

# A Study on the Dynamics of the Labor Market in Guangxi Insights into the Impact of COVID-19 and its Implications for Future Labor Supply and Demand

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**Abstract:** The COVID-19 pandemic has caused a significant slowdown in global economic development, leading to increased search for alternative growth channels. China, with its relatively successful containment of the virus, has emerged as a prime destination for investment. Guangxi, a strategically located province in Southwest China and a crucial gateway to the China-ASEAN region, has gained particular attention from investors. In evaluating investment opportunities, a critical factor that must be taken into consideration is the local labor market. This study aims to examine the concerns of both labor supply and demand by surveying job seekers at the first talent exchange conference post-pandemic and conducting interviews with participating enterprises. In addition, the macro-level analysis will be based on publicly available government data, in order to gain a comprehensive understanding of the state of Guangxi's labor market. The results indicate that while the macro-level structure of the labor market in Guangxi is stable, the pandemic has caused disruption at the micro level.

**Keywords:** Labor Market; COVID-19 Economy; Labor Demand And Supply; Human Recourse Management; Manpower; Guangxi; China

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## Introduction

China, as one of the strongest economies in the world and a crucial component of the global industrial chain, has a significant impact on the global economy, resulting in a surge of interest among academics and business professionals in studying China's economic development. The strong market vitality of the country has also attracted a large number of investors looking to do business in China. Currently, much of the research on China's economy is centered on developed regions such as Beijing, Shanghai, Zhejiang, Jiangsu, and Guangdong, leaving gaps in our understanding of less developed regions such as Guangxi Zhuang Autonomous Region.

Located in Southwest China and serving as the gateway to the China-ASEAN Free Trade Area (CAFTA), Guangxi has a unique business environment that encompasses a range of factors such as economic, legal, cultural, and political considerations. One particularly crucial aspect of the business environment is the labor market, as it has a significant impact on labor costs for enterprises. Potential investors must take the labor market into account when considering investment opportunities in Guangxi.

This paper aims to fill the gap in our understanding of Guangxi by conducting field studies to analyze the current state of the labor market in the region. The findings of this research will provide valuable insights for future researchers and serve as a reference for potential investors looking to do business in Guangxi.

The selection of Guangxi as the research object was driven by several factors. Firstly, Guangxi is a gateway to the CAFTA, and its future development is poised to focus on integration with ASEAN countries. Secondly, as a critical aspect of the Chinese government's Western Development Strategy, the substantial investment in Guangxi serves as an indicator of its potential for future development. Thirdly, existing research on Guangxi is limited and is primarily focused on regional traditional culture or geography.

Few studies have been conducted on Guangxi's labor market, with most written in Chinese, presenting a challenge for international researchers in understanding the region's labor market. Finally, Guangxi's proximity to Guangdong, one of China's most developed provinces, has a spillover effect on Guangxi's economy, both positive and negative, thereby creating a unique labor market compared to other regions in China.

## Literature review

The labor market is characterized as a platform for the exchange of labor services and remuneration (Gimble, 1991). In essence, it is the mechanism through which the labor force of a country is efficiently allocated across various industries, regions, occupations, and enterprises, via a process of negotiation and transaction between labor supply and demand. The relative bargaining power between these two parties plays a crucial role in determining the state of the labor market. Typically, employers are considered to represent the demand side, while workers constitute the supply side of the labor market (Card, 1987). The supply of labor can be analyzed at both the macro and micro levels. Macro labor supply encompasses the total quantity and quality of the available labor force in a region or country, whereas micro labor supply refers to the number of working hours an individual is willing to offer at a specific wage level (Killingsworth, 1983). On the other hand, labor demand refers to the quantity of labor sought by enterprises at the prevailing market wage. It is important to note that labor demand is a derived demand, meaning it is subject to various factors such as the cost of capital (Hamermesh, 1996).

