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The relationship between tourism development and sustainable development goals in Vietnam

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Abstract: This study explores the relationship between tourism development and sustainable development goals in Vietnam. This study takes tourism receipt and tourism expenditures as indicators to measure the level of tourism development, while government environmental expenditures have been used to measure sustainable development. This study also uses population growth and economic growth as control variables in the study. This study has extracted the data from World Bank Indicators (WDI) from 1971 to 2019. The study employs the unit root test to examine the stationarity of the variables and also uses the autoregressive distributed lag (ARDL) model to investigate the relationships among the variables. This study finds a positive association between tourism development and sustainable development goals in Vietnam. In doing so, it is able to provide insightful guidance for policymakers seeking to formulate and implement policies related to tourism development and sustainable development.

1. Introduction

There have been several discussions on sustainable tourism, lectures, workshops, and conferences. Since the idea of sustainable tourism has fallen into disfavor, as undertaking and implementing comprehensive efforts would be difficult. As at currently, there are only a few (if any) policies for sustainable tourism (Sharpley, 2020), owing to the fact that a sizable portion of the population is yet to be established and is uninterested in ecologically responsible tourism. The idea of sustainable tourism has not yet gained popularity with the majority of companies in Vietnam. Small enterprises are the standard rather than the norm for sustainable tourism, which typically emphasizes the short-based advantages while highlighting the need for funding (Rasoolimanesh, Ramakrishna, Hall, Esfandiari, & Seyfi, 2020). It has been suggested that facilities to attract tourists have not been well-secured or put to use. Infrastructure in Vietnamese towns and cities seems to be focused on generating rapid economic development, with golf courses, airports, and seaports being built to boost the local economy. In reality, in France, a large number of old structures have been razed in the name of development to construct new concrete skyscrapers. Only environmentally and community-friendly tourism is targeted tourism that endures in Vietnam, like responsible tourism, responsible travel, and responsible ecotourism (Lyon, Hunter-Jones, & Warnaby, 2017).

In rural and remote areas, including the North-West, North Central, and the Mekong Delta areas of Vietnam, three kinds of tourism are seen. The effect of sustainable tourism is limited by just a select minority of tourists (Dunets et al., 2019). Within this premise, small-based ecological tourism creation and ecotourism are centered on the environment. While most local companies have not been established with sustainability values in mind, the authorities need to encourage them to help them achieve their sustainable tourism goals (T. H. Lee & Jan, 2019). Even in Vietnam, sustainable tourism is still predominantly a recent phenomenon, and as such, study in the field was lacking when the idea was created. This study intends to look into sustainable tourism growth from Vietnam to fill this gap in the literature on how tourism has achieved exceptional development and diversification over the past few decades. As a result, tourism is identified and understood as a significant motivator for socio-economic development in many countries worldwide. Tourism is already a significant source of revenue for many developed countries and can be a wealth-generating industry for many countries as well. Tourism implies well-paying employment, poverty reduction, gender equity, and preservation of our history and protection of the environment (Tien, Thai, Hau, Vinh, & Long, 2019). In practical terms, there is widely held consensus on the significance and value of tourism in national growth policies, and it is increasingly assuming an important role in the global policy agenda.

The United Nations World Tourism Organization (UNWTO) has designated 2017 as the 'Worldwide Year of Sustainable Tourism for Growth,' emphasizing the travel industry's critical role in ensuring financial stability and social balance in a rapidly growing global economy. Contributing US\$ 7,613.3 billion or 10.2 per cent of global GDP in 2016 and creating an estimated 292 million jobs (directly and indirectly), it is also a driver of global engagement and consensus (Liu, Nijkamp, Huang, & Lin, 2017). The report named 'Our Shared Future,' issued by the United Nations World Commission on Climate and Prosperity in 1987, is credited for coining the word 'Economic Development', and highlighting the need for a sober approach to address the negative impact of mass travel felt in the mid-1970s with the advent of significant fairs and festivals in non-Western countries. The UN has acknowledged tourism (to have significant contributions to three aspects of sustainable growth

and to become a field that drives change) as all stakeholders have a part to play in tourism becoming a force for growth. In an organized fashion, positive way, tracking, and mobilizing financial capital, the UN framework will help countries succeed in promoting this initiative (Ristić, Vukoičić, & Milinčić, 2019). This research aims to increase public involvement and participation in sustainable tourism and its impact on sustainable development in Vietnam. In addition, the aim of the study is to encourage tourism development to trigger economic and social growth by achieving development goals while mitigating negative social, cultural, and ecological impacts.

2. Literature Review

The issue of sustainable development became a fiercely debated one since the 1980s. Following decades of environmental consciousness, there has been significant increase in the political relevance of the sustainability phenomenon, which Callicott postulates is an "Environmental Revolution" (Hole & Snehal, 2019). The discovery that nature is limited both, in its ability to supply energy and that it generates waste as a result of industrialization, has revolutionized how stakeholders approach the question of improving the quality of our natural environment. In addition to these natural and environmental challenges is the dilemma of how growth of the global population can be regulated. At the same time, for the same period, if it were to rise exponentially, will it eventually create significant disturbances in human well-being? There is a clear connection between human well-being and environmental preservation in the paradigm shift towards sustainable growth. Moreover, the human development and poverty alleviation dimensions of sustainable development come together when presented holistically (Siakwah, Musavengane, & Leonard, 2020). This UNWTO (United Nations World Tourism Organization) policy is directly relevant to promoting global unity through sustainable tourism. The Stockholm Conference on the Human Condition in 1972 famously describes "sustainable growth" as "development that meets the needs of the present without undermining the capacity of future generations to fulfil their own." [i.e. of the UN Environment Policy (UNEP)].

