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Challenges of Human Resources Governance in Facing the Era of Digital-Based Economic Competition: What Evidences from an Academic Perspective

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Abstract---This paper aims to conduct a discussion backed up by academic findings on the study of challenges faced by economic HR managers who compete in the digital era; the problems and challenges faced by HR managers are admittedly weighty. Therefore, various breakthroughs and studies are needed to minimize these challenges. For this reason, this study has utilized many academic publications to back up a study of the challenges faced by managing sustainable economic and human resources based on digital applications. We did an online search for data in many published journals, both books, and articles, which we then studied carefully, such as involving data coding, data analysis, comprehensive data evaluation, and data interpretation so that these data become valid and valid findings to answer research problems and hypotheses. After getting the data and completing the discussion, we can finally conclude that there are many challenges faced in managing competitive economic HR management in the digital era, including governance management requires the ability to compete, have a competitive strategy, and have conditions that can influence and be able to understand and apply all changes both nationally and globally so that companies can be more flexible in responding to all problems in order to achieve organizational goals through empowering human resources. It is hoped that the results of this study can be helpful for the continuation of future studies, both academic studies and digital applications.

Keywords---academic evidence, challenges, competitive economy, digital era management, human resources

Introduction

Human resource governance is a fundamental issue when discussing the era of economic competition, which continues to change from a conventional economic system to an economy based on digital technology (Dacholfany et al., 2021). Human resources are not only an interesting topic to be discussed among business people, but the issue is also an important issue that colors the implementation of all life activities in other sectors. This is none other because the economic sector wants to be developed to become highly competitive by utilizing all the conveniences of technology, which today is constantly changing but without being followed by an increase in reliable human resources, then this is a futile job. Because even though the concept of technology-based economic governance is quite good, it is impossible to happen without being supported by the human ability to live it (Purbasari et al., 2021).

This is because efforts to improve the quality of human resources in economic competition are a key that cannot be ignored. HR is facing the digital economy era is key because technological developments require that they be backed up by the readiness of highly competitive human resources. The Indonesian parties have worked together to strengthen their human resources, be it entrepreneurs, government, universities, and even the community itself, and continue to work hard to improve Indonesian human resources that are highly competent toward technology-based global economic competition. From academia, we are also trying to develop human resource management based on the digital economy in the publication sector of study results and other academic activities (Made & Kurniawan, 2021). Observing the latest technological developments, especially in running a business related to technology, the answer is that inevitably improving the quality of human resources is necessary. Kwarteng et al. (2021), said that today's business requires innovation, which must be a concern for all parties, especially in the face of an increasingly

competitive era. Without innovation through strengthening human resources, Indonesia will continue to be unable to compete with other countries in Southeast Asia.

According to [Chin & Pehin Dato Musa \(2021\)](#), the solutions for that are several strategies that can be done to win the digital business era; among others, the parties must focus on building their HR-integrated digital infrastructure and making the internet a path that becomes the solution. The party that must continue to look at this problem is the government, where several HR development sectors can be done because the development of human resources is in the automatic sector, the food and beverage chemical sector, and the HR sector. With the participation of the government to support funding for all sectors of the Sumedang human stabilization sector mentioned above, this is progress, especially in facing the coming year after normalcy, all business activities must be carried out again with an emphasis on strengthening human resources and juxtaposing them with technological resources because both This sector is the primary key in economic development in the country ([Bejinaru, 2019](#)).

Dealing with business in the era of globalization has indeed become an era where competition is not a new thing. This era of competition depends on the availability of competent human resources, which must be a priority for all parties. For this reason, innovation and breakthroughs are needed so that Indonesia can produce as many reliable human resources as possible who can compete with all competitive contacts, both nationally and in the international context. The discussion of digitizing business, which continues to resonate, is that the government has given instructions with strategies and steps to accelerate digital technology transformation in which Indonesia must be active and understand the sector of using digital applications. This is supported by [Stiglitz \(2017\)](#), who said that the innovation ability to print domestic human resources is one of the government's priorities that needs to be improved continuously so that our human resources are able and successfully compete in developing both technology products and technology users in terms of learning contexts and also jobs, all of which are for the readiness of skilled Indonesian workers following today's business world order.

