Population Conditions & Technological Progress In The Environment Human Resource Planning

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Abstract

Human resource planning is a crucial element in the economic and social development of a country. In a global context, population changes, technological developments, and environmental dynamics have significant impacts on HR planning needs and strategies.

This document reviews three main aspects of human resource planning: population conditions, technological advancements, and environmental dynamics. Rapid global population growth is a major challenge, especially for developing countries like Indonesia, which face challenges in creating job opportunities and improving people's living standards. However, a large population can also be valuable human capital if managed well. In addition, technological advancements, especially in the fields of digitalization and automation, bring opportunities as well as threats to the sustainability of traditional jobs. This digital transformation requires high technological literacy and the development of new skills in various sectors. Meanwhile, labor migration and globalization also affect the global distribution of human resources, creating the need for an adaptive approach to labor policies. By using various analytical methods such as trend analysis, the Delphi technique, and skill inventory, human resource planning can be strategically designed to meet future labor demand. Effective planning enables the development of human resources that are not only competitive in the local market, but also in the global market. This study emphasizes the importance of integrating policies, teaching and training to produce quality, innovative and responsive human resources to global changes.

Keywords: Population Conditions, Technological Progress, Environment, Human Resource Planning

INTRODUCTION

Human resource planning is an integral part of economic and social development strategies, especially in the era of globalization that is filled with challenges and opportunities. Globalization, accompanied by rapid technological developments and population dynamics, demands HR planning policies that are able to respond to changes in future workforce needs. As a developing country with a large population, Indonesia faces complex challenges in ensuring the availability of jobs, improving the quality of the workforce, and managing resources sustainably.

According to the Central Statistics Agency (BPS), Indonesia's population will reach more than

270 million people in 2022, making it the fourth most populous country in the world after India, China, and the United States.

This large population is a double-edged sword: on the one hand, The Central Statistics Agency reported that in 2022, Indonesia's population will reach more than 270 million, making it the fourth most populous country in the world, after India, China, and the United States. This large population is a double- edged sword: on the one hand, it offers great human capital potential , while on the other hand, it also carries risks such as unemployment, social inequality, and pressure on economic and social infrastructure. The country must ensure that this population growth is balanced with improvements in the quality of human resources through education, training, and health. Technology-based and vocational education are important solutions to creating a workforce that is ready to face global challenges.

Technological advancements are the next factor that influences HR planning. The digital revolution and automation have transformed many sectors of the economy, eliminating some traditional jobs, and creating a need for new skills, such as data literacy and technological analysis capabilities.

Adapting to these changes requires flexible HR planning policies that focus on developing an adaptive workforce. Innovations such as digital payment systems, industrial automation, and the development of artificial intelligence show that technological advances not only create efficiency but also increase a country's competitiveness if the workforce is able to master the technology.

In addition, the changing global environment, including the impacts of climate change and urbanization, adds to the complexity of HR planning. Urbanization in Indonesia, for example, has driven a shift in the workforce from agriculture to services and manufacturing, which require different skills.

Climate change also affects sectors such as agriculture, fisheries and energy, requiring a workforce that understands environmentally friendly technologies and is oriented towards sustainability.

In this context, effective HR planning must consider the aspects of population, technology, and environment as a whole that influence each other. By considering these aspects, effective HR planning must integrate demographic, technological, and environmental factors. The ultimate goal is to ensure that the Indonesian workforce can not only meet domestic needs but also compete at the global level. This article aims to analyze how these three factors affect HR planning in Indonesia and offer strategies to face future challenges. To address these challenges, a comprehensive approach to HR planning is needed. This approach should include:

1. **Adaptive Education and Training**
Integrating technology and sustainability into educational curricula and training programs.
2. **Data-Driven Workforce Policy**
Using demographic and labor market data to design policies that meet future needs.
3. **Cross-Sector Collaboration**
Involving government, private industry, and educational institutions in building an environment which supports the process of sustainable human resource development.
4. **Infrastructure and Regulatory Support**
Ensuring education, health and transportation infrastructure supports human resource productivity.

A comprehensive approach that includes education, training, adaptive policies and cross-sector collaboration is expected to ensure that Indonesian human resources can support inclusive and sustainable development.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Human resource (HRP) planning highlights three main factors that influence HRM management, namely demographic conditions, technological developments, and environmental dynamics. These three factors interact with each other in shaping HRM needs and strategies in various countries, including Indonesia.

