



DIGITAL TRANSFORMATION OF BALI TOURISM HUMAN RESOURCES TOWARDS A KNOWLEDGE-BASED ECONOMY

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ABSTRACT

Digital transformation has driven a paradigm shift in the tourism industry towards a knowledge-based economy that places knowledge, competence, and innovation as the main source of value creation. This study aims to analyze the influence of digital transformation on the realization of a knowledge-based economy through the role of human capital, digital competence, knowledge management, and dynamic capabilities in the Bali tourism industry. The study used a quantitative approach with an explanatory research design on 240 respondents from various subsectors of the tourism industry in Bali. Data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The results of the study show that digital transformation has a positive effect on strengthening human capital, which further improves digital competence, strengthens knowledge management, builds dynamic capabilities, and ultimately encourages the realization of a knowledge-based economy. This research confirms that the success of digital transformation is not only determined by technology adoption, but also by the ability of organizations to develop competencies, manage knowledge, and build adaptive capabilities as a source of sustainable competitive advantage. These findings provide a theoretical contribution through the development of an integrative model that connects digital transformation, human capital, digital competence, knowledge management, dynamic capabilities, and knowledge-based economy in the context of the tourism industry.

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1. INTRODUCTION

Human resources (HR) are strategic capital that determines the success of tourism industry development. In contrast to the manufacturing sector which relies more on automation and production technology, the tourism industry is a people-based industry that places humans as the main actors in value creation. The quality of interaction between service providers and tourists is a factor that greatly determines the formation of a tourist experience, customer satisfaction, tourist loyalty, and the image of a destination. Therefore, the competitiveness of the tourism industry is not only determined by the beauty of the destination, the completeness of infrastructure, and physical investment, but also by the competence, professionalism, creativity, adaptability, and innovation capacity of human resources who manage the industry.

In the context of Indonesia, Bali is a tourism destination that has a strategic position, both as the main driver of the country's foreign exchange and as the center of regional economic activity. Bali's economic structure shows a high dependence on the tourism sector and its supporting industries, such as accommodation, restaurants, travel agencies, tourist transportation, creative economy, as well as the implementation of various cultural activities and meetings, incentives, conventions, and exhibitions (MICE). These characteristics make the quality of human resources a factor that greatly determines the sustainability of Bali's economic development. When the quality of human resources

improves, the productivity of the tourism industry will increase, service innovation will develop, and the competitiveness of destinations will be stronger. On the other hand, if the quality of human resources lags behind industrial development, then Bali's competitive advantage as a world tourist destination has the potential to decrease.

Changes in the global business environment triggered by the Industrial Revolution 4.0 and the acceleration of digital transformation further strengthen the urgency of tourism human resource development. Technological developments such as artificial intelligence (AI), big data analytics, Internet of Things (IoT), cloud computing, machine learning, and various digital platforms have changed almost the entire value chain of the tourism industry. Destination promotion activities, hotel room reservations, operational management, customer relationship management, digital marketing, tourist behavior analysis, and business decision-making are now increasingly dependent on digital technology. Digitalization is no longer seen as a strategic choice, but has become a fundamental need for tourism organizations to maintain their competitiveness.

Digital transformation has also begun to change the ecosystem of Bali's tourism industry. Various hotels, resorts, villas, restaurants, travel agencies, and tourist destinations have utilized hotel management systems (property management systems), online travel agents (OTAs), digital payments, social media-based marketing, customer data analytics, and the use of artificial intelligence in guest services. The Bali Provincial Government also encourages the development of smart tourism through the digitization of public services, the promotion of technology-based destinations, and the strengthening of the digital economy ecosystem. These changes show that the organization's ability to utilize digital technology will increasingly determine service quality, operational efficiency, and tourist experience.

However, the success of digital transformation is not only determined by the availability of technology, but also depends on the quality of human resources who operate, manage, and develop these technologies. Various studies show that the failure to implement digital transformation is more often caused by low digital competence of the workforce, weak organizational learning culture, limited knowledge sharing capabilities, and resistance to change than by technology factors themselves. This condition shows that technology investment must be balanced with investment in human capital development so that organizations are able to get optimal benefits from the digitalization process.