Referring to the study of [Maryanti et al. \(2020\)](#), which said that if in 2013 Indonesia is ready to switch to a technology economy, then to welcome this era, it takes about 20 million human resources which have been adopted with informatics because technological updates are essential because Indonesia, like other nations, must be ready to integrate the technological community. Following the 4.0 revolution era ahead. Likewise, what is said by [McSweeney \(2016\)](#), is that the digital transformation and loading that the parties, especially the government, are intensively carrying out is believed to be able to create 3 million new jobs in 2024 after Indonesia enters normalcy. Even when Indonesia was still in a pandemic, human resource skills using technological means for doing business and working as well as studying were still a priority considering that technology was the most appropriate solution to anticipate the impact of policies responding to the pandemic; both in Indonesia and abroad. Another study by [Pal & Vanijja \(2020\)](#), said that citing Microsoft's 2020 study projected employment related to digital application technology would continue to grow in schools on a large scale and even globally. This number is estimated to reach 195 million jobs by 2025. So Indonesia, as part of the international community that understands and can have complete technology skills, must be ready in the computer field, estimated to absorb around 25 million workers in 2025 ([Kumar, 2016](#)).

Meanwhile, Indonesia's development in the field of digital technology infrastructure, which continues to be pursued, is what the communications ministry wants, and information is increasing the capacity of digital technology talent to utilize existing infrastructure; so far, Indonesia continues to develop technology infrastructure facilities so that the presence of human resources can be directly absorbed. [Willcocks \(2020\)](#) added that in the 2016-2019 period, the government had taken the initiative to improve the quality of human resources in digital technology. So, through these data, basic technology skills must be born by collaborating between educational institutions such as universities and industrial fields; this work must be linked. Therefore, Indonesia, a developing country, must be active with changing work patterns and respond to the demand for labor nationally and internationally with access to proper human resource training for the broadest possible number of skilled workers, especially the government and industry ([Suseno & Umar, 2021](#)).

Based on the importance of human resources in the process of developing the economic sector, primarily related to human resources based on digital technology, it is necessary to study and discuss which aims to accelerate the process of developing human resources related to this, so we conducted various studies intending to produce new knowledge and understanding related to how the importance of human resources in structuring the economy both micro and macro ([Swanson, 2022](#)). In other words, when managing human resources, of course, there are challenges and obstacles, so identifying the challenges and obstacles faced in the governance of human resources that have the potential to develop the economy in the essential digital era is what makes the author interested in studying and discussing the obstacles faced in implementing the human resource management system—managing Indonesian human resources towards a digital economy ([Lima & Galleli, 2021](#); [Narasimhan et al., 2004](#)). For other reasons,

human resource management is essential in helping to bridge the information gap between what employees can do, whether government or company employees, all of which are to streamline organizational goals, so empowering efficient HR governance can provide benefits for both the government and companies (Ahmad, 2015).

When they can compete by winning the competition at the domestic and international level, management must understand the obstacles and obstacles when carrying out their duties and responsibilities to manage human resources at the national and international company level (Bratton et al., 2021). Furthermore, the current and future challenges of HR management are the emergence of various worlds of work and professions, which are a positive impact of technological change itself, both demanded by the government and organizations and companies along with technological developments, especially informatics and other issues that have proximity to HR governance which tends to strengthen the ability of employees to support and contribute to the company or organization they are in (Wilton, 2022). When viewed from what factors are obstacles when developing HR, we will be able to see how to create superior and competitive HR, how HR has a strategy to support the business to avoid avoiding excessive concentration on the company's daily problems but more to orientation and vision so that they look for strategies that match the characteristics of the company's goals or state institutions that employ many employees (Head & Alford, 2015).

