The Intention of Employee’s Relocation from Urban to Rural Area in China: The Practices of Telework within Metaverse Implementation

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ABSTRACT

The surge in telecommuting during the COVID-19 pandemic is a recent and noteworthy development that could potentially influence patterns of population mobility. In order to limit the transmission of Covid-19, the movement restriction was implemented in the whole world. It involves the shutdown of all government and private sectors, save for those that offer essential services. Concurrently, governmental implementation of social distancing measures has led to the increased utilisation of information and communication technology (ICT) for remote cooperation in professional settings. Consequently, a large portion of Chinese were required to work remotely from their homes during this crisis in order to ensure the safety of employees and sustain economic activity. This has led to a significant rise in telework throughout Asia, Europe, and the United States. The primary objective of this research paper is to discuss the existing knowledge on telework practices and the emerging trend of metaverse in the application of human resource policies in private sectors in China. The study aims to examine the influence of metaverse telework and non-metaverse telework on an employee’s inclination to move from an urban to a rural location. This study has been established the conceptual framework which constructed three variable which are Employee’s Intention for Relocate of Residency as endogenous variable, while metaverse telework and non-metaverse telework as exogenous variable. This produced conceptual framework backed by the theory of reason action (TRA) and expected to gather the data via questionnaire from the employees in private sectors in China.

Keywords: Intention of Relocate of Residency, Telework, Metaverse, Non-Metaverse, China
I. INTRODUCTION

The surge in telecommuting during the COVID-19 pandemic is a recent and noteworthy development that could potentially influence patterns of population mobility. In order to limit the transmission of Covid-19, the movement restriction was implemented in the whole world. It involves the shutdown of all government and private sectors, save for those that offer essential services. Individuals have refrained from in-person interactions as a precautionary measure against the COVID-19 pandemic in order to safeguard themselves from the potential harm caused by the virus. Concurrently, governmental implementation of social distancing measures has led to the increased utilisation of information and communication technology (ICT) for remote cooperation in professional settings. Consequently, a large portion of Chinese were required to work remotely from their homes during this crisis in order to ensure the safety of employees and sustain economic activity. This has led to a significant rise in telework throughout Asia, Europe, and the United States (Akter et al., 2023).

A survey conducted by China Youth Daily revealed that 86.3 percent of Chinese individuals interviewed for the study have engaged in remote work as a result of the COVID-19 pandemic. Furthermore, 63.7 percent of respondents expressed the belief that telecommuting represents the future of work. Out of the 2,002 people surveyed, 42.2 percent belonged to the generation born after 1980, followed by 40.7 percent from the generation born after 1990, and 9.7 percent from the generation born after 1970. While proponents of remote working highlight its advantages, such as increased flexibility, critics argue that this flexible approach might lead to distractions. Based on the poll, 52 percent of the participants hold the view that telecommuting has the potential to enhance the productivity of distant employees, whereas 19 percent have a contrary opinion. Advocates of teleworking argue that working remotely not only saves time spent on commuting, but also alleviates traffic congestion and minimises one's carbon footprint, making it an environmentally friendly choice. More than 50% of the respondents indicated that remote work could enhance their ability to achieve a harmonious work-life balance. Nevertheless, over 50 percent of the participants also highlighted that remote work can potentially obscure the boundaries between professional and personal life. Approximately 41 percent of the respondents reported experiencing increased difficulty in communicating with their coworkers while working remotely (Xinhua, 2020).

Telework, often known as telecommuting, is the act of working from a place of an employee's choice, rather than a traditional office setting. This is facilitated by the utilisation of diverse tools and gadgets, such as smartphones, tablets, desktop computers, and laptops, which enable employees to maintain connectivity with their workplaces, organisations, clients, and other pertinent parties while working online. Telework is a flexible work arrangement that allows employees to work from their homes or other locations. This arrangement benefits both the employees and the organisations they work for (Nieminen et. al, 2013). Residential employment is a significant factor in determining where people choose to live. Telework, which allows individuals to live anywhere they like, could potentially affect their preferences for residential location. The development of urban transport will be shaped by multiple factors, including the level of online activity integration, as well as other aspects such as transport systems, the adoption of shared mobility, advancements in transport technologies, urban planning, urban policies
and regulations, and societal influences (Mouratidis & Papagiannakis, 2021). Hence, telecommuting might incentivize individuals to move from urban regions to areas characterised by reduced living expenses and superior environmental regulations. Nevertheless, there have been limited empirical investigations on the correlation between telework and individuals' inclination to relocate from metropolitan areas, despite the potential of telework to alleviate urban residential congestion.