A. Demographic Conditions

The world population continues to grow, although the average birth rate per woman has decreased from 5 to 2.5 children in the last five decades. Based on *worldometer* (2019), in this century, the average life expectancy has increased to 73.2 years. For women, life expectancy

reaches 75.6 years, while for men it is 70.8 years. This data shows that the quality of human life is increasing and life expectancy is also increasing. One indication of this improvement is the decline in infant mortality, which reached 28.2 per 1000 births in 2019.

According to the CIA World Factbook, there are 195 countries with a global population of more than 7.4 billion people. It is projected that the world's population will potentially reach 8.5 billion by 2030; 9.7 billion by 2050; and 10.9 billion by 2100. If we take data from the Population Reference Bureau in 2019, sub-Saharan Africa is predicted to have a population that doubles by 2050 (99%). Other regions will experience population increases with variation between 2019 and 2050: Oceania (excluding Australia/ New Zealand) will increase by 56%; North Africa and West Asia will increase by 46%; Australia/New Zealand will increase by 28%; Central and South Asia will increase by 25%; Latin America and the Caribbean will increase by 18%; East-Southeast Asia will increase by 3%, and Europe/North America will increase by 2%[4].

Based on World Population Review data as of August 19, 2024, India ranks first and is the country with the largest population in the world, with a population of 1,450,935,791. Not only that, India is known as the country with the highest birth rate in the world. It is estimated that every second one baby is born, which means around 63,482 babies are born every day.

Next, the country in second place with the largest population is China, which has a population of 1,419,321,278 people. Then, the third position is occupied by the United States (USA) with a population of 345,426,571 people.

Indonesia is ranked fourth in the world as the country with the largest population in the world. Referring to information on the World Population Review website, Indonesia's population is 283,487,931 people. This figure has increased compared to 2023 which recorded a population of 281,190,067 people. Of that total, it is estimated that one baby is born every 7 seconds, which if added up is around 12,234 babies born every day. Meanwhile, it is estimated that 5,917 people die every day, or the equivalent of one death every 15 seconds.

This poses a major challenge for developing countries in providing employment, health services, and education.

High population growth can increase pressure on the domestic economy, especially in the employment sector. However, as explained by Kompas (2018), a large population can also be a significant human capital potential if balanced with mature HR planning. The productive age population can be the main driver of the economy, as long as they have skills that match the demands of the labor market.

Furthermore, Indonesia's demographic structure also shows an increase in the elderly population (over 60 years old), which requires a different approach in HR planning, such as adjusting pension policies and supporting health services. The migration phenomenon also plays an important role. According to the World Bank (2021), workers from developing countries often migrate to developed countries in search of better economic opportunities. This not only affects the distribution of domestic labor but also creates new challenges in maintaining HR stability domestically.

B. Technological Development

Technology is a key driver of transformation across sectors. Mondy said that the technological revolution has changed traditional work patterns and created the need for new skills. Castells explained that technology is a set of tools, rules, and procedures that are the application of scientific knowledge or specific work in conditions that allow for repetition. The purpose of the creation and development of technology is to improve the quality of human life and make daily activities and work easier.

Technology can be categorized into two types, namely internal technology and external technology. Internal technology refers to components that function as a support in the company's operations, where it directly provides information and data. Generally, internal technology is needed by management to carry out business activities and other daily activities. This technology has a broad impact, not only for certain individuals, but also plays a role as a support and supporter in the company's operational activities as a whole. Examples of internal technology include hardware, software, applications, and infrastructure.

External technology refers to technology that comes from components outside the company or organization, which acts as a source of information needed by management in carrying out business activities. External technology plays a significant role in identifying future information technology developments to support the success of the company. In addition, external technology has some similarities with science, because it will continue to develop along with changes era.

External technology is applied to obtain information about technological advances in the company and how to implement them. Thus, various information technologies that have the potential to be used by organizations or companies will be identified. This new technology will function as infrastructure development and can be used as a reference to compare existing technology with the latest technology that is widely used.

Technological developments continue to increase, the Industrial Revolution 4.0 has had a major impact on various sectors around the world, including in the fields of business and organizations. R. Wayne Mondy stated that the current pace of technological change is unprecedented. Technological advances in human resources present new roles for HR professionals, but also increase the pressure for them to always keep up with developments.

