THE ROLE OF THE STRATEGIC TOURISM RESOURCES IN ENCOURAGING COMMUNITY INVOLVEMENT, SERVICE QUALITY AND ENVIRONMENTAL CONSERVATION TO BUILD SUSTAINABLE ECOTOURISM PERFORMANCE AFTER THE COVID-19 PANDEMIC IN BALI INDONESIA

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Abstract

The research objective is to investigate the role of strategic ecotourism resources on sustainable ecotourism performance during and after the pandemic Covid-19 in Bali. This research was carried out with a quantitative approach using a survey method. The research location is in the Province of Bali, Indonesia with the target of four tourist villages, by taking a sample of 215, consisting of tourism stakeholders (Pentahelix). The

empirical findings of the research are that green innovation, knowledge management and information technology are the keys success of sustainable ecotourism performance in Bali through quality service, community involvement and environmental conservation strategies.

Keywords: Ecotourism Resources; green innovation; knowledge management; information technology; sustainable ecotourism performance

INTRODUCTION

Background

Alternative tourism models such as ecotourism are increasingly recognized as a way to promote not only local livelihoods and cultures but also environmental preservation (Kirkby et *al.,* 2011). Community involvement includes knowledge sharing, getting commitment from the community, and participation in the decision-making process and in turn will provide satisfaction to tourists and support the development of sustainable rural tourism (MacDonald & Jolliffe, 2003).

Conservation support is part of the elements of ecotourism such as the definition formulated by Cobbinah (2015): The clear and widely promoted principles of ecotourism include environmental conservation and education, cultural preservation, experience and economic benefits. Conservation aims to save the planet's non-renewable natural resources, flora and fauna (Chandel, A., & Mishra, S., 2016).

Service quality is very important to provide the best experience for tourists. Parasuraman, at al, (1985) succeeded in identifying five main dimensions of service quality that also apply to the tourism sector, namely reliability, responsiveness, assurance, empathy, and physical evidence. Research on service quality in tourism has been carried out by many previous researchers such as Kim, W.G,. (2009) who examined the effect of tourism service quality on the consumer behavior and satisfaction and the findings of his study stated that the service quality had a positive effect on the tourist satisfaction.

To build competitiveness and sustainable business performance, the Theory of Resources Base View (Wernerfelt, 1984), still powerfull as a reference. The resource-based view is promising and provides insight into how important internal resources are in achieving a sustainable competitive advantage, as green dynamic capability, green innovation, knowledge management and information technology resources.

Research problem

The research problem can be formulated: whether the key tourism resources affect sustainable ecotourism performance through local community involvement, environmental conservation, and service quality?

Research Objectives

The research objectives are to investigate: (1) The role of tourism resources on conservation and service quality. (2) The role of community involvement in conservation and sustainable ecotourism performance and, (3) The role of conservation and quality services on sustainable ecotourism performance, to formulate a model for building sustainable ecotourism performance after the Covidd-19 pandemic in Bali.

LITERATURE REVIEW

Resource-Based Theory (RBT)

RBT was first introduced by Edith Penrose and was the first academic to introduce the importance of resources in position competition (Wong and Karia, 2009). Formally RBT was first introduced in the field of strategic management by Wernefelt in 1984. Wernerfelt (1984) stated that the company's resources consisting of tangible and intangible resources provide and weakness for a company that will determine the company's competitive advantage. Wernerfelt's (1984) contribution to the development of RBT is widely recognized in an attempt to position a different view of corporate success, which provides an alternative explanation that firm performance and growth are based on the privileged resources of the firm.

The long-term success of the organization is determined by the capabilities and competencies was developed by the company (Sharma, 2009). Teece, et *al.* (1997) suggests that capabilities are hidden assets, real or abstract organizational processes and developed by the company over several periods, cannot be bought but must be formed. A firm that survives is highly dependent on its ability to create new resources, build on its program of capabilities, and create more inimitable capabilities to achieve competitive advantage (Day and Wensley, 1988; Peteraf, 1993; Prahalad and Hamel, 1990).

Performance of Sustainable Ecotourism

Ecotourism is considered as one of the fastest growing tourism sectors (Ecotourism Society, 2015). According to Ross S., Wall G. (1999), ecotourism is a necessary option for the development of sustainable tourism. Fennel D., A., (2015) sorts out the core criteria of ecotourism including: (1) ecotourism is nature-based; (2) is a dimension of sustainability where

ecotourism is seen from a conservation perspective; (3) is a dimension of human sustainability in the form of local participation and benefits; (4) learning and education as part of the ecotourism experience; and (5) the obligation to behave ethically. Ecotourism performance encourages the realization of sustainable tourism, where ecotourism is a sub-component of the sustainable tourism sector (Wardana, at *al.*, 2020).

Environmental Conservation

Conservation support is part of the ecotourism element as defined by Cobbinah (2015). The clear and widely promoted principles of ecotourism include environmental conservation and education, cultural preservation, experience and economic benefits. Conservation aims to save the planet's non-renewable natural resources, flora and fauna. (Chandel, A., & Mishra, S., 2016). Ecotourism can be described as nature tourism that intentionally makes a positive contribution to environmental conservation and to sustain the development of local communities (Weaver & Lawton, 2007).

In North America, conservation evolved in three areas (Ortolano 1984). First, the view that conservation should include maintaining harmony between humans and nature; the second is that conservation is related to the efficient use of resources, and the third is based on the realization that conservation can be achieved from a religious and spiritual point of view. This last view of conservation raises philosophical concerns with the aim of saving resources from use and storage (Passmore 1974).