Competitive challenges will undoubtedly affect the ability to manage human resources, how to increase the company's interests with governance, such as how employees can contribute to the company's sustainability, how challenges can be blocked in a global context, and challenges that are angrier with digital technology approaches (Nasution, 2019). These challenges will undoubtedly shine when the HR manager must be more proactive in understanding and applying to understanding rather than challenges. When talking about the biggest challenge in managing skilled HR in an era of automation, HR managers must understand that the biggest challenge in developing skilled HR in the industrial era is the incompatibility between what is created or the competencies produced by, for example, HRM in institutions. Such as universities and training with the demands and needs of the industry or the world of work. In developing resources for attention-oriented companies (Turner et al., 2019).

Viitala et al. (2017), in the digital era certainly has many difficulties; when companies are future-oriented, the challenges HRM developers face include how the economy and the development of economic strategies related to technology must then consider the availability of skilled labor, qualified and competitive and understand the problems related to the organizational structure of the company and existing organizations. This is one of the obstacles faced by HR developers such as universities and other institutions (Ibua, 2014). When viewed from the factors that affect the existence of HR in Indonesia according to these experts, it can be seen from personal and individual factors, which include the qualifications possessed then the factor of how existing links are developed so that every good HR development understands how to build links and must follow workers' unions and understand how political freedom and social factors must be understood in developing human resources (Kirchberger & Pohl, 2016).

Therefore, here at the end of this introduction section, we see that six challenges must be overcome when the first human resource development often occurs that the low income obtained by employees so that HR development will be hampered then how good leadership from managerial to influence employees is there a future leader who has technology solution orientation as well as leaders who can see that technology is a solution so that employees will believe how differences in technology and self-development can solve problems as well as many leaderships in companies in Indonesia who are not trained with the capacity of their human resources so that they will face obstacles in carrying out Indonesian HR development projects based on technology that today works under the auspices of competition and technology (Rosa, 2020).

Research Method

We can explain in this section that the study has presented the process and stages of conducting a study looking for scientific evidence to support the discussion of the challenges of human resource governance to facing economic competition in the digital era (Pathak et al., 2013). Talking about challenges, especially in the area of human resource management in a competitive economic era, this is discussing how to use methods and approaches to improve the quality of Indonesian human resources because any progress in the sector without the support of reliable human resources, such efforts are futile (Bhattacharyya et al., 2021). For this reason, the study has carried out a series of steps to search for literature that can complete the discussion of the study of challenges and opportunities in producing human resources in the era of economic competition. From the 100 publication topics we got after going through a series of in-depth selection and analysis, we finally collected 55 topics in the form of field study publications, and we decided to support this discussion (Williams et al., 2021).

After further data collection, we identified the relevance of the questions we formulated in this study. First, we examined them under the phenomenological approach, a strategy to answer a phenomenal problem by relying on many existing data. Involves a data coding system, evaluates the data thoroughly regarding reliable data in depth, and we also involve a data interpretation system so that the data can become findings that answer the problems of this study with the principles of high validity and credibility (Ontrup et al., 2021). We design this kingdom in descriptive qualitative data to get an in-depth understanding of the various existing publications so that this discussion is supported by scientific findings, especially in HR governance in a competitive economic era—many academic perspectives. We searched for data on many literature sources electronically by relying on keywords we embedded in the Google Scholar search engine and examined them.

This study also relies on secondary data in the form of published journals and other book publications that we consider relevant in supporting the discussion of this study. In reporting the results, we rely on the literature review reporting format published in various data sources (Zhang et al., 2021). These are the steps and stages of carrying out the study, starting with identifying and formulating the problem, followed by a literature search, then analyzing it, and finally reporting it.