As a consequence, the competency profile of tourism human resources has undergone a very significant change. If previously the industry emphasized operational skills (technical skills) and service (service excellence) (service excellence), now organizations need human resources who have digital literacy, data analysis skills, the use of artificial intelligence, critical thinking skills, creativity, cross-disciplinary collaboration, digital communication, and lifelong learning skills. These competencies are the main capital for organizations in generating service innovations, improving operational efficiency, and creating a more personalized travel experience according to the needs of modern travelers.

These changes are in line with the development of the knowledge-based economy paradigm, which is an economic system that places knowledge, innovation, technology, and the quality of human resources as the main factors in economic value creation. In this paradigm, an organization's competitive advantage no longer rests on the ownership of physical assets, but on the ability to generate, manage, distribute, and utilize knowledge as a source of sustainable innovation. For the tourism industry, knowledge covers various aspects, ranging from understanding tourist behavior, tourism product innovation, mastery of digital technology, to the ability to integrate local cultural values into an authentic tourism experience.

Bali has great potential to develop a knowledge-based economy because it is supported by cultural capital, social capital, and a relatively developed tourism education and training ecosystem. Various universities, vocational schools, job training institutions, professional certification bodies, industry associations, and the tourism community play a role in producing a competent workforce. In addition, the philosophy of Tri Hita Karana as Balinese local wisdom provides a value foundation for human resource development that is not only oriented towards economic productivity, but also pays attention to harmony between people, the environment, and culture. The integration of digital competence, innovation, and local cultural values has the potential to become Bali's competitive advantage in facing competition from global tourist destinations.

However, various challenges are still faced in the process of digital transformation of tourism human resources in Bali. The digital skills gap is still found in some of the workforce, especially in small and medium-scale tourism businesses. The use of digital technology has also not been followed by a knowledge management system that is able to document, share, and develop organizational knowledge in a sustainable manner. As a result, the innovations produced are often still individual and have not fully become an organizational asset that is able to increase productivity and overall industry competitiveness.

On the other hand, studies on digital transformation in the tourism sector have so far focused more on aspects of technology adoption, digital marketing, tourist behavior, or the implementation of smart tourism. Research on human resource development generally discusses competencies, training, or workforce performance separately. There is still relatively little research that integrates digital transformation of human resources, knowledge management, and



knowledge-based economic paradigms in the context of Bali's tourism ecosystem. In fact, the integration of these three aspects is important to explain how investment in digital competencies can generate innovation, increase organizational productivity, strengthen destination competitiveness, and ultimately encourage sustainable regional economic growth.

Based on these gaps, this study aims to analyze how the digital transformation of tourism human resources contributes to knowledge-based economic development in Bali. This study examines the relationship between digital competence, human capital, knowledge management, and organizational capabilities in creating innovation and increasing the competitiveness of the tourism industry. Theoretically, this research is expected to enrich the development of the theories of Human Capital Theory, Knowledge-Based Economy, Knowledge-Based View, and Dynamic Capabilities in the context of the tourism industry. Practically, the results of the research are expected to be input for the Bali Provincial Government, regency/city governments, vocational education institutions, training institutions, professional certification institutions, and tourism industry players in formulating human resource development strategies that are adaptive to digital transformation, knowledge-based, and based on Balinese cultural values to realize innovative, competitive, and sustainable tourism.

2. LITERATURE REVIEW

2.1 Digital Transformasi

Digital transformation is an organizational change process that utilizes digital technology to create new value through business model innovation, increased operational efficiency, and customer experience development (Vial, 2019). In the tourism industry, digital transformation is no longer understood as just the adoption of information technology, but as an overarching change that affects organizational strategies, work culture, business processes, and human resource competencies. The development of artificial intelligence (AI), the Internet of Things (IoT), big data analytics, cloud computing, and digital platforms has changed the way destinations are promoted, services are delivered, and business decisions are made based on data analysis (Buhalis & Leung, 2023).

The success of digital transformation is not only determined by the availability of technology, but also by the readiness of the organization to manage change. Verhoef et al. (2021) emphasized that digital transformation is a multidimensional process that requires integration between technology, leadership, business strategy, and human resource competencies. In the tourism sector, the quality of interaction between the workforce and tourists remains the main factor shaping the tourism experience. Therefore, technology is positioned as an enabler that strengthens the quality of service, not as a substitute for human roles.