Community Involvement

The role of local residents in ecotourism as an interrelation in the ecotourism framework as shown in Figure 1.

Figure 1 Successful Ecotourism Paradigma

Sources: Wall, 1996

Some researchers have stated that community involvement is an indicator of the success of ecotourism while other researchers have stated that improving socio-economic goals, environmental protection and resource conservation are key indicators of ecotourism success (Hunt & Stronza, 2009; Lindberg, 1991; Thomlinson & Getz, 1996). Community-based tourism allows local communities to control and be involved in its development and management so that it can make a major contribution (Wang et *al.,* 2010).

Service Quality (Servqual)

Servqual is a service quality management framework developed by Parasuraman, Zeithaml, and Berry in 1988. The five dimensions of service quality are (1) reliability (2) responsiveness, (3) assurance, (4) tangibles, and (5) empathy. The quality of services in the tourism sector has received increasing attention from academics. For example, research that has been published in academic journals that utilize Servqual, becomes the most representative model for measuring service quality (Meesala, A.; Paul, J., 2018). Customer service is an important factor in providing a positive customer experience and improving organizational performance (Opute, 2020). Research on service quality in tourism has been carried out by many previous researchers. Kim, W.G., (2009) examined the effect of tourism service quality on consumer behavior and satisfaction.

Information Technology

In simple terms, the notion of information technology is facilities consisting of hardware and software to support and improve the quality of information for every level of society more quickly and with quality. Utilization of appropriate information technology and supported by the expertise of individuals who operate it can improve company performance and individual performance (Shahroni K.H., (2014).

Information technology has a strong influence on organizational performance (Eliada Herwiyanti, 2015). Information technology can help knowledge management systems to improve the ability of workers to serve customers better. Information technology support is a reflection of the indicators of information technology tools available for: (1) collaboration; (2) communication with fellow workers; (3) search for and access important information; (4) simulation and prediction (according to the context of the company) (Kristinawati D & Tjakraatmadja, J.H., 2018).

Knowledge Management

Knowledge sharing and absorption are necessary to achieve and maintain a competitive advantage. Knowledge management can motivate employees to obtain information to make decisions needed for organizational success (Dietrich, at al., 2010). Drucker (1993) stated that in contrast to capital, labor and natural resources, knowledge plays a special role in enterprise, industry, and even in national economic development. Organizational awareness is increasing about the importance of knowledge, driving transformations in organizational thinking and actions (Fransen et al., 2011)

Michael J Stevens, Michael A Campion (1994), argues that knowledge, skills and abilities (KSA) are indispensable in building team work. Team work is a dimension of organizational culture. To have effective knowledge management where organizational members actively share knowledge, a conducive learning habitat is needed which consists of mutual trust and a culture of continuous learning (Kristinawati D. & Tjakraatmadja J.H., 2017). Knowledge management is the process of creating, sharing, using and managing the knowledge and information of an organization (Girard, John P.; Girard, JoAnn L. 2015). It refers to a multidisciplinary approach to achieving organizational goals by making the best use of knowledge.

Green Innovation

More and more companies are now considering green innovation as a critical approach to reducing negative environmental impacts (Albort-morant et al., 2018; Chang, 2011; Li et al., 2017; Lin et al., 2014; Tseng et al., 2013). Green innovation is another solution to meet environmental requirements and sustainable growth of companies (Chen et al., 2006; Chiou et al., 2011; Lin et al., 2013). Green innovation will direct and give meaning that innovations in products, processes or business models lead the company to a better level of environmental sustainability.

Green innovation is categorized into green product innovation and green process innovation designed to reduce energy use and pollution, recycle waste and utilize sustainable resources (Chen et al., 2006). Environmentally friendly product innovation is applied in the creation of goods or services that do not have a negative impact and minimize waste or reduce the company's negative impact on the environment (Wong et al., 2012). Success in business requires consistent innovation that gives companies a sustainable competitive advantage. Sustainability has become a mantra for companies that want to create a competitive advantage in the global market (Borin et al., 2013).

Green Dynamic Capability

Competency-based human resource management by considering internal and external factors in building organizational performance strategies is part of the dynamic capability concept initiated by D.J. Teece (2009:54). The notion of dynamic capabilities complements the premise of the resource-based view of firms, and has injected new strength into empirical research in the last decade.

The concept of dynamic capabilities relates to the organization's efforts to expand, modify, reconfigure, or even completely change its resources and knowledge to create value in the dynamics of a rapidly changing business environment (Katkalo, Pitelis, & Teece, 2010). Dynamic capability is the company's ability to adapt its resources to create value in a rapidly changing environment (Teece, Rumelt, Dosi, and Winter, 2003).

Dynamic capabilities enable companies to react to market changes by developing and updating organizational resources and capabilities to achieve a sustainable competitive advantage (Winter, 2003). Companies that have dynamic capabilities can focus on developing innovations that bring high profits, social justice, and environmental protection (Cabral, 2010).

Research Hypotheses

Based on the results of previous research and relevant theories, a hypothesis can be formulated that The strategic ecotourism resources are able to encourage community involvement, quality services and conservation to build sustainable ecotourism performance. The strategic resources of ecotourism consists of information technology, knowledge management, green innovation and green dynamic capabilities.