In today's digital era, technology has changed various aspects of life, including in business and organizations. Organizations need to adapt quickly to stay relevant, competitive, and superior. Therefore, developing human resource (HR) competencies in the digital era is very important so that organizations can compete and survive in this increasingly dynamic market. In this situation, a workforce is needed that is technologically proficient, has good morals, character, and high responsibility for their work. An effective HR planning environment requires policies that support the development of a skilled and innovative workforce, as well as investment in education and training infrastructure.

In the digital era, workers are required to have technological literacy which includes the ability to use, analyze, and utilize information technology effectively. OECD, emphasizes the importance of digital literacy as a prerequisite for workers to survive in an increasingly competitive job market. Indonesia adopting technology such as the QR Code Indonesia Standard (QRIS) shows how technology can create efficiency while demanding specific skills.

Digital transformation is also creating new types of jobs, such as application developers and data analysts, that did not exist before. McKinsey research predicts that the technology sector will be one of the main contributors to job creation in the future, but this can only happen if people have the relevant skills.

C. Global Environmental Dynamics

The global environment, including urbanization, climate change, and globalization, also influence HR planning. Urbanization in Indonesia, as noted by BPS, shows a major shift in the workforce from the agricultural sector to the manufacturing and service sectors. This shift creates a need for education and training that supports skills in the non-agrarian sector.

On the other hand, climate change adds complexity with its impact on traditional sectors such as agriculture and fisheries. To maintain productivity, workers in these sectors must adopt sustainable practices and environmentally friendly technologies, such as water-saving irrigation, renewable energy utilization, and the use of technology-based tools to predict the weather.

Globalization also brings its own opportunities and challenges. International migration, both permanent and temporary, affects the distribution of labor globally. Indonesian workers, for example, migrate to countries such as Malaysia, Japan, and the Middle East. This migration can leave a gap in the domestic workforce, requiring the government to create policies that ensure that the domestic workforce remains competitive and available to meet national needs.

To address these challenges, human resource planning must integrate adaptive strategies, such as developing market-based training, incentives for workers in priority sectors, and balanced migration policies. In addition, the government needs to leverage technology to increase efficiency, both in the process of urbanization and adaptation to climate change. Collaborative strategies between the public, private, and civil society sectors are key to ensuring that Indonesia's workforce remains competitive and supports sustainable development.

METHOD

This study applies the library research method, which is a process of collecting information and data by utilizing various sources available in the library or on the internet that are relevant to the issue to be resolved. This process is carried out in a structured manner to collect, analyze, and draw conclusions from data using certain methods or techniques, in order to find solutions to the problems faced.

According to Mirzaqon and Purwoko, library research is the process of searching for data related to various things or variables that can be found in the form of notes, books, papers, articles, journals, and other sources.

to facilitate research on Population Conditions, Technology, and the Human Resource Planning Environment. The data collection method applied is by searching for materials related to the topic this article, either through digital sources or manually. Then, the collected data is analyzed by displaying, reducing, and reconstructing to create a new concept using content analysis that emphasizes intertextuality. In this context, the data obtained comes from qualitative methods that focus more on analysis and description, without presenting data in numerical form. Qualitative methods are a type of research that emphasizes facts obtained from various sources of information or the internet, with the aim of understanding the object of research in depth.

RESULTS AND DISCUSSION

A. Condition of the Indonesian Population

Global demographic changes have major implications for human resource (HR) planning. Population growth reaching 8.5 billion people in 2030 and projected to reach 9.7 billion in 2050 indicates an increasing need for a more skilled workforce to support the global economy. High population growth, especially in developing countries such as Indonesia.

Based on current projections, Indonesia's current population is expected to peak at 337.38 million in 2067 and decline in the following decades.

Based on BPS (2022), Indonesia with a population of 270 million people, is one of the countries with the largest population in the world, and is in fourth place after India, China, and the United States. Quoted from the *World Population Review page,* Indonesia has a population of 283,487,931 people. This number has increased compared to 2023 which was 281,190,067 people. Of this number, it is estimated that there is one baby every 7 seconds which when accumulated becomes 12,234 babies born every day. Meanwhile, an estimated 5,917 people die every day or there is a death every 15 seconds.