This study has two primary objectives. Firstly, it seeks to investigate the effect of metaverse telework on an employee’s intention to relocate from an urban to a rural area. Secondly, it aims to examine the effect of non-metaverse telework on employee’s intentions on people’s intentions to relocate from an urban to a rural area.

In order to pursue further investigation, the researcher must address the following inquiries:

(i) Did metaverse telework affect employee’s intentions to relocate their residency from an urban to a rural area?

(ii) Did non-metaverse telework affect employee’s intentions to relocate their residency from an urban to a rural area?

II. LITERATURE REVIEW

A. The Theory Reason of Action

The TRA model, developed by Martin Fishbein and Icek Ajzen in 1975, seeks to elucidate the correlation between attitudes and behaviours in human actions. Its primary application involves forecasting individuals' actions by analysing their previous opinions and behavioural intentions. The choice to participate in a specific activity is determined by the expected outcomes that an individual foresees resulting from carrying out the action. The hypothesis is based on prior research in the fields of social psychology, persuasion models, and attitude theories. Fishbein's theories postulated a correlation between attitude and behaviour, commonly referred to as the A-B link. TRA states that attitudes play a crucial role in determining behavioural intention. Attitudes refer to individuals' emotional and cognitive evaluations of a particular behaviour. Attitudes towards a particular activity can be categorised as favourable, negative, or neutral. Attitudes and outcomes are correlated, meaning that if someone believes that a particular activity will lead to a favourable or favourable result, they are more likely to have a positive attitude towards that behaviour. Conversely, if someone believes that a particular activity will lead to an undesirable or poor result, they are more inclined to have a negative attitude towards the behaviour and impact their decision to embrace innovation. The positivistic approach to behaviour study seeks to forecast and elucidate an individual’s inclination to engage in a certain behaviour. The theory necessitates a clear definition of conduct in relation to four key concepts: Action, Target, Context, and Time. TRA states that behavioural intention is the primary factor that influences behaviour, and it is determined by attitudes and norms. Through the analysis of attitudes and subjective norms, researchers can ascertain if an individual is likely to carry out the intended activity.
B. The Employee’s Intention of Relocation from Urban to Rural Area

The theory of reasoned action (TRA) posits that attitudes and subjective norms, which refer to the perceived social pressure to engage or abstain from a particular conduct, are the primary factors that influence behaviour. Hence, if an individual holds the belief that a particular conduct will result in favourable consequences and also feels that others endorse that behaviour, they are more inclined to partake in that behaviour. Mohd Hussain, B and Ahmad (2017) performed a survey to investigate the factors that may lead urban migrants to permanently return to rural areas, including their intentions, reasons, and events. The survey findings indicate that 16% of adults expressed a ‘clear intention’ to relocate to rural areas. This ambition was reported by 7% of respondents without any specific reason, 5% upon retirement, and 4% when their children complete their schooling. Some individuals predicted their eventual return when they were obligated to assume control of the family’s wealth (as stated in the family will, 10%), fulfil their responsibilities towards their parents (8%), and earn a sufficient income to sustain themselves in urban areas (4%).

![Figure 2: Urban Residents ‘Definite Intention’ Migrate to Rural Area](image)

The participants’ inclination to move coincides with the findings of Hassanain, Ibrahim and Al-Hammad’s (2020) research, which revealed that 50% of urban migrants showed a desire to return to their place of origin, and 1 in 6 urban migrants had concrete intentions to do so. Their study elucidated the factors that influenced their choice to relocate, encompassing cultural significance and financial considerations.