RESEARCH METHOD

Research Design

This research was carried out with a quantitative approach using a survey method. The purpose of the study is to generalize the population from the selected sample so that conclusions can be made about the behavioral characteristics of the population (Creswell, 2016). The research location is in Bali Province with the target of four tourist villages: (1) Tenganan Village (Karangasem), (2) Pelaga Village (Badung), (3) Penglipuran Village (Bangli), (4) Jatiluwih Village (Tabananan).

Population and sample

The unit of research analysis is tourism stakeholders in Bali consisting of tourism workers, academics, businesses, community leaders and the government. Due to the limited

availability of valid population data, the research sample size was determined using the approach of Hair et al (2010): sample size is the number of construct indicators + number of constructs) x (5 to 10 times). Based on this approach, the research sample size: (35 + 8) (5) = 215 (minimum) and (35 + 8) (10) = 430 maximum. This study set a sample size of 215. The sampling technique used a purposive sampling approach. The measurement technique uses the Likert Scale method with a 5-level degradation as a score from strongly agree on the highest assessment to strongly disagree on the lowest assessment. This study applies descriptive and inferential analysis methods with the Structural Equation Modeling method through the Partial least square (PLS) approach.

RESEARCH RESULTS AND DISCUSSION
Evaluation outer model
Convergent Validity Testing

An indicator can be declared to meet convergent validity and has a high level of validity if the outer loadings value is > 0.70, while the Average Variance Extracted (AVE) value is > 0.50 (Chin & Todd, 1995). In this study, the outer loadings were set > 60 because research with the theme of sustainable ecotourism development related to conservation and service quality is still relatively new. The results of data processing with the SEM_PLS program are as follows:

Table 1. Outer Loading

Description	Original Sample (O)	Average Sample (M)	Standard Deviation (STDEV)	T- Statistics (| O/STDEV |)	P Values
x1.1 <- IT	0,804	0,805	0,030	27,225	0,000
x1.2 <- IT	0,806	0,803	0,041	19,661	0,000
x1.3 <- IT	0,809	0,805	0,036	22,545	0,000
x1.4 <- IT	0,733	0,728	0,057	12,935	0,000
x2.1 <- KM	0,648	0,647	0,056	11,513	0,000
x2.2 <- KM	0,638	0,632	0,065	9,823	0,000
x2.3 <- KM	0,754	0,756	0,041	18,308	0,000
x2.4 <- KM	0,777	0,781	0,033	23,337	0,000
x2.5 <- KM	0,727	0,725	0,053	13,720	0,000
x3.1 <- GI	0,743	0,741	0,045	16,421	0,000
x3.2 <- GI	0,748	0,748	0,049	15,387	0,000
x3.3 <- GI	0,696	0,689	0,067	10,359	0,000
x3.4 <- GI	0,771	0,775	0,035	21,878	0,000

x4.1 <- GDC	0,712	0,714	0,047	14,999	0,000	Table 1…
x4.2 <- GDC	0,638	0,642	0,069	9,190	0,000	
x4.3 <- GDC	0,786	0,784	0,044	18,040	0,000	
x4.4 <- GDC	0,770	0,764	0,050	15,504	0,000	
x4.5 <- GDC	0,802	0,796	0,036	22,452	0,000	
x5.1 <- CE	0,766	0,766	0,043	17,675	0,000	
x5.2 <- CE	0,832	0,832	0,027	31,040	0,000	
x5.3 <- CE	0,834	0,834	0,026	32,508	0,000	
x5.4 <- CE	0,755	0,753	0,035	21,674	0,000	
x6.1 <- SQ	0,768	0,767	0,037	20,865	0,000	
x6.2 <- SQ	0,857	0,856	0,019	44,144	0,000	
x6.3 <- SQ	0,832	0,835	0,024	35,063	0,000	
x6.4 <- SQ	0,695	0,694	0,041	17,149	0,000	
x6.5 <- SQ	0,668	0,665	0,052	12,943	0,000	
x7.1 <- Concervation	0,872	0,871	0,020	43,223	0,000	
x7.2 <- Concervation	0,807	0,804	0,040	20,288	0,000	
x7.4 <- Concervation	0,667	0,669	0,050	13,240	0,000	
y1 <- SEP	0,771	0,774	0,038	20,494	0,000	
y2 <- SEP	0,720	0,720	0,048	14,904	0,000	
y3 <- SEP	0,712	0,709	0,058	12,224	0,000	

Description

GDC = Green Dynamic Capability   SQ = Service Quality

GI = Green Innovation   CI = Community Involvement

KM = Knowledge Management   SEP = Sustainable Ecotourism Performance

IT = Information Technology

Table 1 shows that all construct indicators have reached above 0.60. These results can be concluded that the variance of the indicators of each construct can be explained by each of the research constructs. Convergent validity can also be seen from Composite Reliability and the Average Variance Extracted (AVE) value. Based on the Composite Reliability value presented in Table 2, it shows that the seven constructs have Composite Reliability above 0.7. This means that the indicators that have been set are able to measure each construct well or the measurement model is reliable. The AVE value for each construct was above 0.50 (Table 2). Therefore, there is no convergent validity problem in the model being tested (Chin, 1998).

Table 2. Construct Reliability and Validity

Description	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
CI	0,809	0,811	0,875	0,636
Concervation	0,688	0,724	0,828	0,619
GDC	0,796	0,801	0,860	0,554
GI	0,729	0,745	0,829	0,548
IT	0,799	0,811	0,868	0,622
KM	0,754	0,764	0,836	0,506
SEP	0,578	0,583	0,779	0,540

Discrimant Validity Testing

The next criterion is discriminant validity, by comparing the correlation between constructs with the AVE root as shown in Table 3. These results indicate that the AVE value of each construct is greater than the highest r^2 value of the other construct values. In other words, discriminant validity is achieved.