The Guangxi region of China exemplifies typical features of the Chinese labor market. One crucial concept widely discussed in scholarly literature is "Hukou", a system that categorizes residency status. Before the year 2000, individuals were constrained regarding where they could reside, work, and study based on their Hukou status. Eliminating this constraint has promoted rural-urban migration, which played a part in China's economic development, as noted by Zhao (2005). However, some scholars argue that the influx of rural migrants into cities has reduced the bargaining power of labor, leading to a short-term decline in average wages (Zhan, 2011; Bosker et al, 2012). Moreover, rural-urban migration has significantly affected the rural human resource structure. The migration of young labor from rural areas to urban areas may impede rural economic development, exacerbating the trend of rural-urban migration, according to Zhao (2004). Rural workers without local Hukou status, who leave their children behind, may contribute to the issue of "left-behind children," which affects future labor quality by hampering their education (Robson et al, 2008; Chang et al, 2011).

From a macro perspective, the labor force supply in Guangxi has increased, but the situation at the micro level is less optimistic. The willingness of individual workers to work at a particular wage level, a crucial determinant of labor supply at the micro level, is challenging to quantify due to the complexity of individual preferences and income structures. The proportion of working income in total income reflects, to some extent, the individual's willingness to provide labor. If the proportion of non-working income is high, the probability of the individual being willing to spend time working is likely to decrease, and vice versa, under the assumption that other conditions remain unchanged. Personal preference also plays a significant role in shaping labor supply. Generally, personal time can be divided into working and leisure time. Given a constant wage level, some individuals may choose to allocate more working time in exchange for higher income, while others may opt for reduced working time in the absence of sufficient wage incentives (Dickens & Lundberg, 1985). The decision between work and leisure is a personal preference, shaped by factors such as the social, economic, political, cultural, and educational environments.

Recent research has highlighted that a significant number of young Chinese individuals are opting to remain at home rather than work. This phenomenon can be attributed to a combination of factors, including the slowing of economic growth, which has reduced the overall demand for labor, and the traditional Chinese cultural belief that civil servants have a higher social status. It has been observed that young people in developing regions are more likely to take the civil service examination as compared to their counterparts in developed regions (Zhong, Bao, & Huang, 2021).

The demand for labor constitutes a key area of inquiry in the field of labor market analysis. As a derived demand, it is primarily dependent on the demand for goods and services. When market demand for these goods and services is robust, businesses will tend to increase their labor force in order to expand production and reap profits. Conversely, when demand is weak, labor demand will likewise be impacted (Xiang, 2005). The COVID-19 pandemic has resulted in a decrease in production in many countries, yet demand for goods and services persists. China, having emerged as the fastest recovering economy from the pandemic, has made a concerted

effort to ramp up production to meet both domestic and foreign needs. According to data from the National Bureau of Statistics, the total value of exports in 2021 reached approximately 28.2 trillion US dollars. This strong demand for goods has also contributed to an increase in domestic labor demand within China. Several scholars have noted that the growth of China's labor demand is closely tied to the growth in overseas orders, as well as the recovery of the domestic economy driving increased consumption. The liberalization and opening-up policies implemented in China have facilitated the entry of private and foreign enterprises into the market, leading to an expansion in the demand for labor. Additionally, as baby boomers retire, many businesses are facing a shortage of workers, contributing to the strength of the current labor market. However, it has also been noted that while labor demand remains robust, there have been changes in the quality of demand. With the rapid development of artificial intelligence, internet and automation technology in China, some enterprises are now accelerating the process of automation, leading to a reduction in demand for low-skilled labor. In contrast, the demand for high-tech labor in the service and information technology industries is growing steadily. In conclusion, the current state of labor demand is robust, yet subject to structural changes (Li et al., 2020).