In the context of Bali, digital transformation is increasingly relevant as the concept of smart tourism destinations develops. The use of online reservation systems, property management systems, digital marketing, electronic payments, and data-based tourist behavior analysis has become part of tourism industry operations. This condition requires the availability of human resources who not only master service skills, but also have the ability to adapt to the development of digital technology. Thus, digital transformation is an important foundation in increasing the competitiveness of Bali's tourism industry.

2.2 Human Capital Theory

Human Capital Theory explains that knowledge, skills, experience, and competencies are forms of capital that are able to increase the productivity of individuals and organizations. Schultz (1961) emphasized that investment in education and training is an economic investment that provides long-term benefits, while Becker (1964) expands on the concept by stating that increasing the competence of the workforce will increase productivity as well as the economic value of the organization.

In the tourism industry, the concept of human capital has a very strategic position because the quality of service is highly determined by the ability of the workforce to create quality tourism experiences. Unlike the manufacturing industry that produces tangible products, the main product of tourism is an experience that is built through interaction between tourists and service providers. Therefore, investment in competency development, professional certification, vocational education, and continuous training is the main strategy in increasing the competitiveness of the industry.

In the era of digital transformation, the concept of human capital has evolved from simply mastering technical skills to the ability to adapt to technological changes, think critically, collaborate, and conduct lifelong learning. In the context of Bali, human capital development is not only oriented towards professional competence, but also includes the ability to understand local culture, cross-cultural communication, and the application of Tri Hita Karana values as part of the identity of tourism services. The combination of professional competence and cultural values is a competitive advantage that supports the sustainability of Bali tourism.

2.3 Digital Competence

Digital competence is an individual's ability to use digital technology effectively, critically, and responsibly to complete work, communicate, solve problems, and create innovations (European Commission, 2022). Digital

competence not only includes the ability to operate software, but also includes data literacy, cybersecurity, digital communication, virtual collaboration, the use of AI, and the ability to learn new technologies independently.

The OECD (2021) emphasized that the development of digital competencies is the main prerequisite for the success of digital transformation in the tourism sector. Organizations that invest in technology without being balanced with increasing workforce competencies tend to experience low levels of technology adoption and are less than optimal in creating innovation. Therefore, digital competence is the link between technology investment and increased organizational productivity.

For Bali's tourism industry, digital competence is an increasingly urgent need because most of the interaction with tourists has taken place through digital platforms. The workforce is not only required to be able to operate digital systems, but also understand tourist behavior through data analysis, manage the organization's digital reputation, and utilize technology to improve service quality. Thus, digital competence is a form of human capital that determines the organization's ability to adapt to changes in the business environment and create sustainable added value.

2.4 Knowledge Management

The development of the digital economy has changed the way organizations create and maintain a competitive advantage. One of the sources of this excellence is the organization's ability to manage knowledge (knowledge management). Davenport and Prusak (1998) define knowledge management as a systematic process of acquiring, organizing, sharing, and utilizing knowledge to increase organizational effectiveness. Meanwhile, Nonaka and Takeuchi (1995) explained that organizational knowledge develops through the interaction between tacit knowledge possessed by individuals and explicit knowledge documented in procedures, operational standards, and information systems. These interactions are known as the Socialization, Externalization, Combination, and Internalization (SECI) model, which is the foundation in the process of creating new knowledge.

In the tourism industry, knowledge management has a very important role because most of the quality of service depends on the experience, creativity, and ability of the workforce to deal with diverse situations. Knowledge about tourist preferences, service techniques, complaint handling, and tourism product innovation are organizational assets that need to be managed systematically so that they are not lost when there is a change of workforce. Therefore, tourism organizations need to build a culture of knowledge sharing, organizational learning, and utilizing digital technologies such as Learning Management Systems (LMS), Knowledge Management Systems (KMS), and online collaboration platforms to accelerate the learning process.

In the Balinese context, knowledge management also includes the preservation of local knowledge related to Balinese culture, traditions, customs, art, and service philosophy. Digitization allows that knowledge to be documented, developed, and passed on to the next generation of the workforce without compromising the value of its authenticity. Thus, knowledge management not only functions to improve organizational efficiency, but also becomes an instrument for preserving cultural identity which is the main attraction of Bali tourism.

2.5 Dynamic Capabilities

The theory of Dynamic Capabilities introduced by Teece, Pisano, and Shuen (1997) explains that an organization's competitive advantage is not only determined by the resources it has, but also by the organization's ability to integrate, build, and reconfigure those resources in the face of changing environments. Teece (2007) then developed this concept into three main dimensions, namely sensing (identifying opportunities and threats), seizing (taking advantage of opportunities through innovation), and transforming (making organizational changes in a sustainable manner).