It clashes with sustainability programs that have not tackled societal problems such as poverty, environmental degradation, and the non-renewable capital together. For Stockholm, it is clear that economic development cannot be at odds with nature, resulting in the formulation of a joint policy terminology such as 'environment and development', 'development without destruction, and 'ecological development'. While this word is not commonly used within the tourism creation arena, it is sometimes used in the phrase 'ecotourism (Ibănescu, Stoleriu, Munteanu, & Iașu, 2018). It is evident that the world body that emerged to resolve the environmental problems caused by economic progress was the UN Commission on Environment and Development (WCE) in 1983, which identifies 22 representatives from developed and developing countries with a view to examine the role of human growth in the 21st century without significantly degrading the climate (K. A. Boluk, Cavaliere, & Higgins-Desbiolles, 2019). The report issued by the WCED in 1987 is widely referred to as the Gro Harlem Brundtland's report on sustainable growth, as he was the country's prime minister and chaired the Committee. Central to this study is the concept of 'sustainable growth,' which aims to bridge the apparent divide between environmental impacts that are becoming progressively more serious, leading to a new set of political problems relating to the fulfilment of basic human needs. Although environmental challenges remain vital, it is now thought that economic growth can often integrate ethical considerations of social justice, human rights, and economic equality (Saarinen, 2018). Pinnacles in sustainable growth emerged from 'conservation', 'community,' and 'economic theory'. The 'conservation vision'

revolves around citizen participation, while the 'community vision' revolves around empowerment and policy-making for sustainable change. Bringing these groups on board as much as possible would be critical to this phase, thereby maximizing their future options. This time is different in the third type of the hypothesis, as the capital base is not reduced to the point that it can no longer support continued expansion. It is conceivable that this solution would be based on technology and environmental control (Dube & Nhamo, 2020).

Sustainable tourism development can be described as meeting the needs of current visitors and host communities while securing and upgrading potential opportunities by directing the managers of all assets in a way that they can meet financial, social, and aesthetic requirements while preserving social stability, fundamental environmental cycles, natural diversity, and life-supporting networks (Kapera, 2018). Sustainable tourism is a beneficial approach expected to alleviate stresses and grinding caused by the perplexing communications between the travel sector, travelers, the environment, and the networks that host event producers. It is a technique that involves working towards the expanded purpose and existence of both normal and human capital. While this technique or approach is not anti-growth, it acknowledges that there are developmental stumbling blocks. In the sense of recoverability and utility of normal assets, it bears to note that an extensive number of individuals, customs and lifestyles identify with travel experiences. Sustainable tourism considers the travel industry to be objective territories as a three-sided connection between have regions and their environments and people groups, holidaymakers, and the travel industry (Juma & Khademi-Vidra, 2019). In terms of maintainability, the travel industry aims to accommodate the strains between the three stakeholders in the triangle while ensuring their harmony in the long haul. To be practical, the travel industry requires a foundation that takes stock of the drawn-out impacts of financial action comparable to assets and is generally concerned with people's twin necessities in the future. Tourism meets the desires of existing travelers and host populations while both are securing and upgrading potential prospects (Gazzola, Pavione, Grechi, & Ossola, 2018). It is envisioned as directing the management of all properties to meet financial, social, and aesthetic needs while preserving social integrity, fundamental natural cycles, organic diversity, and life-supporting networks.

To raise awareness regarding tourism's contributions to sustainable growth, it bears to note that the Sustainable Tourism Guide has been a useful tool. The European Commission's Directorate-General for Development Cooperation approved the study (B. Walker, Lee, & Li, 2021). Tourism generates 9% of the world's gross domestic product. When coupled with the surge in foreign tourism, it is seen that there has been a tremendous increase over the last few years and this increase is predicted to continue. Tourism accounts for 29% of all Foreign Service sector revenues and income for various developing countries. Additionally, research reports show that the sector's contribution to the economy and numerous international organizations has been significant. The recently completed Rio+20 result agreement is titled "A Future We Want", and sustainable tourism is listed as a part of "Green Development" (Peng & Tzeng, 2019). One of the distinctive characteristics of tourism is that it promotes growth. It mobilizes valuable resources in all parts of the industry by straddling various sectors. Thus, developed countries have a competitive edge in the environment, such as a long cultural history and skilled populations. Consequently, tourism takes up a significant quantity of available energy, non-renewable resources and creates problems in culture (Radovanov, Dudic, Gregus, Marcikic Horvat, & Karovic, 2020).