The labor market in Guangxi, China is unique in several aspects. It shares a border with Vietnam and the mountainous terrain, including dense forests, in the border area provides ease of entry for illegal immigrants. Several studies have noted that the sugarcane planting industry in Guangxi is heavily reliant on the low-cost labor from Vietnamese workers who enter the country illegally (Chen & He, 2019; Huang & Zhang, 2021). Although the inflow of illegal immigrants has increased the labor supply to some extent, many highly skilled workers in Guangxi have migrated to more developed areas, such as Guangdong, due to the lack of employment opportunities in the region's agriculture and primary industries and the absence of financial and information technology sectors (Yang & Liu, 2021; Liu, 2018). Higher income prospects in developed areas is also a factor contributing to the outflow of labor force in Guangxi (Chang & Huang, 2017). The current research on the labor market in Guangxi is limited, with most studies focusing on labor supply, and the research on labor demand is only briefly addressed. For example, the aforementioned research on the sugarcane planting industry highlights the large labor requirements during harvest season (Chen & He, 2019). Given the dearth of research on both the labor supply and demand in Guangxi, there is significant room for further exploration and analysis in this field.

## Methodology

To comprehensively assess the current state of Guangxi's labor market, it is essential to gather perspectives from both employers and employees. A survey was developed to collect data from the employee side, which incorporated factors such as wage, work experience, age, technical environment, productivity, education level, and training level. Moreover, it is important to consider demographic variables such as race, ethnicity, and gender. To ensure the survey's validity, a pilot study was conducted, and the questionnaire was refined based on feedback.

In addition, in-depth interviews were conducted to gather employer attitudes. This approach allows for unstructured questions, enabling interviewees to express their opinions freely and adjustments to the interview content based on responses.

The survey was administered during the annual Provincial Talent Exchange Conference held on October 13th, 2022, at the International Convention and Exhibition Center in Nanning, Guangxi's capital city. This event brought together over 1,000 employers from various industries and more than 60,000 job seekers, providing a unique opportunity to gather the perspectives of diverse groups in a short period. A total of 1,423 questionnaires were distributed, 972 were collected, and 845 were effectively analyzed. A subset of respondents underwent a short follow-up interview based on volunteers' observations of their attitudes towards the survey.

The author conducted interviews with 14 HR managers from various industries, including state-owned enterprises, private enterprises, and foreign-funded enterprises. Despite the interviews' unstructured nature, they revealed interesting insights that will be presented in the findings section.

## Finding

The results of the survey indicate that the overall labor supply in Guangxi appears to be adequate, however, there exist structural imbalances between labor supply and demand. The available statistics from the Ministry of Education demonstrate that the number of recent college graduates in China, including those in Guangxi, is on the rise, reaching 10.76 million in 2022. Furthermore, the quality of labor in Guangxi has improved, with a growing proportion of workers having received higher education, and the

government-established vocational skills training centers offering skills upgrade training to a significant portion of the workforce.

On the demand side, the resumption of production following the COVID-19 pandemic and the accompanying consumer stimulus have resulted in a robust demand for labor. However, a mismatch between the available labor supply and the needs of different industries exists. There is a high demand for workers in the manufacturing and agriculture sectors, yet job seekers show little interest in these industries. Conversely, job seekers exhibit a preference for careers in the financial or public affairs sectors, where the demand for labor is limited.

The analysis of macro data and micro-level information gathered through both in-depth interviews and questionnaires has revealed several significant issues in the labor market of Guangxi. Firstly, the education level of job seekers has been found to have a significant impact on their personal preferences and employment decisions during the job-seeking process. Secondly, personal job satisfaction has been found to affect labor market mobility, particularly between different occupations and industries. Finally, the impact of the COVID-19 pandemic has been revealed to have not only macro-level impacts on the labor market, but also micro-level effects on labor supply and demand. These findings will be further explored in the following discussion.

## **Education level and personal career preference**

The education level is widely recognized as a key factor that affects career preferences, with numerous studies establishing a positive correlation between education and income, as well as a greater likelihood of obtaining employment in high-income industries or occupations with elevated social status (Griliches & Mason, 1972). However, the situation in Guangxi is unique. Survey results indicate that individuals with high levels of education in Guangxi are not necessarily inclined towards high-income occupations but instead prefer stability in employment, often referred to as an "iron rice bowl" job, which is characterized by low unemployment risk and stable income in civil service, government-sponsored institutions, and state-owned enterprises.