In the tourism industry which is heavily influenced by technological changes, tourist preferences, and global market dynamics, dynamic capabilities are an important factor for the sustainability of an organization. Hotels, restaurants, travel agencies, and tourist destinations are required to be able to respond quickly to changes through the development of new services, the use of digital technology, and the improvement of workforce competencies. Organizations that have dynamic capabilities will be more adaptable to disruption, increase innovation, and maintain competitiveness in the long term.

For Bali, dynamic capabilities are becoming increasingly relevant considering the high level of competition between international tourist destinations. The ability of industry players to combine digital innovation with the richness of local culture will determine Bali's success in maintaining its position as a world-class tourist destination. Therefore, the development of dynamic capabilities must be supported by adaptive human resources, an innovative organizational culture, and a continuous learning system.

2.6 Knowledge-Based Economy

The concept of knowledge-based economy is developing along with changes in the structure of the global economy which increasingly relies on knowledge, innovation, and technology as the main source of economic value creation. The OECD (1996) defines a knowledge-based economy as an economic system that relies on the production, distribution, and utilization of knowledge as the main factors of economic growth. In line with that, Powell and



Snellman (2004) emphasized that knowledge has become a more strategic production factor than natural resources and physical capital because it is able to generate innovation and increase productivity in a sustainable manner.

In the tourism sector, a knowledge-based economy is reflected in the organization's ability to produce service innovations, develop creative tourism products, utilize data in decision-making, and create value-added tourism experiences. Knowledge of tourist needs, market trends, digital technology, and local culture are strategic assets that differentiate one destination from another. Therefore, the success of tourism development is no longer only measured by the number of tourist visits, but also by the ability to create innovations that increase productivity, service quality, and community welfare.

In the context of Bali, a knowledge-based economy has great potential to be developed because it is supported by a tourism education ecosystem, training institutions, professional certification bodies, industry associations, and cultural wealth that is a source of creativity and innovation. The integration between digital competencies, knowledge management, innovation, and local values such as Tri Hita Karana can produce a tourism development model that is not only oriented towards economic growth, but also maintains social, cultural, and environmental sustainability. Thus, the digital transformation of human resources is an important foundation in realizing a knowledge-based economy that is able to increase the competitiveness of Bali's tourism industry at the global level.

Based on the literature review, it can be understood that digital transformation is a process of organizational change that not only requires technological investment, but also the development of the quality of human resources. Human Capital Theory explains that increasing knowledge, skills, and competencies is a strategic investment that can increase organizational productivity. These competencies are strengthened through the development of digital competencies that enable the workforce to utilize technology effectively in supporting business processes.

Furthermore, digital competence will provide added value if supported by a knowledge management system that is able to manage, document, and disseminate organizational knowledge so that it becomes a source of innovation. This process will strengthen the organization's dynamic capabilities in responding to changes in the business environment and creating innovation in a sustainable manner. In the end, the integration between digital transformation, human capital, digital competence, knowledge management, and dynamic capabilities is the foundation for the realization of a knowledge-based economy, which is an economic system that places knowledge as the main source of value creation and competitive advantage.

In the context of Bali tourism, the interconnectedness between these concepts shows that the competitiveness of destinations is not only determined by natural and cultural beauty, but also by the ability of human resources to manage knowledge, utilize digital technology, and create innovations that remain based on local cultural values. Therefore, this study develops a conceptual framework that places the digital transformation of human resources as a strategic factor in encouraging the formation of a knowledge-based economy in the Bali tourism industry.

Conceptual Framework & Hypothesis

Digital transformation has changed the management paradigm of the tourism industry from one oriented to one based on knowledge, innovation, and quality of human resources (HR). In the context of Bali tourism, digital transformation is not only related to the adoption of technologies such as artificial intelligence (AI), big data analytics, cloud computing, and digital platforms, but also includes improving human resource competencies, knowledge management, and strengthening organizational ability to adapt to changing business environments.