Table 3. Discriminant Validity

Fornell-Larcker Criteria

Description	CI	Concervation	GDC	GI	IT	KM	SEP	SQ
CI	0,798							
Concervation	0,444	0,787						
GDC	0,455	0,389	0,744					
GI	0,489	0,404	0,556	0,740				
IT	0,380	0,262	0,560	0,413	0,788			
KM	0,517	0,439	0,602	0,587	0,517	0,711		
SEP	0,475	0,510	0,458	0,414	0,348	0,479	0,735	
SQ	0,445	0,416	0,424	0,407	0,456	0,359	0,545	0,767

Inner model evaluation

R-Square (R^2)

R-Square (R^2) shows the strength and weakness of the influence caused by variations of exogenous constructs on endogenous constructs. According to Chin (1998), the value of R-Square (R^2) is 0.67 (strong), 0.33 (moderate) and 0.19 (weak). The value of R-Square (R^2) for each endogenous construct is presented in Table 4.

Table 4. R-Square

Description	R-Square	Adjusted R-Square
CI	0,337	0,323
Concervation	0,197	0,193
SEP	0,423	0,414
SQ	0,278	0,263

Table 4 shows that all endogenous constructs in the model have an R-Square (R^2) at strong and moderate levels. Thus the model formed by the 8 constructs is strong.

F–Square (f ^{2})

f^2 shows the influence of the construct as a predictor at the structural level. In other words, how much the endogenous construct affects the exogenous construct, which is known as effect size f^2. The f^2 value of 0.02 is categorized as a weak influence, the f^2 value of 0.15 is categorized as a moderate influence and the f^2 value of 0.35 is categorized as a strong influence.

Table 5. F-Square ($f^{2)}$)

Description	CI	Concervation	GDC	GI	IT	KM	SEP	SQ
CI		0,245					0,050	
Concervation							0,101	
GDC	0,011							0,016
GI	0,048							0,035
IT	0,006							0,073
KM	0,056							0,000
SEP								
SQ							0,149	

Table 5 shows that the effect of endogenous constructs on exogenous constructs is at a weak and sufficient level. The effect of GDC on CE with f^2 0.011 (weak), the effect of IT on CI with f^2 0.006 (weak), the effect of KM on SQ with f^2 0.000 (weak), and the effect of exogenous constructs on other endogenous constructs with f^2 at a moderate level.

Q-Square (Q ^{2}), Predictive Relevance

Q-Square (Q^2) (Predictive Relevance) measures the observed value of the estimation model and its parameters. Q-Square (Q^2) value > 0 indicates the model has a good predictive relevance. On the other hand, if Q-Square (Q^2) < 0 indicates the model has poor predictive relevance. The value of Q-Square (Q^2) (Predictive Relevance) can be calculated as follows:

$Q^2 = 1- (1-R^2\ 1)\ (1-R^2 2)$

$Q^2 = 1- (1- 0.337)(1- 0.197)\ (1- 0.423)(1-0,278)$

$Q^2 = 0.778$ or 77.8%, this means that the model has a very good observation value.

GoF (Goodness of Fit) test

The Goodness of Fit (GoF) Index, is used to evaluate the structural model and the overall measurement is calculated by taking the root of the mean AVE multiplied by the average of R^2. The GoF test criteria are 0.1 (GoF small), 0.25 (moderate GoF), and 0.36 (GoF large), (Tenenhaus, 2004).

Average R^2 = 0.337+0.197+0.423+0.278 = 1.235/4= 0.309

Average AVE=0.636+0.619+0.554+0.548+0.622+0.506+0.540=4.205:7= 0.601

Root mean of AVE 0.601= 0.775

Root mean AVE x mean R2 = 0.775 x 0.309 = 0.24

So GoF = 0.240 is close to moderate, thus the overall evaluation of the research model can be declared moderate or good, then it can be continued with hypothesis testing analysis

Statistical testing of the relationship between constructs (Estimate for Path Coefficients)