The career preferences of some interviewees in Guangxi differ from this trend. These individuals contend that the province lacks the availability of high-level job opportunities that align with their career aspirations. Typically, such positions are only available in large state-owned enterprises, thus limiting the choice of these job seekers to such enterprises or necessitating a deviation from their desired career path.

The employment market in Guangxi reflects a comprehensive evaluation of the risks and benefits involved in career pursuits, with highly educated individuals prioritizing job security over high income or social status. Conversely, individuals with lower levels of education tend to prioritize their current income over job security. This disparity can be attributed, in part, to the fact that many of these individuals do not possess local "Hukou," or household registration, resulting in a lack of a strong sense of belonging to the place of their employment.

In conclusion, education level plays a role in shaping the career preferences of workers within the labor market, and there exist differences between Guangxi and other regions in this regard. However, the relationship between Hukou and education level is a complex issue, and is beyond the scope of this paper; as such, a more in-depth discussion of this matter is not feasible within the limited space of this study.

## **Job satisfaction and labor flow**

In this study, a substantial portion of the participants reported being employed while simultaneously seeking alternative employment opportunities. Over 80% of the employed individuals who are still seeking alternative job opportunities indicated dissatisfaction with their current employment. Employee job satisfaction, being a subjective construct, can have a significant impact on the fluidity of the labor force between organizations and industries. Hence, gaining an understanding of employee job satisfaction is critical in the examination of labor market mobility. This information can also assist employers in enhancing employee satisfaction and drive business success by addressing employees' concerns.

In this study, various factors that influence job satisfaction were identified. These factors, including workplace environment, compensation, career development, job responsibilities, work-life balance, and job burnout, are widely acknowledged as key determinants of job satisfaction in both domestic and international labor relations research. Results from the survey revealed some interesting observations, such as higher job satisfaction among individuals with a few years of work experience, those working in "iron

rice bowl" industries, and regular employees compared to their respective counterparts. However, no correlation was found between education level and job satisfaction. Subsequent qualitative analysis, conducted through follow-up interviews, sought to shed light on these findings.

The results of the survey demonstrate a positive relationship between work experience and job satisfaction. Out of the 326 respondents who reported being satisfied with their job, the majority with 121 individuals had over 5 years of work experience, while the largest group of 519 dissatisfied respondents had less than 1 year of experience. This trend can be attributed to the fact that employees with more work experience tend to have higher salaries and better job opportunities, allowing them to secure senior positions in the organization. As one interviewee stated, "I work for a higher salary. In the past, I wasn't able to secure a high-paying job with little work experience, but now that I have experience and skills, I can attain a senior position, resulting in a higher salary. What else is there to be dissatisfied with?"

However, it is worth considering why the job satisfaction of some individuals increases with work experience, while others may not experience the same trend. According to MacKay and Burke (1990), people tend to adjust their perception of the world through their experiences, which also applies to work. A significant number of interviewees stated that after graduation, they held unrealistic expectations about the job market, but as they gained more experience and matured, they realized their limitations and became less dissatisfied. This highlights the importance of experience in shaping job satisfaction.

The job satisfaction of employees in "iron rice bowl" positions is higher than that of employees in other industries, and the satisfaction of regular employees surpasses that of temporary employees. The relationship between sense of belonging and job satisfaction has been extensively studied and a positive correlation has been established. Belonging, which encompasses an employee's sense of identity, security, and purpose within an organization, can be developed over time (Winter-Collins & McDaniel, 2000). It is unsurprising that the "iron rice bowl" nature of certain occupations fosters a high sense of security among practitioners, as they are not faced with the threat of unemployment, thus promoting a greater sense of belonging to their work. Regular employees also tend to have a stronger sense of belonging as they view themselves as more integral members of the organization, with formal labor relationships further reinforcing this identity. As a result, regular employees exhibit higher job satisfaction compared to temporary employees who lack this formal connection to the organization.