Urban areas provide benefits such as lucrative employment opportunities, excellent education and healthcare options. However, their high population has also resulted in other unsustainable social and environmental problems. Urban areas are confronted with a significant problem of air pollution stemming from several sources such as transportation, the combustion of fossil fuels, industrial emissions, and incineration of waste. At least 96% of the urban population is exposed to fine dust (PM2.5) concentrations that exceed the limits set by the World Health Organisation (WHO) (Choi, 2022). Air pollution in urban areas has had a greater influence on children and
young people, leading to an increase in both the occurrence and severity of asthma and allergies. (Cruz, Stelmach & Ponte, 2017). The escalating population density in urban areas gives rise to several unsustainable environmental issues, in addition to air pollution. For example, a high population density often results in issues concerning the amount and quality of water, as well as unmanageable amounts of municipal and industrial garbage (Taksibi, Khajehpour & Saboohi, 2020). Furthermore, inhabitants of urban areas experience the adverse effects of traffic congestion and elevated crime rates. Promoting the relocation of urban residents to other cities can effectively address the fundamental challenges faced by urban areas by alleviating population pressures (Bulkeley, 2006).

Furthermore, migration stimulates urban expansion by creating a greater need for employment opportunities, urban infrastructure and services, the construction of new affordable housing, and other physical advancements. Historically, studies have consistently demonstrated that urban migrants and migration have a significant role in fostering urban expansion and urbanisation (Trask, 2022). Rapid urbanisation has presented both advantages and difficulties. Although cities and lifestyles have become increasingly technologically advanced, individuals are becoming more dependent on employment, foreign products, automobiles, and machinery. If oil becomes unavailable, cities will no longer serve as vital economic engines. The exacerbation of urban poverty, food insecurity, and violence will lead to a significant decline in the migration of people from rural to urban areas. Mumin (2020) have found that population migration has resulted in the emergence of new regions for settlement or resettlement.

As metropolitan areas become denser, people are increasingly moving to newly developed towns, which helps to decentralise urban hubs. However, it is crucial to acknowledge that this does not necessarily indicate a transition from urban to rural areas, but instead demonstrates a trend of counter-urbanization (Yasin, Zain & Hassan, 2022). The shift has resulted in a tendency of folks living in greater proximity to rural areas. These researchers argue that the continual and cyclical depopulation of metropolitan areas can be defined as the act of leaving the city. In general, the significant increase in reverse migration can be linked to the "push factor" of difficulties in metropolitan areas and the "pull factor" of rich rural regions. This stands in opposition to the concept of migration as a "circular" motion, typically associated with elderly or retired migrants.

C. Definition of Telework or Telecommuting

Telework or telecommuting refers to the practice of using information and communication technology (ICT) to work remotely, outside of the traditional workplace. Telework promotes organisational flexibility for employers and work flexibility for employees. It also facilitates the transfer of businesses from rigid to adaptable production processes, allowing them to quickly and cost-effectively respond to market changes. With the advent of Information and Communication Technology (ICT), employees are now able to accomplish their work tasks without the need to physically go to their employer's premises. As a result, the number of teleworkers has been steadily rising (Buomprisco, Ricci, Perri & De Sio, 2021). In response to the COVID-19 pandemic, organisations have increasingly implemented teleworking to ensure the safety of their employees and maintain business
operations (De Haas, Faber & Hamersma, 2020). During the epidemic, teleworking in Greece experienced a significant increase of almost 50% (Mouratidis & Papagiannakis, 2021).

The implementation of telework differs across different industries and across various professions. Telework is more common in knowledge-intensive sectors such as professional and ICT services, but less common in knowledge-light sectors like manufacturing, retail, transportation, as well as non-market services such as health and social services. This is because a large number of highly skilled occupations in industries that rely on knowledge may be done remotely using information and communications technology (ICT). However, jobs in less knowledge-intensive services and non-market activities are more likely to require a person to be physically present. Telework offers numerous benefits for people, employers, and society. Telework promotes work flexibility and work-life balance for employees by reducing travel time and increasing the amount of leisure time they can spend with their families at home (Belzunegui-Eraso & Erro-Garcés, 2020). From an employer’s standpoint, telework reduces costs associated with leasing and operating real estate, enhances the chances of recruiting higher-quality staff, and offers greater flexibility inside the organisation. Telework reduces the environmental impact of travel, making it a sustainable kind of work in contemporary society, which grapples with air pollution and greenhouse gas emissions. Teleworking has several disadvantages for both organisations and employees. From the standpoint of an employee, telework reduces the separation between home and work and limits interactions with people outside of work. However, from the standpoint of an employer, telework presents difficulties in managing employees who are located far away (Buomprisco et.al, 2021).