Result and Discussion

Understanding Indonesia's HR challenges today

The capability of HR is a test in the time of the ASEAN Economic Community. The skill and instructive foundation of Indonesian laborers is one of the essential things in the opposition in the MEA. These laborers are expected to have qualified, creative, inventive, and imaginative abilities. As per Tooranloo et al. (2017), the most significant test in creating gifted HR amidst this globalization period is the misalignment between the skills delivered by establishments and the conventional schooling system with the necessary capabilities by industry players. For this, Wu & Zha (2018), recommend novel insights to audit the course of the vision of the advanced education internationalization program between the nature of graduates and the dependable requests of the universe of work, both government and industry. Endeavors to orchestrate abilities between what is delivered by instruction and field needs should be answered together. Shaturaev (2021), said that the public authority through the Ministry of Research, Technology and Higher Education of Indonesia and different nations generally endeavors to work on the nature of advanced education graduates, one of which is by consistently refreshing general advanced education principles (Cömer et al., 2019).

Different difficulties confronted worldwide incorporate frail 'delicate abilities,' flexibility, and 'relational correspondence' as expressed in the 'Worldwide Talent Index' delivered by the EIU (Economist Intelligence Unit) in 2012. Roughly 52% of industry players in the Asia Pacific said that the most significant shortcoming of HR who did not pass the enlistment cycle was the shortcoming of delicate abilities, particularly imagination in confronting position difficulties and extraordinary relational abilities. Noah & Aziz (2020), see the significance of framing delicate abilities from the beginning, particularly in everyday education and learning exercises. "Information and valuable abilities are the principal capital for each college alum. Nonetheless, in the current period where admittance to information and abilities is highly expansive, delicate abilities play the central part as a determinant of the outcome of graduates both for business improvement and setting out business open doors, particularly in confronting the time of globalization and MEA.

While Kumar (2020), said what was done by Swiss German University is situated towards the arrangement of information and abilities coordinated according to industry assumptions and teach standards in work acquired from understudy insight. "Character and delicate expertise development are framed from the understudy learning climate, the reconciliation of worldwide guidelines and industry needs into the educational plan, and temporary job programs explicitly shared at home and abroad, particularly in Europe. SGU gives imaginative instructive projects through 11 undergrad and three postgraduate investigations with double/triple degree grants from eminent global institutional accomplices and modern organizations with more than 250 organizations spread across Indonesia and Europe (Leeflang et al., 2014; Killian & McManus, 2015; Cardon & Stevens, 2004).

HRM evidence from perspectives

To begin the study of scientific evidence of academic work that raises issues and issues of technology-based human resource development in the era of a free economy, we first examine the findings of Zapata-Cantu et al. (2022), in which they discuss how family-based businesses can adopt a digital technology-based economic system. They focus

on the opportunities and challenges in developing family economic knowledge into future k-oriented businesses. For them, companies need to immediately transform the way they operate so that they can survive in this highly competitive era where the pandemic has inspired how a family-based business is but can solve their problems, namely by making flexible human resources change the way of business that was previously conventional into governance—technology-based governance (Dev et al., 2020).

This is a challenge that usually family-based businesses are complicated to adapt to modern business ways. What can be used as knowledge here is that family values and business management can be carried out with very complex principles that are carried from generation to generation, but personal values affect the process of HR professionalism and innovation that is carried out. Indeed, this is a challenge, but with a more flexible governance principle with a strategy where their innovation becomes a family business, this becomes a professionally run business where the management can adopt conventional methods in a way that prioritizes good and sustainable competitive advantage (Zakery & Saremi, 2020). This is one of the business governance systems that provides concepts and models to strengthen the relationship between knowledge management and the personalization process. The success of running a business, which was previously said to be a family-based economy, is very vulnerable to survival. However, the business can eventually become more advanced and sustainable due to the ability and flexibility of constraints and sustainability.