Eco-consciousness is a continual work in progress. Vietnam is home to numerous attractive areas found in its most rural and poverty-stricken and ethnically mixed areas, including the southwest. This is so because they are still stuck in their original way of life (K. Boluk, Cavaliere, & Higgins-Desbiolles, 2017). Thus, where humans have been established as a tourist destination, inhabitants' livelihoods have been placed at risk, and ecological damage/animal mortality has been recognized as appropriate." People who visit popular vacation spots are weak in their ecological awareness and may be partly to blame for the impact on the local ecosystems, as is widely accepted (Hall, 2019). Thus, the scenic places could not be created by more natural buildings on the one hand, and on the other, by locals or by visitors to those places becoming less conscious of their impact on the environment (Ngo, Lohmann, & Hales, 2018).

Sustainable tourism has not been on the agenda in Vietnam as of yet. That said, sustainable tourism is found articulated in Vietnam's latest laws, enacted in the mid-2000s (Tuan & Rajagopal, 2019). From the 1970s to the 1990s, Vietnam's tourist industry went through many stages of growth, and two separate Ministries handled it. Before the fall of the system in Vietnam in 1990, Vietnamese tourism was handled by the Ministry of Trade T&T&T and became part of the Ministry of Culture in 1992 whereafter all activities in this field have become regulated and controlled (Mai, Thi, Thi, & Le, 2020). The Vietnam administration's Ministry of Tourism created a new branch, the Vietnam National Administration of Tourism (VNAT). Culture Departments operate heavily in terms of control over cities and provinces as in Ba Ria-Vung Tau, which is associated with local government associations i.e., travel regulations are managed at the city/regional level. At the local district level, the Tourism Administration (Culture 83) and Information Division oversees tourism administration. The Office People make decisions, and the individual Office People who shape the Decision-Making Units are all members of the People's Committees responsible for tourism at the district level of government (Giuliani, Bellucci, & Nhon, 2019). Nevertheless, the Communist Party of Vietnam remains in power which practically implies that all facets of tourism often come under Party influence. These departments provide some recommendations for the government, depending on the details they have been able to obtain.

Sustainability has now gradually replaced other issues in the environmental debate. The biggest hurdle to overcome is that the terms "sustainable growth" and "sustainability" are commonly but erroneously described as being synonyms (Ngo, Hales, & Lohmann, 2019). In the long term, it's different to anyone in the short term, and everyone in the long term i.e. groups, owners, and consumers, create, view, and enforce it as an "equitable" use of resources. The single greatest weakness of the word 'sustainable growth' is its lack of precision. Generally, it is relevant for all and sundry in terms of conceptual and political roles, especially for foreign NGOs, transnational and supranational organizations, social groups, and so on (VU, LAM, & PRABHAKARAN, 2021). Since the notion of 'sustainable growth' needs consistency, there is a considerable semantic uncertainty around the word 'sustainable production.' This may render it challenging to decide which idea is intended. Sustaining productivity levels apply to economic levels of manufacturing, whereas other experts emphasize higher or lower demand levels. Rapid development has recently been almost unsustainable due to excessive consumption patterns in the world's most developed nations. Often sustainable development initiatives have a manufacturing orientation rather than a demand focus. Some concepts describe sustainable development as having three pillars: environmental, economic, and social, while others refer to environmental, economic, and social interconnectedness (Tien et al., 2019). To pursue the creative choice, researchers

usually use either non-invasive techniques, such as systematic or exploratory research observation, or they adopt non-invasive methods, such as systematic or informal observation. These pillars include economic and social sustainability, which was part of the Rio Earth Summit in 1992 as recognized as Agenda 21 and includes an understanding of their interdependence (D. Lee, Kim, Han, & Wong, 2020). The interconnectedness of the three pillars is stressed within the literature on sustainability growth. Like economic development, their different approaches to history have historically viewed nature as a plentiful resource to benefit from. Trade-offs would almost certainly have to be made with all three elements for sustainable sustainability to occur (NGUYEN, NGO, DO, & NGUYEN, 2020). Thus, the emphasis on the 'what' and 'who' of sustainable development is crucial to correctly measure its efficacy (Powell et al., 2018).

Slovenia has a good reputation for ensuring environmental sustainability and has also set a high bar for future sustainable tourism. 13% of the country's GDP accounts for 8% of all exports, and almost 37% of all utility exports (Juma & Khademi-Vidra, 2019). To strengthen the travel industry, the Slovenian Tourism Board is setting up a green program with a view to improving the popularity of the green tourism strategy. A visual representation of the trends of travel and leisure in Slovenia can be done through a map. General mapping is one of the objectives of the European Tourism Indicator System (ETIS), established with a view to implement a comprehensive qualification system that takes the local characteristics of countries and tourism providers into account. To achieve Slovenia's Green Label status, any location must sign a seven-step green growth plan involving community outreach, create a Green Label profile, and compile data (Scott, Hall, & Gösling, 2019).

