

# Workforce development, performance improvement practices and employee well-being in manufacturing firms in China: Basis for a thriving workforce framework

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## Abstract

This study investigated the relationship among workforce development, performance improvement practices and employee well-being in manufacturing firms in China that will be used as basis in developing a thriving workforce framework among employees. Specifically, it determined the workforce development in terms of soft skills and personal development, technology and digitalization and focusing on continuous improvement; assessed the performance improvement practices as to technical skills and knowledge, motivation and engagement and innovation and creativity; described the employee well-being as to mental and emotional, financial well-being and personal and professional; Tested the significant relationship between workforce development, performance improvement practices and employee well-being; and developed a thriving workforce framework for employees in manufacturing firms. This study used descriptive type of research and was participated by 400 respondents from 5 manufacturing or production firms in Haidian District, Beijing, China. It was found out that there is moderate agreement on the effectiveness of the workforce development strategies being implemented as to soft skills, continuous improvement, and technology integration. The respondents generally agreed that technical skills, innovation, and engagement are integral to performance improvement, with a slight edge given to technical skills and innovation as key drivers. Also, there is a moderate agreement that the manufacturing companies are adequately addressing employee well-being in terms of Mental and Emotional, Financial Well-being, and Personal and Professional. There are highly significant relationships that exist between workforce development, performance improvement practices and employee well-being. A proposed thriving workforce framework was developed that can be adopted by the manufacturing companies in China. The findings indicate that manufacturing firms in China should refine workforce development strategies, prioritize technical skills and innovation, adopt a holistic approach to employee well-being, and integrate workforce development, performance improvement, and well-being practices, with the proposed thriving workforce framework offering a structured path to long-term success.

**Keywords:** workforce development, performance improvement practices, employee well-being, manufacturing firms, thriving workforce framework

## **Workforce development, performance improvement practices and employee well-being in manufacturing firms in China: Basis for a thriving workforce framework**

### **1. Introduction**

Businesses often refer to their employees as their most valuable resource. To succeed, every business needs resources, including its workforce. Without the necessary personnel to manage and perform the work with these significant physical assets, even organizations that rely on them will find that they are not very valuable. There are numerous reasons why employers should view people as the most important asset. The workforce plays a crucial role in delivering the goods or services offered by a company. As such, enhancing employee performance and productivity becomes a top priority. Skilled individuals who are well-versed in the company's operations are not only challenging to recruit but also difficult to replace. These skills often stem from formal education, practical experience in related industries, and familiarity with diverse organizational cultures, systems, and processes. A motivated employee can significantly impact the company's success by securing new business, satisfying customer demands, innovating products, and making extraordinary efforts to achieve operational, financial, or other organizational objectives (Wisker et. al.,2019).

Human Resource (HR) experts often look for individuals with the appropriate education, experience, and professional background. For any firm, selecting the appropriate personnel is essential. For any firm prepared to put in the necessary time, effort, and funds, employing and finding the right workers has many advantages. Employers can reduce risks and dangers to worker safety by selecting the best candidate for the job rather than hastily choosing an inexperienced or unqualified applicant. Workplace risks may increase as a result of bad hiring practices or wrong hires. The cost of hiring new employees is reduced when we make quality hiring decisions because we avoid having to replace unsatisfactory personnel with new hires, which increases productivity, cuts down on hiring time, and results in effective hiring (skillwork.com, 2023). Effective hiring practices ensure that a company secures its most asset—its people. Once this is achieved, the organization's next goal is to retain skilled and productive employees while minimizing turnover. In any business environment, reducing employee turnover is critical as it lowers expenses related to recruitment, training, and the loss of talent and institutional knowledge. By applying principles from organizational behavior, employers can enhance retention rates and mitigate the costs associated with high turnover. Some organizations pursue "positive turnover," focusing on retaining only top-performing employees. This can be accomplished by fostering a supportive workplace culture, encouraging active employee participation, expressing appreciation, offering competitive pay and benefits, and promoting a healthy work-life balance (Main, 2022). Such practices exemplify what it means to cultivate a thriving workplace. Modern HR experts considered thriving workplace as a place where employees would like to spend the rest of their careers. It might take different forms in different environments, but some of the hallmarks include thriving work as people who love and engage with what they do, a workplace where people can see the bigger picture and a place where people are empowered to do their best work and be their best selves. A thriving workplace is characterized by a thriving workforce lead by an excellent leadership team which oversee the welfare and benefits of all its employees to include their development, performance improvement and well-being (Craig, 2019).