The concentrate by Hidayat et al. (2022), which centers around the difficulties and possibilities of instructive Islamic foundations and their supportability in the Digital Age, is a discussion for instructive exercises that plan to improve lives. The advancement of computerized innovation requires instructive organizations to assemble and foster a school system ceaselessly. This article investigates the difficulties and possibilities of instructive Islamic foundations and their maintainability during computerized innovation. The technique utilized in this article is a subjective inductive substance examination strategy. The discoveries are 1) Political changes, monetary changes, and socio-social changes in the public eye require instructive Islamic establishments to work on the institutional framework and control every institutional action. 2) Islamic instructive foundations' Prospects include working on the nature of HR and administrations, viability and effectiveness of monetary administration, and concealment of extraordinary expenses. 3) The eventual fate of instructive Islamic establishments, in particular, the manageability of the presence of the foundation, the supportability of the organization's quality level, and the assets' maintainability (Mosteanu et al., 2020).

Furthermore, to carry out an increase in human resources capable of transforming problems with strategies from a multi-stakeholder approach, the study of Brunetti et al. (2020), proposes various strategies for dealing with problems in improving human resources in the era of digital business transformation. What they found from their study was that the transformation of digital technology is a formidable challenge because HR management has elements of culture and skills that must be taken into consideration. Another result is that infrastructure and technology issues are critical points in the information age, and diverse interactions and artificial intelligence are vital strategies (Li et al., 2021). In addition, the results of their study have also outlined essential contributions. The importance of creating a computerized culture and capabilities before putting resources into computerized foundations and innovation in a simple, imaginative macro area is essential. Organizations must change their vision before reconfiguring their action plans, putting resources into brilliant work, and establishing contacts with new businesses. In addition, this study suggests that policy implementation should essentially put resources into secondary schools and associations while, regarding association education and training, it recommends providing computerization capabilities for some partners of the two students and laborers (Kane et al., 2015).

The following is evidence of an academic study (Tassey, 1991), which raises the challenge of information business associations toward computerized-based innovation. Mobile phones have also worked to decipher much information, and they can be essential tools in HRM, from registration to final processing. With the help of this versatile application, business associations can store more desired information and data and access them without any problems. According to them, HR management is a relatively new mode for this to be taken carefully in HRM, especially using portable technology innovations. So this study is concerned with HRM for associations, assuming business associations find success in the severe and complex business world. On that basis, they need to take new advances such as HRM Management, an imaginative and imaginative innovation in supervising HR. This shows that HRM has different objectives and has tremendous breadth and difficulty for businesses and representatives to discharge their responsibilities successfully.

Then, Baskerville et al. (2020), examine the effect and difficulties of computerized change in banking and monetary. They said the banking advanced change process saw the turn of events and reinforcement of computerized channels as quite possibly the earliest and most significant stages, without disregarding the significance of virtual channels for specific necessities. From one perspective, this duality between digitalization and the human component

is reflected in the bank's multichannel procedure, progressively moving towards collective energies between computerized channels and the human touch (Moro & Norman, 2003; Hellwig & Irmen, 2001; Jain, 2016). Then again, a careful survey of the client support rationale drives the bank to audit the activity of inner cycles, presenting development components through an organized work that prompts the development and the executives of a development methodology. Subsequently, public trust in using computerized instruments and cycles in the monetary area is expanding. Artificial consciousness, AI, extensive information examination, blockchain records, advanced cash, and different carefully evolved monetary subsidiaries are losing their secrets inside and outside organizations and organizations working in banking and money (Hussain & Al-Turjman, 2021).

Agostini et al. (2020), said that the digitalization project is essential for the mechanical development process, which positively has many difficulties and valuable open doors from a business administration point of view. Different researchers have shown that the outstanding development in computerized innovation has, in a critical improvement for the overwhelming majority of business processes, likewise assumed a significant part in the advancement field. The point of this paper is to coordinate the commitments of this specific issue as per a system that considers three subjects presently being widely bantered in writing: development inputs, cycles, and results. They presume that in light of advanced innovation; 1) Inputs are progressively becoming interrelated, putting forth most development attempts happen in a biological system of entertainers across associations. 2) The development cycle is slowly consolidated, expecting and working on the stage in which client criticism is gathered and utilized. 3) Advancement yields expanded as stages used to make esteem by coordinating resource supply with the request (Klofsten et al., 2019).