Bhutan is one of only a handful of nations around the world that has been able to precisely define and operationalize the ethos of manageability. If all goes according to schedule, the nation will become a carbon-negative entity showing financial success, ecological security, social conservation, administration, fantastic achievements, administrative strength, and progress (Kristjánsdóttir, Ólafsdóttir, & Ragnarsdóttir, 2018). Being a landlocked nation, travel accounts for 9% of the GDP, help procure income for locals, and creates new job opportunities. Despite this, the country prefers to follow a "high-value, low-impact" approach to the management of its travel industry. A Druk Air-sponsored tour would have an organizer, who will mastermind all of the movements in Bhutan and have an announced departure from approximately 6 of the continent locations (Xiao, Norris, Lenzen, Norris, & Murray, 2017). During low season, everybody has to pay a day by day, \$200, and \$250 during the high season. This amount, US\$65 from this levy, is deemed fair to fund the country's free medical care and education base. It ought to be noted, nonetheless, that this standard does not have any significant bearing for guests from adjoining nations, alluded to as 'local sightseers' (residents from India, Bangladesh, and the Maldives do not require a Visa for travel). The accomplishment of this model can still be sanctioned notwithstanding the significant expense obstruction, as the travel industry in Bhutan keeps on prospering, with a consistent ascent in the development rate as noticed. The length of traveler visits likewise stays high, with vacationers from the top 20 global market sources staying through seven evenings in the country on average (Swamy, Drazen, Johnson, & Bukoski, 2018).

Tentatively assigned to win a 2017 WTTC Global Sustainable Tourism Prize, Cinnamon Wilds Yala serves to help the local community without fail. Nearly 80% of the workers come from the city, and Cinnamon Wild has partnered up with drivers who are employed to provide safari transportation for guests

(Scheyvens & Hughes, 2019). Local children are housed in a nature club, while an effort is made to use natural resources as much as possible. Cinnamon Wild Yala employs support and customer serviceability operations are done on the company's support systems which are implemented, verified, and monitored on a day-to-day basis. If you leave home and drive for 10,000 miles, you can visit 10 separate locations and encounter a dozen new and fascinating people, but if you travel 20,000 miles, you cannot, signifying a net decrease in social acceptability, market favourability, and neediness (Mio, Panfilo, & Blundo, 2020). One of the travel highlights is its benefits for financial movement, especially for women and youth. While not all forms of travel will lead to relieving absolute poverty, to say so is at least a genuine need for numerous necessities for passage positions as well as an exciting opportunity for businessmen and women who are seeking to further differentiate or formalize their businesses. In the varied and dynamic organization of sectors, including tourism, reverse and forward linkages may be generated to embrace those that are very broad and those that are smaller (Cumming et al., 2017).

In 1986, the Mexican government created the Sian Ka'an Biosphere Reserve, a UNESCO World Heritage, a site that was previously a private fishing area. In the mid-1990s, a Mexican non-governmental organization named Amigos de Sian Ka'an established a boat rescue program to support the needs of the city, which grew into an environmentalism program offering good for the neighbourhood and the community in the long term (Schaltegger, Beckmann, & Hockerts, 2018). In 2004, the visit operation has been transferred to neighbouring cooperatives." The operation was terminated in 2014 and now occupies a region of 10,000 km in three districts, both utilizing various internet marketing to improve fishing and farming prospects. The author is confident that this ecotourism will be accepted by the majority of the cooperatives and their assistants. He has participated in the media and fairs across Europe and Mexico for some hundred hours in preparation for the cooperatives in media and travel. The project makes life better for 400 people in the Mayan area of Mexico (Govindan, Shankar, & Kannan, 2020). The assets necessary to obtain, safeguard, and restore a self-sustaining quality of life include social capital, ecological security, and environmental change and relief. While there might be some opportunity for more accessible travel, giant hotels are utilizing a great deal of energy as well as cutting-edge conveniences, using all of the common and social capital, signifying that more travellers have come to the upper part of the pyramid. Though GHG problems are global, the use of energy and water, as well as squander, should be given high importance due to "whether this industry relies on 'honeypots' and draws in a big number of tourists" (Nilsson et al., 2018).

Barcelona's historic setting of the tourism industry has been straightforward. During the 60s, the Catalan coastline saw enormous improvements. Recognition of the Olympic Games in Barcelona in 1992 has had an emotional and photogenic effect on the region. An old industrial seaport became increasingly more cosmopolitan as a result of a major marine reestablishment project. Barcelona was put to the torch by the Olympics. However, the sudden growth of travel in the sector also carried unintended consequences including, use of medications, prostitution, and casinos, trends that are viewed by certain quarters of the local community as being immoral and therefore, undesirable (Sharif et al., 2020). The experts in Barcelona fear that Barcelona's stature in the travel business may suffer. Recently, changes in travel growth have led to a particular concern in terms of the "social, shopping, and urban organization of the region. This study recognizes a number of main issues vis-a-vis the travel industry in the city, including, growing the DE concentrations of vacationers, and widening the

metropolis as well as from encouraging sightseeing to handling visitors, and from administering the travel to negotiating an era of knowledge creation of partnerships with the public and voluntary organizations, ultimately going from exclusion to include a competitive, fair growth. Recurring visitors have also raised Barcelona's cultural importance and made the company, city and its numerous organizations an environment more accessible and innovative (Yoopetch & Nimsai, 2019). The travel experience to Barcelona was also recently modified to ensure availability of up-date information on prominent vacationer-targeted areas as well. The traveller's long-activity data gathering and initiative are starting an aggressive initiative that will support the tourism industry because of Barcelona's Tourist Board and Technology Consortium. The city administration has developed a comprehensive approach to linking face-to-face interactions, discussions, selection processes, and participatory platforms, as well as focused community-based initiatives and other new networking venues. Moreover, Barcelona's travel sector has also produced participatory loops by leveraging their transparent administration (Mann, Garcia-Martin, Raymond, Shaw, & Plieninger, 2018).