Result of statistical testing of the relationship between constructs is the path coefficient value which shows the influence between exogenous constructs on endogenous constructs. Results of significance testing of the path coefficien using Smart-PLS 3 can be seen in Table 6.
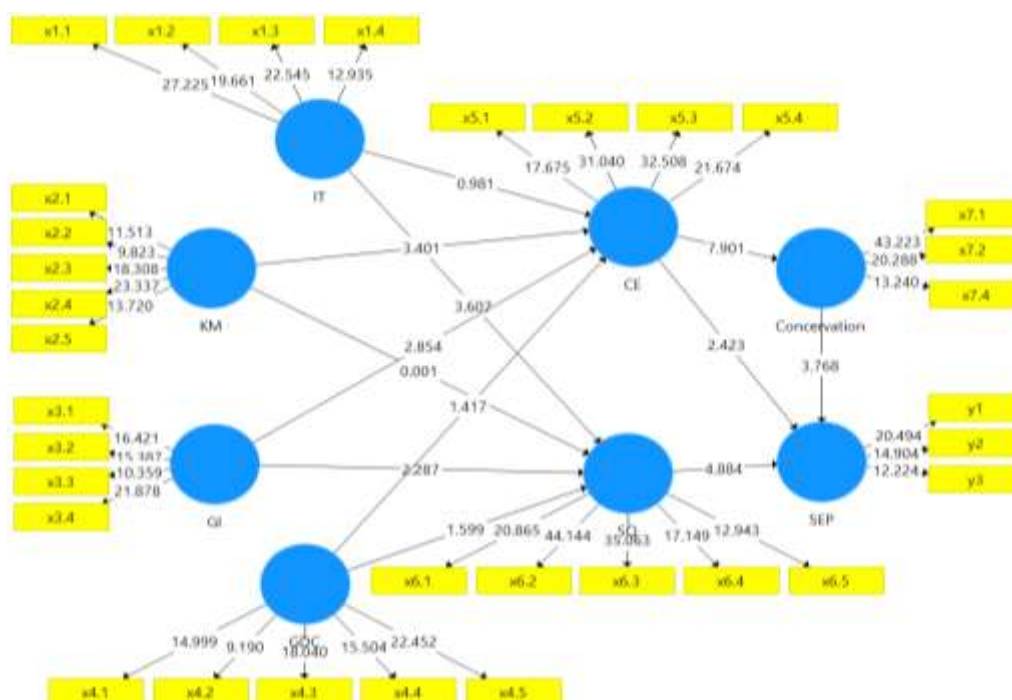

Figure 2: Bootstreping data processing model

Table 6. Path Coeficient (Mean, STDEV, T-Values, P-Values)

Description	Original Sample (O)	Sample Average (M)	Standard Deviaation (STDEV)	T Statistics (| O/STDEV |)	P Values
CI -> Concervation	0.444	0.449	0.056	7.901	0.000
CI -> SEP	0.200	0.202	0.082	2.423	0.016
Concervation -> SEP	0.279	0.276	0.074	3.768	0.000
GDC -> CI	0.122	0.117	0.086	1.417	0.157
GDC -> SQ	0.148	0.144	0.093	1.599	0.111
GI -> CI	0.232	0.230	0.081	2.854	0.004
GI -> SQ	0.206	0.208	0.090	2.287	0.023
IT -> CI	0.077	0.070	0.078	0.981	0.327
IT -> SQ	0.287	0.290	0.080	3.607	0.000
KM -> CI	0.268	0.289	0.079	3.401	0.001
KM -> SQ	0.000	0.012	0.085	0.001	1.000
SQ -> SEP	0.340	0.349	0.070	4.884	0.000

Table 6 shows there are four causal relationships between constructs that are not significant (hypothesis rejected) at 0.05 with a statistical value of < 1.96. On the other hand, there are eight causal relationships between exogenous constructs and endogenous constructs that are significant (hypothesis accepted) of 0.05 with a statistical value of > 1.96.

Explanation of hypotheses testing

The results of the hypothesis testing (H1), prove that information technology does not have a significant impact on community involvement in ecotourism management in Bali. This finding is not in line with the findings of Spencer, at, *al.,* (2012) which states that technological innovation unites all levels of stakeholders in the tourism service ecosystem. Community nformation technology adoption in tourist areas is good but has not been used optimally in encouraging community involvement for ecotourism development.

The results of the hypothesis testing (H2), prove that information technology has a significant impact on build service quality in ecotourism in Bali. Understanding of good information technology, providing insight into customer needs and how to execute core items in Servqual. The results of the study are in accordance with the results of research by Tjakraatmadja D., (2018), states that information technology can help knowledge management systems to improve the ability of workers to serve customers better.

The results of hypothesis testing (H3) prove that knowledge management significantly encourages community involvement in ecotourism management in Bali. Knowledge management can improve work discipline, build innovation initiatives, share information and experiences, and foster a culture of disseminating information, being a reflection of community involvement. Knowledge, skills and abilities (KSA), are very necessary in building team work (Michael J Stevens, and Michael A Campion (1994).

The results of hypothesis testing (H4) prove that knowledge management has no significant impact on service quality in ecotourism management in Bali. The results of this study differ from the findings of Downes (2014), which states that equipping employees with the knowledge and skills needed, organizations will be able to provide high-quality services to their customers. In this study there is a tendency that work discipline, building innovation initiatives, sharing information and experiences, and fostering a culture of disseminating information, has not focused on quality service management aspects.

The results of hypothesis testing (H5) prove that green innovation has a positive impact on community involvement in ecotourism management in Bali. This finding is in accordance with the research results of Ullah, R., at *al.*, (2021), which states that green innovation and green technology can protect the environment and facilitate society. Success in green innovation will further encourage the community to be involved in ecotourism management both in planning, implementation and supervision.

The results of hypothesis testing (H6) prove that green innovation encourages service quality. This finding is in line with the results of research which states that value innovation in the phenomenon of sustainable development is green innovation that requires companies to direct the entire system towards the goal of achieving a leap in value for buyers and for companies simultaneously (Kim and Mauborgne, 2004). The value leap in this context is the value of consumers providing quality services and experiences.

The results of hypothesis testing (H7) prove that the green dynamic capability does not have a significant impact on community involvement in ecotourism management activities in Bali. This finding is not in accordance with the findings of several studies which state that human resources are the main factor in explaining the effectiveness of dynamic capabilities (Arend and Bromiley, 2009; Colbert, 2004; Kok and Ligthart, 2014). Awareness of the quality of the green environment, awareness of the importance of green products and services, awareness of the importance of exploring green knowledge to develop ecotourism has not grown to encourage public awareness of involvement in ecotourism management in Bali.