China has become the world's factory; the country's manufacturing sectors have flourished because labor costs are so low. China is home to the world's greatest working-class population in the twenty-first century. Extreme difficulties in recruiting and retaining workers are serious problems for manufacturing enterprises in China (Liu et. al.,2020). Retaining talent is a key challenge to many international companies in China. The Chinese employees have higher average job changing rates than the international average. This high turnover rate causes large losses to the business operation and future opportunities. High employee turnover is a typical occurrence in China, particularly among office workers, professional technicians, and senior-level staff. It is rare

for experienced individuals in China to work their entire career at one organization. Relocation and job changes are the two primary reasons why employees quit their existing company, though there are many more reasons. Other major reasons to quit current job include being dissatisfied with work or being tired of the setting in the present work for longer periods (Acadia, 2022).

The impact of thriving workplace in China was studied and found out that in the Chinese setting, workplace thriving is a higher order construct represented by both a sense of learning and a sense of vitality. Further results found that learning goal orientation and exploration at work fostered thriving, while role ambiguity reduced thriving. This shows that employee development and well-being when being prioritized will develop thriving workforce. It is therefore important to first pinpoint the factors that encourage thriving workforce before implementing a program to address it. Once identified, a program can be tailored to meet the unique needs of the organization. The researcher believed that these elements form a critical basis that many successful businesses should investigate to determine what keeps employees in the company and what causes them to quit. This will lead to the creation of a thriving workforce framework that will help manufacturing firms in China, retain their workforce.

**Objectives of the Study** - This study investigated the relationship among workforce development, performance improvement practices and employee well-being in manufacturing firms in China that will be the basis in developing a thriving workforce framework among employees. Specifically, it determined the workforce development in terms of soft skills and personal development, technology and digitalization and focusing on continuous improvement; assessed the performance improvement practices as to technical skills and knowledge, motivation and engagement and innovation and creativity; described the employee well-being as to mental and emotional, financial well-being and personal and professional; Tested the significant relationship between workforce development, performance improvement practices and employee well-being; and developed a thriving workforce framework for employees in manufacturing firms

## 2. Methods

**Research Design** - This study used the Descriptive Methods of research. Descriptive research design is a scientific method which involves observing and describing the existing phenomenon. It aims to accurately and systematically describe a population, situation or phenomenon. A questionnaire was used in determining the various employee retention factors such as employee engagement, performance management and reward and recognition as basis in the development of strategic talent management model among technology manufacturing companies.

**Participants of the Study** - This study was participated by 400 respondents from 5 manufacturing or production firms in Haidian District, Beijing, China. Devised equally or 80 participants from each technology company which includes Baidu, Xiaomi, Lenovo, Tencent and Meituan. The respondents were managers and supervisors who are directly involved in the manufacturing/production firm operations and in at least one year in the company. A purposive sampling among managers was used in the conduct of the study.

**Data Gathering Procedure** - The questionnaire was submitted to industry and academe experts for validation. The gathered responses was subjected for Cronbach alpha for its reliability. The researcher then asked permission from the General Manager or Operations Head of the manufacturing firms for the questionnaire to be distributed to the targeted respondents. Subject to the discretion of the General Manager, the questionnaire may be administered with the use of Google forms. The questionnaire were also subjected to approval of Ethics Review Committee. Respondents were assured that all information gathered will remain under full confidentiality and will solely be used for this research.

### ***Data Gathering Instrument***

Table A

#### ***Reliability Test Results Summary***

Indicator	Cronbach Alpha	Remarks
Soft Skills And Personal Development	0.752	Acceptable
Technology And Digitalization	0.950	Excellent
Continous Improvement	1.00	Excellent
Technical Skills And Knowledge	0.873	Good
Motivation And Engagement	1.000	Excellent
Innovation And Creativity	1.000	Excellent
Mental And Emotional Well Being	1.00	Excellent
Financial Well Being	1.00	Excellent
Personal And Professional Well Being	1.00	Excellent

George and Malley (2003) provide the following rules of thumb “>0.90 – Excellent, >0.80 – Good, >0.7 – Acceptable, >0.60 – Questionable, >0.50 – Poor, and <0.50 – Unacceptable”

This study made use of the self-structured questionnaire as the instrument to collect data. The questionnaire is composed of four (4) parts. Part I includes the demographic profile of the respondents; Part II tackles the workforce development in terms of soft skills and personal development, technology and digitalization and focusing on continuous improvement;; Part III are items on the performance improvement practices as to technical skills and knowledge, motivation and engagement and innovation and creativity; and Part IV are the employee well-being as to mental and emotional, financial well-being and personal and professional.