3. Research Methodology

This section outlines the analysis methods used in the study. This study follows the quantitative approach, and this approach

is well-suited for analyzing in-depth and complicated data sets. In this investigation, secondary data are utilized as extracted (and collated) from the WDI from 1971 to 2019. Based on the current study constructs, the author establishes the following equation.

$$SD_t = \alpha_0 + \beta_1 TR_t + \beta_2 TE_t + \beta_3 POPG_t + \beta_4 EG_t + e_t \quad (1)$$

Where.

- SD = Sustainable Development
- t = Time Period
- TR = Tourism Receipts
- TE = Tourism Expenditures
- POPG = Population Growth
- EG = Economic Growth

Table 1 provides the measurements of the variables such as sustainable development measured as the ratio of government environmental expenditures and total governmental expenditures. In addition, tourism development is measured on the basis of international tourism receipts (% of exports) and international tourism expenditures (% of imports). Moreover, population growth is measured in terms of population growth (annual percentage), and economic growth is measured on the basis of GDP growth (annual percentage).

Table 1. Variables with Measurements

S#	Variables	Measurement	Sources
01	Sustainable Development	The ratio of government environmental expenditures and Total governmental expenditures	World Development Indicators
02	Tourism Development	International tourism receipts (% of exports)	World Development Indicators
		International tourism expenditures (% of imports)	World Development Indicators
03	Population Growth	Population growth (annual percentage)	World Development Indicators
04	Economic Growth	GDP growth (annual percentage)	World Development Indicators

The present study shows the nexus among the variables using the correlation matrix, and the Augmented Dickey-Fuller Test (ADF) is also used to examine the stationarity of the variables. The equation for ADF is mentioned below:

$$d(Y_t) = \alpha_0 + \beta t + \gamma Y_{t-1} + d(Y_t(-1)) + \epsilon_t \quad (2)$$

This study examines the stationarity of each variable separately; thus, the estimation equations of ADF regarding each variable are given as under:

Sustainable development

$$d(SD_t) = \alpha_0 + \beta t + \gamma SD_{t-1} + d(SD_t(-1)) + \epsilon_t \quad (3)$$

Tourism receipts

$$d(TR_t) = \alpha_0 + \beta t + \gamma TR_{t-1} + d(TR_t(-1)) + \epsilon_t \quad (4)$$

Tourism expenditures

$$d(TE_t) = \alpha_0 + \beta t + \gamma TE_{t-1} + d(TE_t(-1)) + \epsilon_t \quad (5)$$

Population growth

$$d(POPG_t) = \alpha_0 + \beta t + \gamma POPG_{t-1} + d(POPG_t(-1)) + \epsilon_t \quad (6)$$

Economic growth

$$d(EG_t) = \alpha_0 + \beta t + \gamma EG_{t-1} + d(EG_t(-1)) + \epsilon_t \quad (7)$$

ARDL test is more robust and also performs better in case of the small sample size of data as used in current study with a 49

sample size. The stationarity results indicate that some constructs are stationary at level, however some variables are stationary at first difference. These results confirm that the ARDL model is appropriate for checking the nexus among variables. The equation for ARDL is given as under:

$$\Delta SD_t = \alpha_0 + \sum \delta_1 \Delta SD_{t-1} + \sum \delta_2 \Delta TR_{t-1} + \sum \delta_3 \Delta TE_{t-1} + \sum \delta_4 \Delta POPG_{t-1} + \sum \delta_5 \Delta EG_{t-1} + \varphi_1 SD_{t-1} + \varphi_2 TR_{t-1} + \varphi_3 TE_{t-1} + \varphi_4 POPG_{t-1} + \varphi_5 EG_{t-1} + \epsilon_1 \quad (8)$$

ARDL model seeks to measure the long-run association among the variables. Moreover, the present study also examines the short-run nexus among the variables using an error correction model (ECM). The equation for ECM is given as below:

$$\Delta SD_t = \alpha_0 + \sum \delta_1 \Delta SD_{t-1} + \sum \varphi_2 \Delta TR_{t-1} + \sum \omega_3 \Delta TE_{t-1} + \sum \theta_4 \Delta POPG_{t-1} + \sum \gamma_5 \Delta EG_{t-1} + \delta ECM_t + v_t \quad (9)$$

4. Results

The correlation matrix is used by the study to examine the association among the variables. The results show a positive association among tourism receipts, tourism expenditures, population growth, economic growth and sustainable development in Vietnam. Table 2 shows the results of the correlation matrix.