The industries with higher job satisfaction tend to have a lower rate of worker turnover, indicating a saturation in labor demand. Conversely, industries with low job satisfaction not only provide ample labor demand in the job market, but also continually supply a significant amount of experienced workers. For investors seeking to establish a business in Guangxi, an understanding of this trend can assist in formulating effective human resource planning at the organizational level, and contribute to the success of their venture.

## **The impact of COVID-19 pandemic**

In response to the COVID-19 pandemic, Chinese authorities implemented stringent border control policies that not only reduced the inflow of legally-employed foreign workers into the country, but also affected some undocumented immigrants. With the reinforcement of identity verification in border regions and a robust repatriation policy, personnel costs have risen in industries that previously relied on low-cost undocumented workers, resulting in an increase in product prices.

As previously noted, there is strong demand for Vietnamese labor in Guangxi's sugarcane planting industry. However, due to border control policies, the industry has been forced to raise wages to recruit local workers to address the labor shortage. A representative of a state-owned sugar enterprise was quoted as saying: "In the sugar pressing season every year, large numbers of trucks transport sugarcane from farms to our production facilities. However, last year the price of sugarcane was significantly higher than in previous years. We reached out to our suppliers, who informed us that due to the impact of the epidemic, they had to raise wages to ensure a sufficient labor force to maintain output. This price increase was thus deemed a case of force majeure.

The COVID-19 pandemic has resulted in an imbalance between the supply and demand of labor in Guangxi, leading to rising costs in the sugarcane planting industry and a surplus of workers in sugar mills. The shortage of raw materials has led to a reduction in the average workload of some workers in sugar enterprises, and the freezing of recruitment. A representative of a state-owned sugar enterprise stated that, as a state-owned entity, the obligation to maintain the overall employment rate of society was present, and layoffs were not an option, even if the excess employees became a burden. Instead, the solution was to reduce the workload of

individual employees and temporarily halt hiring, with the goal of rebalancing the workforce through gradual retirement or voluntary departure. This situation highlights the impact of the COVID-19 pandemic on the labor market, with sugarcane farming and sugar industry serving as just one example of the problem, which may be present in other industries in Guangxi as well.

The COVID-19 pandemic has not only impacted the employment of foreign workers in Guangxi, but it has also influenced the future labor market in the region. As mentioned previously, Guangxi is undergoing industrial upgrading. During the early days of the pandemic, the Chinese government implemented strict home quarantine policies to curb the spread of the virus, which resulted in many enterprises shutting down operations. This has highlighted the need for automated production, as crowded workplaces pose a risk for virus transmission. With the adoption of automated production, the demand for unskilled labor will decrease and the demand for highly skilled and educated labor will increase. Several enterprise leaders have stated that, due to the impact of the pandemic, the implementation of automatic production has become imperative. As such, they are set to upgrade their production lines and adjust their human resource structures as soon as operations resume. This will result in a reduction in low-skilled employees and an increase in highly skilled and educated personnel, particularly those proficient in utilizing new technologies.

## Limitations and Conclusion

The present study acknowledges certain limitations in the data collection process. The survey questionnaire was primarily distributed to individuals with higher educational attainment and was randomly distributed, possibly resulting in sample underrepresentation. The talent exchange conference, serving as the survey venue, had specific education and skill requirements for job postings, creating a self-selection bias among job seekers who did not meet the criteria. Additionally, the conference was government-organized, leading to limited labor demand representation, as only larger and well-established enterprises were eligible to participate. Future studies may aim to address these limitations through the adoption of more comprehensive sampling methods.

In conclusion, the Guangxi labor market exhibits a promising outlook for future growth. The gradual easing of the "Hukou" system and the expansion of higher education will ensure an adequate labor supply. At a micro-level, disparities in the labor supply are largely driven by individual worker preferences, while labor demand centers around skills and education. The COVID-19 pandemic has brought new elements to the Guangxi labor market, with restrictions on foreign labor increasing labor costs in labor-intensive industries, but providing an opportunity for advanced production methods. The current labor market in Guangxi shows positive trends, with increasing labor force quality and quantity, and supply adjusting to demand. Future research should monitor the impact of the pandemic on the labor market.

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