Figure 1. Population of Indonesia in 2024

As the Jakarta Post reported in 2013, Indonesia's population has doubled in just 40 years from 119 million in 1971 to nearly 240 million in 2010, according to figures from the Central Bureau of Statistics. In the next 40 years, the country's population is expected to increase even further. According to official population data from 2010, Indonesia had 11 cities with populations of more than 1 million, although a 2014 estimate showed that there were now 14 cities with populations exceeding 1 million.

Many argue that a large population will be a burden for the country because the more people there are, the greater the budget needed to meet their needs. However, this view is not entirely accurate. In a modern perspective, the larger the population of a country, the greater its assets in the form of human capital , which actually opens up more opportunities for progress.

The productive age population that dominates Indonesia's demographic structure presents a great opportunity for economic growth. However, this must be balanced with education and training policies that can meet the needs of an increasingly dynamic labor market. Conversely, the increase in the elderly population requires special policies, including pension management and the provision of health services. If not managed properly, pressure on the domestic economy, such as the provision of public services, could increase.

According to WHO, life expectancy in Indonesia increased to 69.1 years in 2015, although productive life expectancy was only 62.1 years. The decline in birth rates occurred along with increasing levels of education and awareness of healthy and prosperous living. In 2018, the number of senior citizens in Indonesia was around people. Meanwhile, in 2021 more than 10% of Indonesia's population will be in the senior age group.

This significant population growth brings various challenges in the employment, education, and health sectors. Limitations in the provision of employment and equitable distribution of welfare are urgent issues for the government to address. In the midst of increasingly tight global competition, Indonesia needs to prepare quality human resources, have skills that match industry needs, and can compete in the global market.

With the implementation of the ASEAN free market (AEC), Indonesia is in a situation of free movement of services and free movement of skilled labor. Workers are required to have regional qualifications because they have skills and knowledge or special skills in their profession (skilled labor).

It is important to consider together the standardization of learning outcomes for each curriculum and

preparation of higher education curriculum based on required competencies, especially in accordance with ASEAN standards.

Population is closely related to the number of workers, which requires attention from state leaders. The availability of jobs in a country can affect other countries that offer more job opportunities and higher salaries. Workers from developing countries usually seek jobs in developed countries that offer better welfare levels. Developed countries with high capital and technology can invest in other countries while bringing experts to the country, which has an impact on human resource planning.

For example, the USA with a significant population can be said to be a developed country that dominates the global economy. Now China, which has the largest population in the world, has developed into one of the economic powers that is very competitive with the USA. Likewise, Japan, which has long been a world economic power with a manufacturing industry that has penetrated various countries, including in the field of public and private transportation. Simple, high-quality, and highly efficient Japanese electronic products have spread to all corners of the earth. However, even though there are many countries with significant populations, some of them are still experiencing decline in terms of human resource management. Thus, the fundamental strength of a nation depends on the quality of educated and skilled people, which is obtained through structured and comprehensive planning.

B. The Relationship Between Indonesian Human Resources and Current Technological Advances

Technological transformation has redefined HR management strategies worldwide. In the digital era, technology-based competencies are a primary prerequisite. Digital literacy encompasses not only operational capabilities but also strategic understanding to support innovation.

The challenges of human resource (HR) competency in the digital era are increasingly real, along with technological changes that significantly affect the way people work and live. Organizations face challenges in adjusting HR competencies to suit the needs of the digital era. According to Adiawaty, S. (2019), the world of work is now facing the Industry 4.0 era, which is marked by rapid digitalization.

Companies, especially HR management, must immediately respond to these changes with the right strategy. Developing HR skills and competencies is a top priority that must be consistently considered by company leaders. This is important to ensure the sustainability of the company, which is highly dependent on the ability of decision makers to adapt to the dynamics of the Industry 4.0 era.

The industrial revolution 4.0 creates new jobs such as data analysts and application developers. However, traditional sectors face adaptation challenges, requiring workforce upskilling to be relevant. In this context, investment in technology-based education and continuous training is a priority. The OECD emphasizes the importance of technological literacy as a key to workforce competitiveness in the global market.

Haryanto and Nurhayati (2019) stated that technological advances such as the Internet of Things (IoT), Big Data, and Artificial Intelligence (AI) present new challenges for organizations in ensuring that HR has adequate competence to operate the technology. To face the digital era, organizations need to design effective strategies to improve HR skills so that they can adapt to the needs of ever- evolving technology.