Table 2. Correlation Matrix

Variables	SD	TR	TE	POPG	EG
SD	1.000				
TR	0.254	1.000			
TE	0.624	0.235	1.000		
POPG	0.428	0.570	0.275	1.000	
EG	0.365	0.314	0.443	0.319	1.000

Table 3 shows the unit root analysis of the variables to check the stationarity of the constructs. The results indicate that tourism receipt, tourism expenditures, and economic growth

are stationary at level while sustainable development and population growth have been stationary at first.

Table 3. Unit Root Test

Augmented Dickey-Fuller Test (ADF)	Level	t-statistics	p-values
SD	I (1)	-6.739	0.002
TR	I (0)	-4.013	0.043
TE	I (0)	-3.245	0.004
POPG	I (1)	-7.699	0.000
EG	I (0)	-3.325	0.000

Table 4 illustrates the ARDL bound test that shows the co-integration necessary to run the ARDL model. The results show that co-integration exists because the f-statistics (5.68) are

larger than the calculated f-statistics values. Thus, we can run the ARDL model.

Table 4: ARDL Bound Test

Model	F-statistics	Lag	Level of Significance	Bound test critical values	
				I (0)	I (1)
SD/ (TR, TE, POPG, EG)	5.68	4	1%	5.18	5.39
			5%	4.69	4.95
			10%	3.36	3.85

Table 5 shows the short-run relationships among the variables. The results indicate that tourism receipts, tourism expenditures, population growth, and economic growth have a significant and positive association with sustainable

development in Vietnam. The R square 0.643251 shows that 64.3251 per cent variations in sustainable development are due to tourism receipts, tourism expenditures, population growth and economic growth.

Table 5: Short Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TR)	0.396281	0.112362	3.526824	0.0010
D(TE)	0.432682	0.193624	2.234651	0.0113
D(POPG)	0.836215	0.391072	2.138263	0.0248
D(EG)	1.236271	0.502344	2.461005	0.0041
CointEq(-1)*	-1.264823	0.232571	-5.438438	0.0000
R-squared	0.643251	Mean dependent var		-0.030852
Adjusted R-squared	0.623655	S.D. dependent var		2.525322

Table 6 illustrates the long-run relationships among the variables. The results demonstrate that tourism receipts,

tourism expenditures, population growth, and economic growth have a significant and positive association with

Table 6: Long Term Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TR	0.536142	0.203624	2.633001	0.0036
TE	0.632519	0.236534	2.674115	0.0031
POPG	1.638521	0.635272	2.579243	0.0125
EG	2.362541	1.120342	2.108768	0.0236
C	0.763695	0.239641	3.186829	0.0000

sustainable development in Vietnam.

5. Discussions and Conclusion

This study explores the relationships between tourism development and sustainable development goals in Vietnam. This study identifies tourism receipt and tourism expenditures as indicators to measure the level of tourism development, while government environmental expenditures have been used to measure sustainable development. This study uses population growth and economic growth as control variables. The present study results reveal that tourism development has a positive association with sustainable development. Both the measurements i.e., tourism receipts and tourism expenditures, have shown a positive association with sustainable development. This result is similar with the output of Tseng et al. (2018), who also show that effective tourism development could lead to sustainable development in the country. In addition, these findings are also matched with the results of Adongo, Choe, and Han (2017), who posit that tourism development is the foremost factor for sustainable development in the country. Moreover, a study by Holladay et al. (2018) also examines how sustainable development depends on tourism development in the country and reaches conclusions in line with the present study results. Finally, the results also show that population growth and economic growth have a positive association with sustainable development. These results corroborate the research outcomes of Mohsin, Abbas, Zhang, Ikram, and Iqbal (2019) who argue that economic growth and population growth the significant factors for improving sustainable development in the country.

This examination shows that the Vietnamese government's arrangements and projects on reasonable travel industry improvement, for the most part, include obligatory guidelines and can be described as an 'order and control' approach. The public authority's administration activities have explicit prerequisites for contamination control advances, hardware, or sources of info; these have been firmly censured for being exorbitant, legalistic, and an obstruction limiting the scope of travel industry undertakings in terms of their selection of manageable practices. This study guided policymakers seeking to design and develop new laws, policies and regulations related to tourism development and sustainable development. This analysis demonstrates that existing public projects and regulations, though not falling in absolute terms, have merely limited the feasibility of travel industry ventures to adopt ecosystem-friendly practices. A possible clarification bears similarity to those discussed in Rodriguez-Ward, Larson, and Ruesta (2018), where for example, top-down arrangements addressing financial and natural problems in the travel industry are found to have little influence due to their vertical 'top-down' management their specific issues. Under this context, all decisions and actions are taken and carried out without regard for neighborhood conditions or available assistance. Additionally, it implies that a more influential dialogue and partnership within and among stakeholders such as governments, the travel industry, and community networks is essential to amass local support for the growth of the travel industry.