**Data Analysis** - Weighted mean and rank were used to determine the workforce development in terms of soft skills and personal development, technology and digitalization and focusing on continuous improvement; assess the performance improvement practices as to technical skills and knowledge, motivation and engagement and innovation and creativity; and describe the employee well-being as to mental and emotional, financial well-being and personal and professional. The result of Shapiro-Wilk Test showed that p-values of all variables were less than 0.05 which means that the data set was not normally distributed. Therefore, Spearman rho was used as part of the non-parametric tests to determine the significant relationship. All analyses were performed using SPSS version 28.

**Ethical Considerations** - Respondents were given appropriate instructions on the purpose of the study, what their participation would involve and how the results would be used in order to obtain their informed consent. Strict measures were observed to ensure that individual respondents’ responses to the questionnaire will be kept confidential and will not be revealed by the researcher to anyone else or other purposes.

### **3. Results and discussions**

Table 1

#### ***Summary Table on Workforce Development***

Key Result Areas	Composite Mean	VI	Rank
Soft Skills and Personal Development	3.41	Agree	1.5
Technology and Digitalization	3.39	Agree	3
Focusing on Continuous Improvement	3.41	Agree	1.5
Grand Composite Mean	3.40	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

This summary table consolidates the key result areas for workforce development, providing an overview of the composite means, verbal interpretations (VI), and rankings for each area. IT helps to evaluate the effectiveness and emphasis placed on different aspects of workforce development within an organization. The Grand Composite Mean of 3.40 indicates an overall agreement on the effectiveness of the workforce development strategies being implemented. This average score reflects a positive assessment of the approaches to soft skills, continuous improvement, and technology integration, suggesting that these areas are well-regarded and effective in supporting workforce development initiatives.

Soft Skills and Personal Development and Focusing on Continuous Improvement both share the same composite mean of 3.41 and are ranked 1.5. This indicates a strong agreement that these areas are crucial for workforce development. The emphasis on soft skills and personal development underscores the importance of communication, teamwork, and ongoing training for employees. Similarly, focusing on continuous improvement reflects the organization's commitment to enhancing processes and encouraging employee contributions towards improvement. Technology and Digitalization has a composite mean of 3.39 and is ranked third. This reflects a solid agreement on the importance of integrating technology and digital tools into workforce development. The emphasis on technology and digitalization highlights the need for employees to adapt to new technologies and digital platforms to remain competitive and effective in their roles.

Not all of the burden for employee development and retention falls on HR and training departments, even while companies struggle with a significant shift in the labor market. Companies should give managers the resources and structure they need to increase employee engagement and retention, given their special position. Workforce development is an essential part of ensuring that your employees flourish in the manufacturing environment. Workers can gain a better understanding of manufacturing with the correct training, which increases their confidence in their skills (Doster, 2023).

**Table 2**

*Summary Table on Performance Improvement Practices*

Key Result Areas	Composite Mean	VI	Rank
Technical Skills and Knowledge	3.41	Agree	1
Motivation and Engagement	3.38	Agree	3
Innovation and Creativity	3.39	Agree	2
Grand Composite Mean	3.39	Agree	

*Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree*

Table 2 presents a summary of performance improvement practices, focusing on three key areas: Technical Skills and Knowledge, Motivation and Engagement, and Innovation and Creativity. The composite means for each area indicate the overall agreement among respondents on the effectiveness of these practices. The Grand Composite Mean of 3.39 reflects a general consensus that all three areas—technical skills, innovation, and engagement—are integral to performance improvement, with a slight edge given to technical skills and innovation as key drivers.