This research is based on Human Capital Theory (Schultz, 1961; Becker, 1964) which emphasized that investment in education, training, and competency development is the main factor in increasing organizational productivity and competitiveness. In the digital era, this development is realized through increasing digital competence, namely the ability of the workforce to utilize technology to support business processes, services, and innovation. Digital competence further strengthens knowledge management practices, because human resources are able to acquire, manage, document, and share knowledge more effectively through digital technology.

Based on the SECI model (Nonaka & Takeuchi, 1995), effective knowledge management encourages organizational learning and the creation of innovation in a sustainable manner. Furthermore, these capabilities will strengthen the organization's dynamic capabilities, namely the ability to identify opportunities (sensing), utilize opportunities (seizing), and transform in response to environmental changes (Teece, 2007). Organizations that have strong dynamic capabilities will be more adaptive in developing products, improving service quality, and maintaining competitiveness.

The integration between digital transformation, human capital, digital competence, knowledge management, and dynamic capabilities ultimately supports the realization of a knowledge-based economy, which is an economic system that places knowledge as the main source of value creation, innovation, and competitive advantage. In the context of Bali, this model explains that the competitiveness of the tourism industry is not only determined by the use

of technology, but also by the ability of human resources to manage knowledge and produce innovations that are still based on local cultural values.

Based on this framework, this study proposes six hypotheses, namely: H1) Digital transformation has a positive effect on human capital; H2) Human capital has a positive effect on digital competence; H3) Digital competence has a positive effect on knowledge management; H4) Knowledge management has a positive effect on dynamic capabilities; H5) Dynamic capabilities have a positive effect on the knowledge-based economy; and H6) Digital transformation has an indirect effect on the knowledge-based economy through human capital, digital competence, knowledge management, and dynamic capabilities as mediation variables.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study uses a quantitative approach with an explanatory research design, which aims to analyze the causal relationship between variables in the research model. This approach was chosen because the research focuses on testing the influence of digital transformation on the realization of a knowledge-based economy through the role of human capital, digital competence, knowledge management, and dynamic capabilities in the Bali tourism industry.

3.2 Research Location and Population

The research was carried out on various tourism businesses in the Province of Bali, including hotels, resorts, villas, restaurants, travel agencies, tourist attraction managers, and other tourism businesses that have implemented digital technology in their operations. Bali was chosen as the research location because it is an international tourist destination that is experiencing an acceleration of digital transformation and has a growing tourism human resources ecosystem.

The research population is managers, supervisors, and professional staff involved in operational management and human resource development in tourism organizations. This group of respondents was chosen because they have an understanding of the application of digital technology, knowledge management, and organizational development strategies.

3.3 Sampling Techniques

This study uses purposive sampling techniques, which are the selection of respondents based on certain criteria that are in accordance with the research objectives. Respondents were selected based on three criteria, namely: (1) working in tourism organizations in Bali Province that have applied digital technology in business processes or services; (2) have a working period of at least two years so that they understand the operational processes of the organization; and (3) occupy managerial, supervisory, or professional staff positions involved in the development of human resources and organizational operations.

The total research sample was 240 respondents from various subsectors of the tourism industry in Bali, including hotels, resorts, villas, restaurants, travel agencies, and tourist attraction managers. The determination of the number of samples refers to the recommendation of Hair et al. (2022) who stated that the analysis of Structural Equation Modeling–Partial Least Squares (SEM-PLS) requires the number of respondents to be about five to ten times the number of research indicators. This study uses 24 indicators, so that the sample number of 240 respondents has met the methodological recommendations to produce stable model estimates and has adequate statistical strength in testing the direct relationship and the influence of mediation between variables.

3.4 Data Collection Techniques

Primary data was obtained through the distribution of questionnaires online and offline using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The research instrument was developed based on indicators that have been used and validated in various previous studies on digital transformation, human capital, digital competence, knowledge management, dynamic capabilities, and knowledge-based economy.

In addition to primary data, the study also utilizes secondary data in the form of government reports, scientific publications, organizational documents, and tourism industry reports as supporting information to strengthen the interpretation of research results.

3.5 Data Analysis Techniques

Data analysis was carried out using the Structural Equation Modeling approach based on Partial Least Squares (SEM-PLS) with the help of SmartPLS software. This method was chosen because it is able to analyze the simultaneous relationships between latent variables, test mediation models, and is suitable for use in research oriented to theory development.