6. Limitations and Future Directions

While this study highlights a number of valuable empirical findings and practical implications, it also has certain limitations that must be pointed out to guide the direction for future studies. This study has used only tourism development and economic and population growth to predict sustainable development while downplaying the significance of additional

factors, therefore, it is suggested that upcoming studies should take stock of other factors perceived to be essential for sustainable development. In addition, this study is conducted in the context of Vietnam and therefore, its findings may not be applicable to other country or cultural contexts, indicating the narrow scope of the current study design. In the future, researchers are urged to include more countries in their data collection and analysis. Finally, the present study only uses the ARDL approach to examine the nexus among variables; future studies are recommended to add more statistical techniques in order to more accurately test the relationships among the understudy variables.

References

- Adongo, R., Choe, J. Y., & Han, H. (2017). Tourism in Hoi An, Vietnam: impacts, perceived benefits, community attachment and support for tourism development. *International Journal of Tourism Sciences*, 17(2), 86-106. doi:<https://doi.org/10.1080/15980634.2017.1294344>
- B. Walker, T., Lee, T. J., & Li, X. (2021). Sustainable development for small island tourism: developing slow tourism in the Caribbean. *Journal of Travel & Tourism Marketing*, 38(1), 1-15. doi:<https://doi.org/10.1080/10548408.2020.1842289>
- Boluk, K., Cavaliere, C. T., & Higgins-Desbiolles, F. (2017). Critical thinking to realize sustainability in tourism systems: reflecting on the 2030 sustainable development goals. *Journal of Sustainable Tourism*, 25(9), 1201-1204. doi:<https://doi.org/10.1080/09669582.2017.1333263>
- Boluk, K. A., Cavaliere, C. T., & Higgins-Desbiolles, F. (2019). A critical framework for interrogating the United Nations Sustainable Development Goals 2030 Agenda in tourism. *Journal of Sustainable Tourism*, 27(7), 847-864. doi:<https://doi.org/10.1080/09669582.2019.1619748>
- Cumming, T. L., Shackleton, R. T., Förster, J., Dini, J., Khan, A., Gumula, M., & Kubiszewski, I. (2017). Achieving the national development agenda and the Sustainable Development Goals (SDGs) through investment in ecological infrastructure: A case study of South Africa. *Ecosystem Services*, 27, 253-260. doi:<https://doi.org/10.1016/j.ecoser.2017.05.005>
- Dube, K., & Nhamo, G. (2020). Sustainable Development Goals localisation in the tourism sector: lessons from Grootbos Private Nature Reserve, South Africa. *GeoJournal*, 5, 1-18. doi:<https://doi.org/10.1007/s10708-020-10182-8>
- Dunets, A. N., Vakhrushev, I. B., Sukhova, M. G., Sokolov, M. S., Utkina, K. M., & Shichiyakh, R. A. (2019). Selection of strategic priorities for sustainable development of tourism in a mountain region: concentration of tourist infrastructure or nature-oriented tourism. *Entrepreneurship and Sustainability Issues*, 7(2), 1217. doi:[http://doi.org/10.9770/jesi.2019.7.2\(29\)](http://doi.org/10.9770/jesi.2019.7.2(29))
- Gazzola, P., Pavione, E., Grechi, D., & Ossola, P. (2018). Cycle Tourism as a Driver for the Sustainable Development of Little-Known or Remote Territories: The Experience of the Apennine Regions of Northern Italy. *Sustainability*, 10(6), 1863. Retrieved from <https://www.mdpi.com/2071-1050/10/6/1863>
- Giuliani, S., Bellucci, L. G., & Nhon, D. H. (2019). Chapter 19 - The Coast of Vietnam: Present Status and Future Challenges for Sustainable Development. In C. Sheppard (Ed.), *World Seas: an Environmental Evaluation (Second Edition)* (Vol. 2, pp. 415-435): Academic Press.
- Govindan, K., Shankar, K. M., & Kannan, D. (2020). Achieving sustainable development goals through identifying and