Since 2011, Indonesia has entered the Industry 4.0 era or the digitalization era. The main

challenge in the field of human resources is the ability to follow technological developments and adapt to changes quickly. Organizations or companies are required to present human resources who are able to analyze data effectively and think critically. Digitalization has become an essential need for the sustainability and progress of organizations and companies in this modern era.

If human resources are good, it means the quality of the information system in the organization or company is also good. Because humans are directly involved in running the information system. Humans also play the main key in forming an information system to absorb modern technology and to develop capacity to be able to produce goods and services optimally, determine decisions quickly so that they will obtain optimal benefits too.

In the process of a business having good and competent performance and workforce as well as good operational and infrastructure activities, it can be said that a company uses the information system as well as possible so that it can generate great benefits for a company. A good business will make the distribution of information good and smooth, so that it is easily accepted by its members and gets great benefits. In addition, the business has the ability to adapt to the external environment, meaning that the business pays attention to competition, or market conditions well, from there the business can quickly and accurately make good decisions for the continuity of its business.

With the existence of technology, it will be easier to provide information or distribute information or data easily, quickly and accurately, then not only that, with technology we can see the latest technological developments and review useful things in the technology, therefore, the better the technology in providing and developing information, the more it will have a direct positive impact on the information system.

Technologies such as QRIS in Indonesia are an example of how technology drives efficiency in public services while demanding competent workers. In 2019, Bank Indonesia (BI) introduced a quick response code (QR Code) as a payment method through the use of server-based electronic money, electronic wallets, or mobile banking, known as the Standard Indonesian QR Code (QRIS). The national implementation of QRIS began in January 2020. QRIS functions as a retail payment facility in Indonesia & supports micro, and medium enterprises (MSMEs). Although the QRIS system reduces several types of jobs, on the other hand, this system creates new job opportunities that require workers with special skills in the field.

The expectation of increasing human resources in the era of technology can provide economic value to the people with increased social status of the community mentally, financially and psychologically prosperous.

Achieving goals, organizations need various sources of energy. Starting from human energy sources, equipment, machines, finances, and data energy sources. Each source of energy has its own tasks and uses.

As a system, the energy source must be related and work together so that the goal can be achieved effectively and efficiently. The improvement of human resources can be influenced by the education pattern involved in the implementation aspect and the integration between the micro business community and macro business competition. As a business partner in achieving product development and asset improvement in every company that is built and developed. Related to the problem of human resource management in an educational institution, in its implementation it must be able to answer the challenges of the increasingly complex world of education.

C. Global Environmental Dynamics

Urbanization and globalization also have significant impacts on HR strategies. Urbanization in Indonesia is shifting the workforce from the agricultural sector to the service and manufacturing sectors, creating a need for new skills training. Meanwhile, climate change is affecting sectors such as agriculture, which requires continuous technological innovation to maintain productivity.

It is estimated that approximately 80% of the global population lives in developing countries. By 2020, approximately 90% of the population aged 10 to 24 will also be in these countries. In addition, human migration is at its peak, with international migrant flows ranging from 2 million to 4 million people per year. In 1996, there were approximately 125 million individuals living outside their home country.

Migration patterns share a movement from rural to urban areas. In 1960, only 1/3 of the global population lived in cities, but by 1999, that number had risen to almost half (47%). This trend is predicted to continue into the 21st century. In 2020, data shared that 55.7% of the total global

population lived in urban areas.

International migration, both as an opportunity and a challenge, affects the global distribution of labor. For example, Indonesian workers migrating to other countries for economic opportunities can create a domestic labor vacuum. The government needs to develop policies that ensure human resources remain competitive and are distributed effectively to support national needs.

Urbanization and globalization continue to be major forces shaping human resource (HR) strategies. Urbanization in Indonesia, characterized by a shift in the workforce from the agricultural sector to the service and manufacturing sectors, creates an urgent need for reskilling and upgrading. skills (upskilling). The workforce that previously relied on traditional skills must now adapt to the needs of more complex modern sectors, such as technology services, logistics, and supply chain management. This shift requires investment in vocational education, technology-based training, and strengthening training infrastructure.