The International Labour Organisation (ILO) classifies telework into three categories based on its location and frequency: regular home-based telework, high mobile teleworks, and occasional telework. Regular home-based telework refers to the consistent use of information and communication technology (ICT) to work from home. High mobile telework refers to the regular use of ICT to work in various locations outside of the employer’s premises. Occasional telework refers to the occasional use of ICT to work in one or more locations outside of the employer’s premises. ICT, including cell phones, personal computers, tablets, and virtual conferencing tools, is essential for telework to be possible, as indicated by the description of telework modes mentioned earlier. There is a scarcity of research on telework, particularly focusing on the information and communication technology (ICT) platforms used for teleworking. This study categorises telework into two types: metaverse telework and non-metaverse telework. The distinction is based on the important role of information and communication technology (ICT) in telework, as well as the increasing number of enterprises that are using metaverse offices, made feasible by recent breakthroughs in ICT (Jaafar & Rahim, 2022).

D. Metaverse Telework and Non-Metaverse Telework

The word "Metaverse" has gained significant traction in the technology industry after 2020. The term "metaverse" was introduced by Neal Stephenson (1992) in his science fiction novel Snow Crash. The term "metaverse" is a combination of the word "meta," which signifies "beyond," and "verse," derived from "universe." It refers to a virtual environment that exists outside the physical world, where individuals are represented by avatars (Choi,
The metaverse has gained significant global attention due to the emergence of advanced technologies such as the fifth-generation mobile network, blockchain, virtual reality (VR), augmented reality (AR), and head-mounted display (HMD). Meta is the new name for Facebook, as announced recently. In 2021, Nvidia's CEO expressed plans to develop a metaverse (Kim, 2021). The metaverse refers to a digital realm that lives independently from our physical reality. It is considered as a new iteration of the internet, known as the next-generation internet (Park, Ahn & Lee, 2023).

As metaverses have emerged in various domains, teleworking has begun to take place within metaverse workspaces. An increasing number of companies are adopting metaverse offices to facilitate remote work. Currently, telecommuters around the world are using immersive, interactive, and collaborative metaverse platforms like Gather, Teamflow, Meta, or platforms created by their employers (Park, Ahn & Lee, 2023). Real work necessitates workers to commute to and operate from a designated office space, whereas remote work enables tasks to be accomplished using technology (such as just relying on email or a combination of several tools) without the need to travel to a real office. The distinguishing feature of the Metaverse workspace is the provision of a virtual office environment that enables employees to collaborate and work together within a shared online space. Consequently, both contemporary and past versions of metaverse workspaces are subsets of remote work that can overlap but are not identical.

The concept of metaverse telework refers to the integration of augmented physical reality with digitally persistent virtual space. This workspace facilitates instantaneous communication among all participants through the use of avatars and/or live video feeds, enabling large-scale remote collaboration without being constrained by time or physical distance. In addition, an immersive setting promotes social interactions and meanings that are comparable to those experienced in a real office, while also enabling new ones. Ultimately, all jobs and responsibilities are smoothly included, functioning in the same manner as they would in a traditional office setting. The workspace in the metaverse that we are discussing is primarily oriented towards providing services, with an emphasis on creating sustainable content and promoting societal importance. Advanced technology elements such as VR, AR, and ER are not necessary for this workspace (Xiong et al, 2022). Therefore, metaverse telework provides a comparable communication setting to that of non-telework in a physical office (refer to Table 1).

Table 1. Similarities and differences between metaverse telework, non-metaverse telework, and non-telework.