Technical Skills and Knowledge ranks highest with a composite mean of 3.41, suggesting that respondents believe strongly in the importance of enhancing technical competencies to improve performance. This area likely emphasizes the critical role of skills development in achieving operational efficiency and staying competitive, particularly in technical fields where expertise is essential. Innovation and Creativity follows closely with a composite mean of 3.39, highlighting its significance in driving continuous improvement and adaptation within organizations. The close ranking with technical skills indicates that respondents recognize the value of fostering innovation alongside maintaining technical proficiency. Motivation and Engagement is ranked third with a composite mean of 3.38. Although slightly lower than the other two areas, it still reflects a solid agreement on the importance of keeping employees motivated and engaged as a means of enhancing overall performance. This suggests that while technical skills and innovation are vital, ensuring that employees remain motivated and invested in their work is also crucial for sustained success.

The productivity of the organization is ultimately determined by the work output of its personnel. Organizational goals and targets must be met by the manufacturing sector. Furthermore, effective performance management is crucial for the manufacturing sector's goal of raising productivity. Employee performance reviews, whether they be weekly or monthly, have not been widely adopted by the industrial sector. In order to meet the post-pandemic demand for goods, it has encountered numerous obstacles and is finding it difficult to boost productivity. The productivity of a manufacturing company's workforce determines its production. There are numerous advantages and higher aims that come with having a strong performance appraisal system in the

manufacturing business (Koskaroba, 2022).

Table 3 summarizes the evaluation of employee well-being across three key areas: Mental and Emotional, Financial Well-being, and Personal and Professional. The grand composite mean of 3.40 indicates a general agreement that the organization is adequately addressing employee well-being.

**Table 3**

*Summary Table on Employee Well-being*

Key Result Areas	Composite Mean	VI	Rank
Mental and Emotional	3.40	Agree	2
Financial Well-being	3.39	Agree	3
Personal and Professional	3.41	Agree	1
Grand Composite Mean	3.40	Agree	

*Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree*

This average score highlights the effectiveness of current initiatives but also points to potential areas for further improvement, particularly in financial well-being. For Chinese manufacturing companies, prioritizing personal and professional well-being remains essential, while also ensuring comprehensive support across mental, emotional, and financial dimensions to foster a thriving and satisfied workforce.

The highest-ranked area is Personal and Professional Well-being, with a composite mean of 3.41, reflecting a strong agreement that employees feel well-supported in both their professional roles and personal lives. This indicates that the organization effectively addresses needs related to competitive salaries, benefits, and resources that aid in managing personal responsibilities, contributing to overall job satisfaction and performance. Mental and Emotional Well-being follows closely with a composite mean of 3.40, suggesting that employees generally agree on the importance of a supportive work environment that helps in managing stress and fostering a positive atmosphere. This score indicates that while this aspect is crucial, it is slightly less emphasized compared to personal and professional well-being but still valued by employees. Financial Well-being ranks third with a composite mean of 3.39, showing a positive response to the resources provided for financial management, such as budgeting workshops and retirement planning. Although this area is perceived as important, it ranks lower than the other aspects, suggesting that while financial support is recognized, it is seen as less critical compared to the more immediate impacts of personal and professional support.

Kim et. al.,(2021) review the impact of financial literacy programs on employees' financial well-being, noting that while such programs are important, they may not be as immediately impactful as other well-being initiatives. This supports the lower rank of financial well-being in the table, suggesting that while valued, it is perceived as less critical compared to personal and professional support.

**Table 4**

*Relationship Between Workforce Development and Performance Improvement Practices*

Variables	rho	p-value	Interpretation
<b>Soft Skills and Personal Development</b>			
Technical Skills and Knowledge	0.657**	< .001	Highly Significant
Motivation and Engagement	0.697**	< .001	Highly Significant
Innovation and Creativity	0.679**	< .001	Highly Significant
<b>Technology and Digitalization</b>			
Technical Skills and Knowledge	0.744**	< .001	Highly Significant
Motivation and Engagement	0.736**	< .001	Highly Significant
Innovation and Creativity	0.718**	< .001	Highly Significant
<b>Focusing on Continuous Improvement</b>			
Technical Skills and Knowledge	0.732**	< .001	Highly Significant
Motivation and Engagement	0.709**	< .001	Highly Significant
Innovation and Creativity	0.722**	< .001	Highly Significant

*\*\*.* Correlation is significant at the 0.01 level

As seen in the table, the computed rho-values ranging from 0.657 to 0.744 indicate a strong direct

relationship among the sub variables of workforce development and performance improvement practices. There was a statistically significant relationship between workforce development and performance improvement practices because the obtained p-values were less than 0.01.