Climate change also adds a new dimension to human resource planning, especially in the vulnerable agricultural sector. Rising temperatures, changing weather patterns, and water resource challenges are affecting the productivity of this sector. Therefore, environmentally friendly technological innovations, such as data-driven agriculture and efficient irrigation techniques, are critical solutions to sustaining production output. This requires developing a workforce that is not only technically skilled but also understands the principles of sustainability and green technology.

Globalization, through international labor migration, presents both opportunities and challenges. On the one hand, migration allows Indonesian workers to gain better economic opportunities abroad, such as in the construction sector in the Middle East or health services in East Asia. However, this migration also creates a labor vacuum in the domestic sector, especially in areas requiring skilled and semi-skilled labor.

The dynamic global environment, including the development of the digital economy and climate change, increasingly drives the importance of integrated and sustainable HR planning. Globalization and automation in the world of work present their own challenges, where many traditional jobs are threatened to be replaced by machines and smart technology. Therefore, Indonesia needs to strengthen HR planning policies that are adaptive to global changes and pay attention to environmental sustainability. This includes integration between industry needs, increasing workforce competency, and protecting the environment.

To address these challenges, governments need to design policies that include managing labor migration through pre-departure training, protecting labor rights abroad, and developing repatriation programs that utilize the new skills of returning workers. At the national level, equitable distribution of labor can be achieved through infrastructure development and economic incentives in less developed areas.

D. Analysis Method

In the context of human resource planning (HR), there are several analysis methods used to assess population, technology, and environmental conditions. These methods aim to predict future HR needs and adjust to existing dynamics. Here are some commonly used analysis methods:

1. **Trend Analysis**

This method is used to predict HR demand based on historical data. By analyzing patterns that emerge from previous data, organizations can estimate future workforce needs. This often involves statistical techniques such as regression to identify relationships between different variables.

2. Delphi Technique

It is a systematic method for collecting opinions from a group of experts through a series of questionnaires.

This approach maintains the anonymity of respondents and allows them to provide feedback on each other's opinions in several rounds, until reaching a consensus on the number and type of human resources needed.

3. **Modeling**

Using mathematical and computer techniques, this method helps in estimating the demand and supply of human resources by considering various factors such as economic conditions, technological developments, and educational systems. This is especially useful in large organizations that require complex analysis.

4. Employee Needs Analysis

This method involves collecting data on the internal and external conditions of the organization, including labor market analysis and demographic trends. This is important for understanding human resource availability and planning the development of necessary skills.

5. *Skill Inventory*

Used to analyze the skills possessed by current employees as well as future skill needs. This helps in planning employee training and development so that according to job demands.

6. *Forecasting* with *Judgment*

This method relies on the assessment of future workforce needs by managers and staff. This can include a bottom-up approach (units or departments estimate their own needs) or a top-down approach (senior management provides estimates based on their experience). Factors Affecting HR Planning

1. Economic Conditions: Changes in the national economy and industry affect planning strategies. HR.
2. Technological Developments: Technological innovations can create new needs for certain skills in the labor market.
3. Social and Demographic: Demographic trends such as changes in population age and labor force participation rates also influence HR planning.
4. Government Regulations: Government policies regarding employment can affect the way an organization plan their HR needs.

By using these methods effectively, organizations can better prepare for changes in the business environment and meet their human resource needs more appropriately.

CONCLUSION

Indonesia is facing demographic changes, technological developments, and global dynamics that affect human resource (HR) management strategies. High population growth, especially the productive age population, provides great potential for economic growth. However, this opportunity must be balanced with relevant education and training policies and management of the aging population.

In the context of technology, digital literacy is an important prerequisite for workforce competitiveness, especially in the era of the Industrial Revolution 4.0. The use of technology such as QRIS shows how technology can drive efficiency while creating new job opportunities.

Global environmental dynamics, including urbanization, globalization, and climate change, affect human resource needs.

Urbanization shifts labor from the agricultural sector to the manufacturing and service sectors, while globalization and labor migration create challenges in domestic labor distribution.

Governments and organizations need to develop flexible, data-driven HR management strategies to remain competitive in the global marketplace.

Analytical methods such as trend analysis, Delphi technique, and modeling are important tools in forecasting HR needs. Factors such as economic conditions, technological developments, demographic trends, and government regulations influence HR planning. With a holistic approach that takes all these factors into account, Indonesia can leverage its demographic and technological potential to support economic sustainability and development.

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