The stages of analysis include: (1) descriptive analysis of respondent characteristics; (2) testing the measurement model (outer model) through convergent validity, discriminant validity, and construct reliability tests using loading factor values, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha; (3) testing of structural models (inner models) through R^2 , Q^2 , effect size (f^2), and bootstrapping values to test the



significance of intervariable relationship paths; and (4) testing the effect of mediation to determine the role of human capital, digital competence, knowledge management, and dynamic capabilities in bridging the relationship between digital transformation and knowledge-based economy.

Through this approach, this research is expected to be able to provide empirical evidence on the mechanism of human resource digital transformation in encouraging the formation of a knowledge-based economy in the Bali tourism industry, as well as providing a scientific basis for the development of human resources policies and sustainable digital transformation strategies.

4. RESULTS AND DISCUSSION

Based on the analysis of 240 respondents from various subsectors of the tourism industry in Bali Province, the results were obtained that the research model met the eligibility criteria to be analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach. All indicators show a loading factor value above 0.70, while the Average Variance Extracted (AVE) value of each construct exceeds 0.50. The Composite Reliability and Cronbach's Alpha values on all variables were also above 0.70, so the research instrument was considered valid and reliable in measuring the digital transformation of human resources in the Bali tourism industry.

Evaluation of structural models shows that the model has a good ability to explain the relationships between variables. The value of the determination coefficient (R^2) indicates that the Knowledge-Based Economy in the Bali tourism industry is significantly influenced by Dynamic Capabilities, while Dynamic Capabilities is influenced by the effectiveness of Knowledge Management. These findings show that the integration of digital transformation with human resource development is able to build a competitive advantage that is relevant to the sustainability of Bali's tourism industry.

The results of the hypothesis test show that digital transformation has a positive effect on Human Capital. These findings indicate that tourism organizations in Bali that are more intensively adopting digital technology tend to pay greater attention to workforce competency development through training, certification, and continuous learning. This condition is in line with Human Capital Theory which states that investment in the quality of human resources will increase the productivity and competitiveness of the organization (Schultz, 1961; Becker, 1964).

Furthermore, Human Capital has been proven to have a positive effect on Digital Competence. This shows that improving the quality of human resources encourages the ability of Bali's tourism workforce to utilize digital technology, manage information, use cloud-based applications, and optimize the use of data to improve the quality of tourist services. Digital competence is an important need considering that Bali's tourism industry increasingly relies on digital marketing, online reservation systems, and technology-based services.

The results of the study also show that Digital Competence has a positive effect on Knowledge Management. Tourism organizations in Bali that have human resources with good digital competencies tend to be more effective in obtaining, documenting, sharing, and utilizing organizational knowledge. This condition supports the organizational learning process and accelerates the creation of service innovations as described in the SECI model by Nonaka and Takeuchi (1995).

The positive relationship between Knowledge Management and Dynamic Capabilities shows that an organization's ability to manage knowledge will increase its capacity to recognize opportunities (sensing), seizing, and transform the organization (transformation). For Bali's tourism industry that faces global market dynamics, changing tourist preferences, and the development of digital technology, these capabilities are an important factor in maintaining the competitiveness of destinations.

Furthermore, Dynamic Capabilities have been proven to have a positive influence on the realization of a Knowledge-Based Economy. These findings indicate that tourism organizations in Bali that are able to adapt, innovate, and manage knowledge effectively will be better equipped to create knowledge-based added value. The mediation effect test also shows that the influence of digital transformation on the Knowledge-Based Economy takes place through strengthening Human Capital, increasing Digital Competence, developing Knowledge Management, and forming Dynamic Capabilities. Thus, digital transformation in Bali's tourism industry not only results in technological changes, but also builds an ecosystem of learning, innovation, and collaboration that is the foundation of a knowledge-based economy and strengthens Bali's competitiveness as a world-class tourism destination.

5. CONCLUSION

This research shows that digital transformation in Bali's tourism industry is not only related to technology adoption, but also a process of strengthening human capital, increasing digital competence, developing knowledge management, and forming dynamic capabilities that together encourage the realization of a knowledge-based economy. These findings confirm that the competitive advantage of the tourism industry is increasingly determined by the ability

of organizations to manage knowledge, develop competencies, and create innovations in a sustainable manner. Therefore, the digital transformation strategy needs to be directed not only at technology investment, but also at developing human resource capacity and organizational learning culture to be able to support the competitiveness and sustainability of Bali tourism in the era of knowledge-based economy.

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