This indicates that the correlations observed in the data are not due to chance and are highly significant, meaning that workforce development efforts are strongly associated with improvements in performance across the measured indicators. Companies that focus on developing soft skills, such as communication, teamwork, and problem-solving, can expect improvements in overall workforce adaptability and innovation. This is particularly important as Chinese manufacturing companies shift towards more automated and technologically advanced processes. The strong correlation between technology and digitalization and Technical Skills and Knowledge reflects the importance of digital skills in modern manufacturing environments. As Chinese manufacturers adopt advanced technologies like AI, robotics, and IoT, employees must be well-versed in these areas to maintain and optimize these systems. The significant relationship with Motivation and Engagement (suggests that when employees are equipped with the necessary digital skills, they are more motivated and capable of contributing to innovative solutions—key factors in staying competitive in a rapidly evolving market. The emphasis on continuous improvement is a hallmark of many successful Chinese manufacturing firms, particularly those adhering to lean manufacturing principles. The high correlation with Technical Skills and Knowledge indicates that continuous improvement initiatives directly enhance employees' technical competencies, making them more proficient and efficient in their roles. Additionally, the positive relationship with Motivation and Engagement) and Innovation and Creativity (underscores that a culture of continuous improvement fosters a more engaged and innovative workforce, which is crucial for driving incremental and breakthrough improvements in production processes where human oversight and creative problem-solving remain crucial. Zhang et. al.,(2021) highlight, the rapid adoption of advanced technologies such as AI, robotics, and IoT has created a pressing need for employees to acquire new digital skills. This shift is not just about equipping workers with technical knowledge but also about fostering a more innovative and engaged workforce. The strong correlation observed between technology and digitalization and performance improvement practices, such as technical skills and motivation, supports this notion. As employees in Chinese manufacturing firms become more proficient with digital tools, their engagement and capacity for innovation increase, leading to overall enhanced performance.

**Table 5**

*Relationship Between Workforce Development and Employee Wellbeing*

Variables	rho	p-value	Interpretation
<b>Soft Skills and Personal Development</b>			
Mental and Emotional	0.779**	< .001	Highly Significant
Financial Well-being	0.681**	< .001	Highly Significant
Personal and Professional	0.777**	< .001	Highly Significant
<b>Technology and Digitalization</b>			
Mental and Emotional	0.722**	< .001	Highly Significant
Financial Well-being	0.779**	< .001	Highly Significant
Personal and Professional	0.738**	< .001	Highly Significant
<b>Focusing on Continuous Improvement</b>			
Mental and Emotional	0.783**	< .001	Highly Significant
Financial Well-being	0.734**	< .001	Highly Significant
Personal and Professional	0.772**	< .001	Highly Significant

\*\* . Correlation is significant at the 0.01 level

As seen in the table, the computed rho-values ranging from 0.681 to 0.783 indicate a strong direct relationship among the sub variables of workforce development and employee well-being. There was a statistically significant relationship between workforce development and employee well-being because the obtained p-values were less than 0.01. The strong correlation with Mental and Emotional Well-being (rho= 0.779,p< .001) and Personal and Professional Well-being (rho=0.777, p<.001) suggests that investing in soft skills and personal development significantly enhances employees' overall well-being. This indicates that when employees develop their interpersonal and self-management skills, they experience better mental and emotional

health, as well as a greater sense of fulfillment in both their personal and professional lives. The significant correlation with Financial Well-being ( $\rho=0.681, p<.001$ ) implies that such development might also contribute to financial stability, possibly through career advancement or better financial management skills.