Then, at that point, what do Hagemann & Klug (2022), say regarding HR the board in a computerized innovation climate? They give an outline of significant subjects in HR, the executives that are affected by digitization and robotization. It frames how work in HRM is changing in regions, for example, psychological wellness in the working environment, work plan, administration, and faculty advancement. The last segment shifts center and presents a better approach for working in HRM, known as HR examination or individual investigation. The way that the different points are not autonomous and converge with one another is made sense in the particular segments (Bloom & Van Reenen, 2011).

At last, this study presents the consequences of a concentrate by Calzada Olvera (2022), which expresses that innovation will be developed in mining according to the perspective of difficulties and valuable open doors. As indicated by them, the mining business, which is viewed as a customary and moderate industry regarding development, is ending up at a defining moment because of progressively complex difficulties, for example, corrupting metal grades (Lee & Lee, 2015). These difficulties have made the basics enhanced. Following the over, a few computerized developments are being carried out in many mining tasks all over the planet.

It answers for existing issues and drastically changes mining processes, expanding productivity, benefit, and capacity to agree with additional rigid guidelines. The joining of complete growth and beginning innovation into the mining business has opened numerous unique doors for long-laid organizations and information-based new companies. This remembers likely providers for nations where digging represents a considerable portion of GDP; however, the improvement of valuable connections remains sub-standard, like in Latin American nations (Soriano & Garrido, 2016). While a few providers in Latin America have recently committed to expanding development in the mining business, most providers in the locale have not had the option (Du et al., 2015; van der Laan et al., 1997; Hidir et al., 2021). Their outcomes outline the mining area's development worldview according to a worldwide point of view, specifically how the development cycle happens in nations with long-laid mechanical initiatives in the mining area, like Australia and Canada.

Conclusion

Finally arrived at the conclusion section, where this study has succeeded in reviewing many kinds of literature that have backed up the results of the study discussion aimed at obtaining scientific evidence from an academic perspective on the topic of the study of challenges in governance HR is facing the era of digital-based economic competition which has recently become a topic that has attracted the attention of scientists. Through academic evidence, the author believes that this discussion is valid following the formulation of the problems and hypotheses that we propose; looking at managing superior human resources is certainly not an easy job because a competitive economy has various problems and challenges, and it will be answered when votes and the thoughts of experts also smother the thoughts of the author.

Well, among other things, we have received an understanding that managing HR management to develop a competitive economy in a very competitive era according to the recognition of the exporters that, among other

things, HR management from an academic perspective is an effort to prepare skilled and highly knowledgeable human workers who can handle everything. Problems and come up with efficient, effective, and productive solutions. Human resource governance is said to be challenging because today's business is run with high competition where there is a variety of business and technical models that must be carried out which must meet market demands both in the area of government and private organizations where technological developments, especially informatics and business management governance issues. This requires that human resource management, which absolutely must be competitive, is a problem for which there is no end to the search for solutions. In addition to HR management issues, other companies also have issues of leadership or management that will carry out human resource leadership. Where currently, good leadership to manage sustainable and challenging economic HR must be flexible with all changes. Competitive human resources are needed, namely human resources who can overcome problems so that companies can continue towards global change and the impact of the presence of technology ready to innovate in all sectors of life, especially business and the economy. Therefore, the challenge faced by HR managers is to maintain a competitive advantage to support the company's overall strategy in achieving business goals, avoid dealing with efficiency and problems that arise and develop HR strategies according to the characteristics of each existing organization. These include the conclusions we can present from a series of published studies of academic works that we believe have helped back up our study discussion, namely the challenges of managing human resources in a digital-based competitive economy today.

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