The results of hypothesis testing (H8) prove that green dynamic capability has no impact on service quality in Bali. This finding is not in line with the theory of Teece, et *al.*, (2003) which

states that dynamic capability is the company's ability to adjust its resources to create value in a rapidly changing environment. Although the understanding of environmental quality with a green nuance, awareness of the importance of green products and services, awareness of the importance of exploring green knowledge is good, but it has not been implemented in the aspect of quality services.

The results of hypothesis testing (H9) prove that community involvement has a significant impact on environmental conservation efforts as the main capital in the development of ecotourism in Bali. This finding is in accordance with the theory of Ross S., Wall G. (1999) which states that local residents have an interrelation with elements in ecotourism development, namely elements of biodiversity, and tourism itself. Understanding of local communities in the wise use of natural resources and realizing that humans are part of the natural spectrum so that they must maintain sustainability which is a concept of ecological awareness that must be embraced (Anshoriy and Sudarsono, 2008).

The results of hypothesis testing (H10) prove that community involvement has a significant impact on sustainable ecotourism performance in Bali. The higher community involvement can provide a higher stimulus to ecotourism performance. This finding is in line with the findings of Hunt & Stronza, (2009); Lindberg, (1991); Thomlinson & Getz, (1996), state that community involvement is an indicator of the success of ecotourism while others argue that increasing socio-economic goals, environmental protection and resource conservation are key indicators of ecotourism success (Hunt & Stronza, 2009; Lindberg, 1991; Thomlinson & Getz, 1996).

The results of the hypothesis testing (H11) prove that service quality is an important factor in improving the performance of sustainable ecotourism in Bali. This finding is in line with view of Opute's (2020) which states that customer service is an important factor to provide a positive customer experience and improve organizational performance. An indicator of the success of quality services is the commitment to always provide the best service, provide the right information, always build trust in visitors, understand the needs of visitors and provide adequate facilities.

The results of hypothesis testing (H12) prove that conservation can to encourage sustainable ecotourism performance. Conservation support is part of the ecotourism element as defined by Cobbinah (2015). Environmental conservation is a general term that defines whatever we do to protect our planet and conserve its natural resources so that every living thing can have a better quality of life (Del Rosso, 2017). Some conclusions that can be drawn from the results of this study are to provide an illustration that the success of ecotourism can be evaluated from the concern for the environment, both natural and cultural; involvement and

social responsibility of the community and stakeholders; the economic benefits and empowerment felt by local residents.

CONCLUSIONS

1. Green innovation, knowledge management and information technology have a significant effect on service quality and community involvement in ecotourism development in Bali. Indirectly has an impact on the performance of sustainable ecotourism. Green innovation, knowledge management and information technology are important strategic elements in the development of sustainable ecotourism performance during and after the Covid-19 pademic.

2. Green dynamic capabilities, knowledge management and information technology have no significant effect on quality service and community involvement in ecotourism development in Bali. The three constructs are not well organized in the management of sustainable ecotourism performance development.

3. Community involvement, conservation and quality services affect the performance of sustainable ecotourism. Community involvement, conservation and quality services, are key factors to develop ecotourism that has sustainable competitiveness.

LIMITATIONS OF THE RESEARCH

Previous research is still rare related to green strategies in sustainable ecotourism development, as a reference for developing sustainable performance improvement models. This research was conducted at a time when the pandemic had begun to decline, so there was a management transition in the development of sustainable ecotourism.

Research Team Contribution

The purpose of this research can be achieved with the support of the research team through their respective competencies, namely: (1). Prof. Dr. I Made Wardana SE MP (Tourism Management). (2). Prof. Dr. Ni Nyoman Kerti Yasa SE MS (Business Strategy Management). (3). Prof. IGA Kt. Giantari SE MS., (Marketing Management). (4) IPutu Elba Duta Nugraha (Information Technology Management)

REFERENCES

Albort-Morant, G., Leal-Rodríguez, A.L. and De Marchi, V. (2018), "Absorptive capacity and relationship learning mechanisms as complementary drivers of green innovation performance", *Journal of Knowledge Management,* Vol. 22 No. 2, pp. 432-452. https://doi.org/10.1108/JKM-07-2017-0310

Anshoriy, N. & Sudarsono. (2008). Environmental Wisdom in Javanese Cultural Perspective. Jakarta: Indonesia Torch Foundation

Arend RJ, Bromiley P. Assessing the dynamic capabilities view: spare change, everyone? *Strategic Organization.* 2009;7(1):75-90. doi:10.1177/1476127008100132

Borin, Norm & Lindsey-Mullikin, Joan & Krishnan, Ram. (2013). An analysis of consumer reactions to green strategies. *Journal of Product and Brand Management*. 3. 10.1108/10610421311320997].

Cabral, J.P. (2010) Water microbiology. Bacterial pathogens and water. *International Journal of Environmental Research and Public Health*, 7, 3657-3703. doi:10.3390/ijerph7103657

Chandel, A., & Mishra, S. (2016). Ecotourism revisited: Last twenty-five years. *Czech Journal of Tourism*, 5(2), 135–154. DOI: 10.1515/cjot-2016–0008.

Chang, Chingching. (2011). Feeling ambivalent about going green: Implications for green advertising processing. *Journal of Advertising*. 40. 19-31. 10.2307/23208833.

