently underestimates internal consistency. Composite Reliability, on the other hand, has a tendency to overestimate internal consistency, resulting in a greater reliability estimate than Cronbach's Alpha. When analyzing and evaluating the internal reliability of the scales, the true reliability usually lies between Cronbach's Alpha (which represents the lower limit) and Composite Reliability (which represents the upper limit).

Table 2: Reliability's results of the scale

	Cronbach's Alpha (α)	Composite Reliability (ρ)	Average Variance Extracted (AVE)
IR	0.897	0.918	0.617
Push	0.770	0.839	0.475
Pull	0.917	0.930	0.572

Mooring	0.938	0.942	0.599

Source: The author group's calculations

The higher the Cronbach's Alpha coefficient, the more reliable the scale; a value of 0.7 or higher is considered good (Peterson, 1995). As a result, our Cronbach's Alpha test results show that the scale's reliability has met the standard. Many researchers, including Bagozzi & Yi (1988), Henseler & Sarstedt (2013), and Hair et al. (2014), recommend a rating threshold of 0.7 for composite reliability values . In general, all the structures in table 2 have a value of ρ greater than 0.7, indicating that they meet the structural value requirement. Therefore, it can be affirmed that the results of the test of the reliability of the scale are excellent and the observation variables that measure the factor are appropriate.

The Average Variance Extracted (AVE) is used to assess the convergence of the scale. Hock & Ringle (2010) states that a scale reaches a convergence value if the AVE reaches 0.5 or higher. This level of 0.5 (50%) means that the average maternal latent variable will explain at least 50% of the variation of each child observation variable. So, according to table 2, the AVE derivative variance index in all structural groups in our model is qualified, except for personal-family characteristics variables (AVE = 0.475). This is because this factor is a demographic variable that consists of nominal scales of personal and family characteristics of the survey subjects, so the evaluation of AVE in this factor is not necessary.

Table 3: Results of regression model inspection

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values (*p*)
Push -> IR	0.183***	0.184	0.048	3.779	0.000
Mooring -> IR	-0.199***	-0.203	0.064	3.093	0.002
Pull -> IR	0.200***	0.207	0.046	4.370	0.000
Mooring*Push -> IR	-0.008	-0.002	0.057	0.140	0.889
Mooring*Pull -> IR	-0.158***	-0.158	0.043	3.668	0.000

*Note: Meaning level: ** p <0.05; *** p <0,01*

Source: The author group's calculations

Table 3 shows the results of the PLS-SEM model obtained through the bootstrapping technique. We investigate three major factors (push, pull, mooring) that influence the intention to return to urban areas for work, as well as the moderating effect of mooring factors on the relationship between push factors, pull factor and the intention to return. The study's findings have revealed new information about labor migration in Vietnam in the context of the Covid-19 outbreak, including:

First: Push factors positively affect the laborers' intention to return to urban areas (β = 0.183; p < 0.01).
Second: Pull factors significantly positively affect the return intention for work (β = 0.200; p < 0.01).
Third: Mooring factors negatively affects the intention to return to urban areas (β = -0.199; p < 0.01).
Fourth: The role of the mooring factors in the relationship between the push factor and laborers' intention to return to urban areas for work has yet to be demonstrated.
Fifth: Mooring factors that play a moderating role in reducing the influence of pull factors leading to laborers' intentions to return to urban areas (β = -0.158; p < 0.01).

IV. Discussion

This result gives us some theoretical and practical implications.

Theoretically, this study adds more diversity to the current theory of migration. In Vietnam as well as around the world, there is very little research on migration that considers the influence of mooring factors, but mainly takes into account the impact on the impact of the two push-pull factors. In addition, the studies are primarily aimed at migration or repatriation migration, not to mention the intention to migrate back to the city. Therefore, testing the effects of the above factors is necessary to clarify the nature of this issue, particularly in the context of the Covid-19 pandemic. Furthermore, a piece of evidence from a developing country would also provide a meaningful comparison to previous studies, which were mostly conducted in developed countries.

Practically, the results of the study also indicate that pull factors have a positive impact on Vietnamese laborers' intention to return to urban areas, and that their cognition of policies in both rural and urban areas will give them more basis in making the decision to remain in their hometowns or return to the urban areas for work. Specifically, young, well-educated laborers (from 15 to 40 years old) will intend to return to the city where they previously lived and worked if the Government and enterprises have support policies to ensure social security, health for laborers in "new normal" situation. As a result, businesses should take measures to "retain" laborers, such as: proactively keeping information, communicating through groups on social media; implementing measures of suspending yet still be paid or suspending without paid rather than terminating the employment contract, ... Additionally, in the "new normal", Governments and businesses must plan to implement occupational safety methods to protect employees, as well as strategies for remote work and automation.

The results also showed that mooring factors have the effect of keeping Vietnamese laborers in their hometown, reducing the effect of the push factors to intention to return. Especially laborers who are over the age of 40, low-skilled, and vulnerable are less likely to return to urban areas for work if the local authority where they live strictly performs solutions to respond to Covid-19 or policies to help laborers stabilize their lives. Therefore, to take advantage of this workforce, local authority must conducts statistics and reviews of unemployed laborers' needs, the ability of each person, create on-site jobs by creating conditions for capital, technology, breeding breeds and cultivation; conduct new vocational training, foreign language training so that they can get used to economics restructuring.

V. Conclusion

Through the PPM model, this study further examined and explained the impact of push-pull-mooring factors on Vietnamese laborers' intention to return to urban areas for work in the context of the Covid-19 pandemic. The findings revealed that push and pull factors had a positive effect on intention, encouraging laborers to return to the urban areas; mooring factors, on the other hand, had the opposite effect, deterring intention while moderating to reduce the influence of pull factors that lead to laborers' intention to return to the working city in Vietnam.

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