<table>
<thead>
<tr>
<th>Avatar</th>
<th>Metaverse Telework</th>
<th>Non-Metaverse Telework</th>
<th>Non-Telework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees exist in the same space</td>
<td>O (Virtual Space)</td>
<td>X</td>
<td>O (Physical Space)</td>
</tr>
<tr>
<td>Immediate face-to-face communication</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>
**Method of communicating with co-workers**

<table>
<thead>
<tr>
<th></th>
<th>Move an avatar and interact with co-workers</th>
<th>Email, call, teams, virtual conferencing (must schedule a meeting and connect to the virtual conferencing applications)</th>
<th>Physically move and communicate with co-workers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical work location</strong></td>
<td>Anywhere with internet access</td>
<td>Anywhere with internet access</td>
<td>On the employer’s premises</td>
</tr>
<tr>
<td><strong>Regular commute</strong></td>
<td>O (commute to metaverse office)</td>
<td>X</td>
<td>O (commute to physical office)</td>
</tr>
</tbody>
</table>

Both forms of telework allow employees to work from any location with internet access, regardless of the disparity in communication effectiveness between individuals who engage in metaverse telework and those who do not. According to Sparkes (2021), a person’s decision on where to live is greatly impacted by their place of work. However, telework, which allows workers to work from any location, even if it is far from their employer’s main office, may affect this decision (Mouratidis & Papagiannakis, 2021).

Based on the aforementioned literature, the researcher formulated the two hypotheses for this investigation as follows:

**H1.** Metaverse teleworking has a positive effect on an employee’s intention to relocate from an urban to a rural area.

**H2.** Non-metaverse teleworking has a positive effect on an employee’s intention to relocate from an urban to a rural area.

### III. RESEARCH METHODOLOGY

This study utilises two methodologies to examine the factors that influence platforms. The main aim of this study is to determine a relationship between the independent variables. This research enhances the advancement of knowledge and the generation of innovative ideas for scholars. Therefore, the ongoing study aims to gather the necessary data to investigate the issue. The main data source for this study will consist of a quantitative approach and an online poll, while additional data will be obtained from scientific journals, publications, and credible websites.

Figure 2 demonstrates that both metaverse teleworking and non-metaverse teleworking are influential factors in employees’ intention to relocate their residency. For this study, the researcher will focus on a certain group of people employed in different private industries. The data was collected by an online survey using a non-probability sampling method in conjunction with convenience sampling. The participants’ demographic information is used as the foundation for disseminating surveys through internet platforms. The poll was disseminated through commonly used means of instant messaging and face-to-face encounters, such as the
messaging programme WhatsApp. Afterwards, surveys will be given to coworkers who have comparable characteristics.

![Conceptual Framework](image)

**Figure 2: Conceptual Framework**

**IV. CONCLUSION AND RECOMMENDATION**

Ultimately, this study has examined how telework practices impact an individual's inclination to move from an urban to a rural place. Previous research has shown a gap in the study of how telework practices influence employees' decisions to relocate from urban to rural areas. This is despite the growing number of teleworkers and the sustainability challenges faced by megacities due to population pressures. The COVID-19 pandemic has resulted in an increase in the utilisation of metaverses as substitutes for in-person interactions and telework is currently being carried out in metaverse-based offices. This study aims to differentiate between metaverse telework and non-metaverse telework and investigate their impact on individuals' migration aspirations, considering the increasing significance of sustainability. A theoretical framework has been proposed to investigate the impact of two independent variables: telework metaverse and telework non-metaverse (Figure 2).

Further investigation is warranted to apply the conceptual framework in this study. In addition, this study specifically concentrates on assessing an employee's intention rather than their tangible actions. Hence, additional investigation is required to authenticate whether the findings derived from this study manifest as tangible actions. In order to create a well-organized experiment with distinct manipulations, this study instructed the participants to imagine that organisations with three distinct employment kinds have the same working conditions in terms of commute time, compensation, culture, work intensity, and in-house welfare.

This study examines the connection between the adoption of telework and the desire of people living in large cities to move elsewhere, adding to the existing body of knowledge on telework and sustainability. This study suggests that authorities in the smart city development sector should introduce laws that encourage firms in
megacities to utilise metaverse telework in order to improve the sustainability of these cities. This study is expected to stimulate additional research on the social consequences of telework and individual decision-making in the metaverse. This will enhance the existing body of knowledge and benefit practitioners in the human resource sector by facilitating the development of new mechanisms for working hours and working styles.

REFERENCES