The correlation between technology and Financial Well-being ( $\rho=0.779, p<.001$ ) is the strongest among the relationships listed for this category. This reflects that employees who are proficient in digital tools and technologies tend to experience better financial well-being, likely due to higher productivity, better job performance, and potentially higher wages. The significant correlations with Mental and Emotional Well-being ( $\rho=0.722$ ) and Personal and Professional Well-being ( $\rho=0.738$ ) suggest that digital skills also contribute to overall life satisfaction and emotional stability, likely by reducing stress associated with technological changes and increasing job security. The strongest correlation in this category is with Mental and Emotional Well-being ( $\rho=0.783, p<.001$ ). This indicates that a culture of continuous improvement not only enhances productivity but also significantly contributes to employees' mental and emotional health. This could be because such a culture promotes a sense of achievement and personal growth, reducing stress and enhancing job satisfaction. The correlations with Financial Well-being ( $\rho=0.734$ ) and Personal and Professional Well-being ( $\rho=0.772$ ) further emphasize that continuous improvement practices help employees feel more secure and fulfilled both financially and professionally.

The highly significant relationships between workforce development practices and employee well-being suggest that Chinese manufacturing companies that prioritize these areas can expect to see not only improved performance but also enhanced employee well-being. By focusing on soft skills, digitalization, and continuous improvement, these companies can create a more supportive work environment, leading to happier, healthier, and more financially stable employees. This, in turn, contributes to higher levels of engagement, productivity, and retention, which are critical for sustaining competitive advantage in a rapidly changing industry. Zhang et. al.,(2021) study offers a comprehensive examination of how digitalization, when integrated effectively with workforce development strategies, significantly benefits both employee well-being and overall productivity within China's manufacturing sector. The study emphasizes that digitalization in manufacturing often leads to higher efficiency and productivity, which can translate into better financial outcomes for employees. For example, as companies adopt advanced technologies like automation, AI, and data analytics, employees who are skilled in these areas become more valuable to the organization. This can lead to higher wages, more stable employment, and opportunities for career advancement, contributing to greater financial well-being. Digitalization, when accompanied by proper training and development programs, helps employees adapt more easily to new technologies, thereby reducing the anxiety and stress that often accompany technological changes. The integration of digital skills into workforce development also boosts overall productivity. As employees become more proficient in using digital tools, their ability to perform tasks efficiently increases, leading to improved job performance. Additionally, employees who feel supported in their development are generally more engaged, which further drives productivity.

**Table 6**

*Relationship Between Performance Improvement Practices and Employee Well-being*

Variables	Rho	p-value	Interpretation
<b>Technical Skills and Knowledge</b>			
Mental and Emotional	0.709**	< .001	Highly Significant
Financial Well-being	0.734**	< .001	Highly Significant
Personal and Professional	0.713**	< .001	Highly Significant
<b>Motivation and Engagement</b>			
Mental and Emotional	0.761**	< .001	Highly Significant
Financial Well-being	0.729**	< .001	Highly Significant
Personal and Professional	0.778**	< .001	Highly Significant
<b>Innovation and Creativity</b>			
Mental and Emotional	0.763**	< .001	Highly Significant
Financial Well-being	0.763**	< .001	Highly Significant
Personal and Professional	0.774**	< .001	Highly Significant

\*\* . Correlation is significant at the 0.01 level



As seen in the table, the computed rho-values ranging from 0.709 to 0.778 indicate a strong direct relationship among the sub variables of performance improvement practices and employee well-being. There was a statistically significant relationship between workforce development and employee well-being because the obtained p-values were less than 0.01. It indicates that there is a very low probability that these relationships are due to random variation. Instead, it suggests that the observed correlations between workforce development and employee well-being are real and significant. In other words, improvements in workforce development practices are statistically linked to enhancements in employee well-being. The statistically significant relationships imply that efforts to improve workforce development in areas like soft skills, digitalization, and continuous improvement are likely to have a meaningful and positive impact on various dimensions of employee well-being. Li et. al.,(2019) supports the conclusion that workforce development practices, such as the enhancement of soft and digital skills, significantly impact employee well-being. The study underscores that these skills are crucial for improving employee engagement, mental and emotional well-being, and overall job satisfaction. By focusing on these areas, manufacturing firms can create a more supportive and fulfilling work environment, aligning with the statistically significant relationships observed in your analysis.