Chen, Yu-Shan & Lai, Shyh-Bao & Wen, Chao-Tung. (2006). The Influence of Green Innovation Performance on Corporate Advantage in Taiwan*. Journal of Business Ethics.* 67. 331-339. 10.1007/s10551-006-9025-5.

Chin, W.C. and Todd, P.A. (1995) *On the Use, Usefulness and Ease of Use of Structural Equation Modelling in MIS Research*: A Note of Caution. MIS Quarterly, 19, 237-246. http://dx.doi.org/10.2307/249690

Chin, Wynne & Marcoulides, G. (1998). The Partial Least Squares Approach to Structural Equation Modeling. *Modern Methods for Business Research*. 8.

Chiou, Tzu-Yun & Chan, Hing & Lettice, Fiona & Chung, Sai-Ho. (2011). The Influence of Greening the Suppliers and Green Innovation on Environmental Performance and Competitive Advantage in Taiwan. *Transportation Research Part E-logistics and Transportation Review* - TRANSP RES PT E-LOGIST TRANSP. 47. 822-836. 10.1016/j.tre.2011.05.016.

Cobbinah P.,B. (2015). Contextualising the meaning of ecotourism. *Tourism Management Perspectives.*Volume 16, , Pages 179-189. https://doi.org/10.1016/j.tmp.2015.07.015

Colbert, Barry. (2004). The Complex Resource-Based View: Implications for Theory and Practice in Strategic Human Resource Management. *Academy of Management Review.* 29. 10.5465/AMR.2004.13670987.

Creswell, John W. 2016. *Research Design: Qualitative Methods Approach,*

Quantitative and Mixed. Fourth Edition (First Printing). Yogyakarta : Student library

Del Rosso, Laura. (2017). Responsible Tourism is Focus of Travel Expo: 2017 *New Travel Expo. Travel Weekly* 56 (14), 10-13.

Dewi, M.H. (2013). Development of a Tourism Village Based on Local Community Participation in the Tourism Village of Jatiluwih Tabanan, Bali. *Kawistara Journal*, 3

Dietrich, P., Eskerod, P., Dalcher, D., & Sandhawalia, B. (2010). The Dynamics of Collaboration in Multipartner Projects. *Project Management Journal*, 41(4), 59–78. https://doi.org/10.1002/pmj.20194

Downes, P. (2014) Access to Education in Europe: A Framework and Agenda for System Change. *Journal of Prison Education and Reentry*. 3. 10.15845/jper.v3i1.971.

Drake, S.P. (1991) "*Local Participation in Ecotourism Projects*", in T. Whelan (ed.), Nature Tourism: Managing for the Environment, pp.132-163, Island Press: Washington DC

Drucker, P.F. (1993), *Post-Capitalist Society, Harper Business*, New York, NY

Dwyer, Larry & Forsyth, Peter & Dwyer, Wayne. (2010). *Tourism Economics and Policy*. 10.21832/DWYER7314.

Eisenhardt, K.M. and Martin, J.A. (2000) Dynamic Capabilities: What Are They? *Strategic Management Journa*l, 21, 1105-1121. http://dx.doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

Fennell, D.A. (2014). *Ecotourism* (4th ed.). Routledge.https://doi.org/10.4324/9780203382110

Fransen, Jos & Weinberger, Armin & Kirschner, Paul. (2013). Team Effectiveness and Team Development in CSCL. *Educational Psychologist*. 48. 9-24. 10.1080/00461520.2012.747947.

Girard, John & Girard, Joann & Sagology,. (2015). Defining knowledge management: Toward an applied compendium. *Online Journal of Applied Knowledge Management*. 3. 1-20

Gössling, Stefan & Schumacher, Kim. (2010). Implementing carbon neutral destination policies: Issues from the Seychelles. *Journal of Sustainable Tourism* - J SUSTAIN TOUR. 18. 377-391. 10.1080/09669580903147944.

Hair J.F., W. C. Black, Barry J. B., R. E.. Anderson**,** *Multivariate Data Analysis* Prentice Hall, 2010 - 785

Herwiyanti, Eliada. (2015). The Effect of Information Technology Capability and Quality of Management Accounting Information with Technological Uncertainty as Moderating Variable. *The International Technology Management Review*. 5. 10.2991/itmr.2015.5.1.2.

Hunt, Carter & Stronza, Amanda. (2009). Bringing ecotourism into focus: Applying a hierarchical perspective to ecotourism research. *Journal of Ecotourism*. 8. 1-17. 10.1080/14724040802283202*.*

Karia, Noorliza & Wong, Chee Yew. (2013). The impact of logistics resources on the performance of Malaysian logistics service providers. Production Planning & Control *- Production Planning Control.* 24. 1-18. 10.1080/09537287.2012.659871.

Kim, T. T., Kim, W. G., & Kim, H. B. (2009). The effects of perceived justice on recovery satisfaction, trust, word-of-mouth, and revisit intention in upscale hotels. *Tourism management*, *30*(1), 51-62.

Kirkby, C., Giudice, R., Day, B., Turner, K., Soares-Filho, B., Oliveira-Rodrigues, H., & Yu, D. (2012). Closing the Ecotourism-Conservation Loop in the Peruvian Amazon. *Environmental Conservation* 38(01), 6–17.

Kristinawati, D., & Tjakraatmadja, J. H. (2018). How Do Dynamic Capabilities And Knowledge Management Affect Company Performance? : A Conceptual Model Building. Matrix: *Journal of Management, Business Strategy and Entrepreneurship*, 99. doi:10.24843/matrix:jmbk.2018.v12.i02.