### Research Output

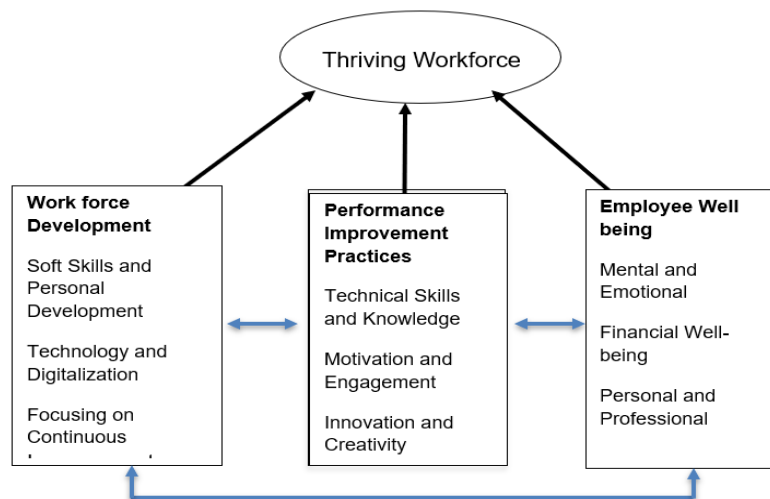


Figure 1. Manufacturing Firms Thriving Workforce Framework

The Manufacturing Firms Thriving Workforce Framework integrates workforce development, performance improvement practices, and employee well-being to create a sustainable and competitive advantage for manufacturing companies. At the core of this framework is the recognition that workforce development is not just about technical skills but also about fostering soft skills and personal development. By emphasizing interpersonal communication, problem-solving, and adaptability, companies can cultivate a workforce that is not only proficient in their roles but also capable of thriving in a dynamic environment. This focus on soft skills is crucial for enhancing employees' mental, emotional, and professional well-being, leading to a more engaged and resilient workforce. In addition to soft skills, the framework highlights the importance of continuously up-skilling and re-skilling employees in industry-specific knowledge and digital tools. As manufacturing firms increasingly adopt advanced technologies, ensuring that employees are equipped with the necessary technical skills and knowledge is vital for maintaining productivity and financial stability. Integrating digital literacy and technological proficiency across all levels of the workforce reduces stress associated with technological changes and enhances job satisfaction. Performance improvement practices are another key component of the framework. By fostering a culture of continuous improvement, companies can drive operational excellence and maintain a competitive edge. Encouraging innovation and creativity within the workforce not only contributes to company

growth but also enhances personal and professional well-being. Moreover, implementing strategies to boost motivation and engagement, such as recognition programs and career development opportunities, aligns individual goals with organizational objectives, resulting in higher levels of job satisfaction and a more committed workforce. The framework also places significant emphasis on employee well-being, recognizing that a thriving workforce is one that is healthy, financially stable, and personally fulfilled. Providing resources for mental and emotional well-being, offering competitive compensation, and promoting career development opportunities are all critical elements in creating a supportive work environment. This holistic approach to employee well-being leads to reduced absenteeism, higher retention rates, and a more loyal and productive workforce. By implementing this comprehensive framework, manufacturing firms can expect to see a thriving workforce that is not only highly skilled but also engaged, motivated, and well-supported. The synergistic effects of workforce development, performance improvement, and employee well-being drive higher productivity, better quality output, and stronger financial performance, ensuring that companies can sustain their competitive advantage in a rapidly changing industry.

#### 4. Conclusions and recommendations

Based on the findings of this study, the following conclusions were drawn: There is moderate agreement on the effectiveness of the workforce development strategies being implemented as to soft skills, continuous improvement, and technology integration. The respondents generally agreed that technical skills, innovation, and engagement are integral to performance improvement, with a slight edge given to technical skills and innovation as key drivers. There is a moderate agreement that the manufacturing companies are adequately addressing employee well-being in terms of Mental and Emotional, Financial Well-being, and Personal and Professional. There are highly significant relationships that exist between workforce development, performance improvement practices and employee well-being. A proposed thriving workforce framework was developed for manufacturing companies in China.

Manufacturing firms' top management may invest in advanced training programs related to emerging technologies, such as artificial intelligence, cloud computing, and data analytics. The manufacturing companies may focus more on boosting employee motivation and engagement by recognizing employees' achievements through awards, incentives, or promotions. The HR department may implement programs on improving financial literacy among employees by offering financial planning services, retirement benefits education, and workshops on budgeting and savings. The proposed framework for thriving workforce maybe considered for implementation by Chinese manufacturing companies. Future researchers may investigate the impact of emerging technologies, such as artificial intelligence and automation, on workforce development and employee well-being as these technologies influence job roles, skills requirements, and employee satisfaction.

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