Learning Affects Performance To Achieve Excellence Compete. *Journal of Management & Organization Studies* Vol.2 No.1 www.eprints.undip.ac.id/15063 accessed on 20 April 2015

Lin, H., Zeng, S. X., Ma, H. Y., Qi, G. Y., & Tam, V. W. Y. (2014). Can political capital drive corporate green innovation? Lessons from China. *Journal of CleanerProduction*, *64*(2), 63–72. https://doi.org/10.1016/j.jclepro.2013.07.046

Lindberg, K. (1991) Policies *for Maximizing Nature Tourism's Ecological and Economic Benefit*s. World Resources Institute, Washington, D.C.

Linson, Eugene & Getz, Donald. (2010). The Q uestion of Scale in Ecotourism : Case Study of Two Sm all Ecotour O perators in the Mundo Maya Region of Central Am erica. *Journal of Sustainable Tourism*. December 1. 183-200. 10.1080/09669589608667267.

Macdonald, Roberta & Jolliffe, Lee. (2003). Cultural rural tourism: Evidence from Canada. *Annals of Tourism Research*. 307-322.

Meesala, A.; Paul, J. (2018) Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. J. *Retail. Consumer*. Serv, 40, 261–269.

Mieczkowski, Z. (1995). *Environmental issues of tourism and recreation.* Lanham, Md.: University Press of America.

Opute, A. P. (2017). Exploring Personality, Identity and Self-Concept among Young Consumers (Chapter Five), Young Consumer Behaviour: A Research Companion, Routledge (Taylor and Francis). ISBN: 978-0-415-79008-6 (hbk).

ORegan, Nicholas & Ghobadian, Abby & Gallear, David. 2006. In search of the drivers of high growth in manufacturing SMEs. *Technovation*, 26(1): 30-41.

Parasuraman, A Parsu & Zeithaml, Valarie & Berry, Leonard. (1985). A Conceptual Model of Service Quality and its Implication for Future Research (SERVQUAL). The *Journal of Marketing*. 49. 41-50. 10.2307/1251430.

Passmore J.A, (1974). *Man's Responsibility for Nature: Ecological Problems and Western Traditions.* University of Michigan, Duckworth.

Pedersen, A. (1991). Issues, problems, and lessons learned from ecotourism planning projects. In: J. Kusler (Ed.), *Ecotourism and resource conservation* (pp. 61Ð74). Selected papers from the 2nd International Symposium: Ecotourism and Resource Conservation, Madison: Omnipress.

Robert A.W. Kok, Paul E.M. Ligthart (2014) Differentiating Major and Incremental New Product Development: The Effects of Functional and Numerical Workforce Flexibility. *Journal of Product Innovation Management*. Volume 31, Issue S1 Pages 30-42

Sheryl Ross, Geo¤rey Wall (1999). Ecotourism: Towards Congruence Between Theory and Practice. *Tourism Management.* 20 (1999) 123-132.

Andrew J. Spencer; Dimitrios Buhalis and Miguel Moital, (2012), A hierarchical model of technology adoption for small owner-managed travel firms: An organizational decision-making and leadership perspective, *Tourism Management*, 33, (5), 1195-1208

Stevens, M. J., & Campion, M. A. (1994). The Knowledge, Skill, and Ability Requirements for Teamwork: Implications for Human Resource Management. *Journal of Management,* 20(2), 503–530. https://doi.org/10.1177/014920639402000210

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, *51*(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic *Management Journal*, 18(7), 509-533.

Thomlinson, E., & Getz, D. (1996). The question of scale in ecotourism: case study of two small ecotour operators in the Mundo Maya region of Central America. *Journal of Sustainable Tourism*, 4, 183-200.

Tseng, S.-M., & Lee, P.-S. (2014). The effect of knowledge management capability and dynamic capability on organizational performance. *Journal of Enterprise Information Management, 27(2), 158–179.* doi:10.1108/jeim-05-2012-0025

Ullah, R., Ahmad, H., Rehman, F.U. and Fawad, A. (2021), "Green innovation and Sustainable Development Goals in SMEs: the moderating role of government incentives", *Journal of Economic and Administrative Sciences*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JEAS-07-2021-0122

Wardana, I & Sukaatmadja, Putu & Ekawati, Ni Wayani & Nyoman, Ni & Yasa, Ni & Astawa, Putu & Setini, Made. (2021). Policy models for improving ecotourism performance to build quality tourism experience and sustainable tourism. Journal of Management Science Letters 11. 595–608. 10.5267/j.msl.2020.9.008.

Wardana, I.M., Sukaatmadja, I.P.G., Yasa, N.N.K., & Setini, M. (2020). Comparative And Competitives Advantages: Perspective Of Rural Tourism (Study On Tourism In The rovince Of Bali Indonesia). *GeoJournal of Tourism and Geosites*, 33(4spl), 1493–1500. https://doi.org/10.30892/gtg.334spl07-598

Weaver, David & Lawton, Laura. (2007). Twenty Years On: The State of Contemporary Ecotourism Research. *Tourism Management.* 28. 10.1016/j.tourman.2007.03.004.

Wernerfelt B., (1984). *Strategic management Journal* vol 2 (5) p 171-18 https://doi.org/10.1002/smj.4250050207.

Winter S.G., (2003). Understanding dynamic capabilities. *Strategig Management Journal*. Vol. 24: 991–995 doi.org/10.1002/smj.318