- analyzing barriers to industrial sharing economy: A framework development. *International Journal of Production Economics*, 227, 107575. doi:<https://doi.org/10.1016/j.ijpe.2019.107575>
- Hall, C. M. (2019). Constructing sustainable tourism development: The 2030 agenda and the managerial ecology of sustainable tourism. *Journal of Sustainable Tourism*, 27(7), 1044-1060. doi:<https://doi.org/10.1080/09669582.2018.1560456>
- Hole, Y., & Snehal, P. (2019). The significance of pilgrimage tourism to sustainable development with special reference to the Indian context. *African Journal of Hospitality, Tourism and Leisure*, 8(3), 1-11.
- Holladay, P., Dixon, A. W., Nguyen, M. C., Nguyen, B. L., Xu, S., & Price-Howard, K. (2018). Stakeholder perceptions of tourism assets and sustainable tourism development in Da Nang, Vietnam. *Enlightening Tourism. A Pathmaking Journal*, 8(2), 74-98. doi:<http://dx.doi.org/10.33776/et.v8i2.3357>
- Ibănescu, B.-C., Stoleriu, O. M., Munteanu, A., & Iașu, C. (2018). The Impact of Tourism on Sustainable Development of Rural Areas: Evidence from Romania. *Sustainability*, 10(10), 3529. doi:<https://doi.org/10.3390/su10103529>
- Juma, L. O., & Khademi-Vidra, A. (2019). Community-Based Tourism and Sustainable Development of Rural Regions in Kenya; Perceptions of the Citizenry. *Sustainability*, 11(17), 4733. doi:<https://doi.org/10.3390/su11174733>
- Kapera, I. (2018). Sustainable tourism development efforts by local governments in Poland. *Sustainable Cities and Society*, 40, 581-588. doi:<https://doi.org/10.1016/j.scs.2018.05.001>
- Kristjánsdóttir, K. R., Ólafsdóttir, R., & Ragnarsdóttir, K. V. (2018). Reviewing integrated sustainability indicators for tourism. *Journal of Sustainable Tourism*, 26(4), 583-599. doi:<https://doi.org/10.1080/09669582.2017.1364741>
- Lee, D., Kim, S., Han, H., & Wong, A. K. F. (2020). Casino tourism development is blessing or curse? Assessment of casino tourism impacts and suggestions for sustainable casino tourism development. *Asia Pacific Journal of Tourism Research*, 25(11), 1168-1184. doi:<https://doi.org/10.1080/10941665.2020.1837891>
- Lee, T. H., & Jan, F.-H. (2019). Can community-based tourism contribute to sustainable development? Evidence from residents' perceptions of the sustainability. *Tourism Management*, 70, 368-380. doi:<https://doi.org/10.1016/j.tourman.2018.09.003>
- Liu, J., Nijkamp, P., Huang, X., & Lin, D. (2017). Urban livability and tourism development in China: Analysis of sustainable development by means of spatial panel data. *Habitat International*, 68, 99-107. doi:<https://doi.org/10.1016/j.habitatint.2017.02.005>
- Lyon, A., Hunter-Jones, P., & Warnaby, G. (2017). Are we any closer to sustainable development? Listening to active stakeholder discourses of tourism development in the Waterberg Biosphere Reserve, South Africa. *Tourism Management*, 61, 234-247. doi:<https://doi.org/10.1016/j.tourman.2017.01.010>
- Mai, A., Thi, K., Thi, T., & Le, T. (2020). Factors influencing on tourism sustainable development in Vietnam. *Management Science Letters*, 10(8), 1737-1742. doi:<http://dx.doi.org/10.5267/j.msl.2020.1.006>
- Mann, C., Garcia-Martin, M., Raymond, C. M., Shaw, B. J., & Plieninger, T. (2018). The potential for integrated landscape management to fulfil Europe's commitments to the Sustainable Development Goals. *Landscape and Urban Planning*, 177, 75-82. doi:<https://doi.org/10.1016/j.landurbplan.2018.04.017>
- Mio, C., Panfilo, S., & Blundo, B. (2020). Sustainable development goals and the strategic role of business: A systematic literature review. *Business Strategy and the Environment*, 29(8), 3220-3245. doi:<https://doi.org/10.1002/bse.2568>
- Mohsin, M., Abbas, Q., Zhang, J., Ikram, M., & Iqbal, N. (2019). Integrated effect of energy consumption, economic development, and population growth on CO2 based environmental degradation: a case of transport sector. *Environmental Science and Pollution Research*, 26(32), 32824-32835. doi:<https://doi.org/10.1007/s11356-019-06372-8>
- Ngo, T., Hales, R., & Lohmann, G. (2019). Collaborative marketing for the sustainable development of community-based tourism enterprises: a reconciliation of diverse perspectives. *Current Issues in Tourism*, 22(18), 2266-2283. doi:<https://doi.org/10.1080/13683500.2018.1446919>
- Ngo, T., Lohmann, G., & Hales, R. (2018). Collaborative marketing for the sustainable development of community-based tourism enterprises: voices from the field. *Journal of Sustainable Tourism*, 26(8), 1325-1343. doi:<https://doi.org/10.1080/09669582.2018.1443114>
- NGUYEN, C. D., NGO, T. L., DO, N. M., & NGUYEN, N. T. (2020). Key Factors Affecting Sustainable Tourism in the Region of South Central Coast of Vietnam. *The Journal of Asian Finance, Economics, and Business*, 7(12), 977-993. doi:<https://doi.org/10.13106/jafeb.2020.vol7.no12.977>
- Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., . . . Stafford-Smith, M. (2018). Mapping interactions between the sustainable development goals: lessons learned and ways forward. *Sustainability Science*, 13(6), 1489-1503. doi:<https://doi.org/10.1007/s11625-018-0604-z>
- Peng, K.-H., & Tzeng, G.-H. (2019). Exploring heritage tourism performance improvement for making sustainable development strategies using the hybrid-modified MADM model. *Current Issues in Tourism*, 22(8), 921-947. doi:<https://doi.org/10.1080/13683500.2017.1306030>
- Powell, R. B., Green, T. F., Holladay, P. J., Krafte, K. E., Duda, M., Nguyen, M. T., . . . Das, P. (2018). Examining Community Resilience to Assist in Sustainable Tourism Development Planning in Dong Van Karst Plateau Geopark, Vietnam. *Tourism Planning & Development*, 15(4), 436-457. doi:<https://doi.org/10.1080/21568316.2017.1338202>
- Radovanov, B., Dudic, B., Gregus, M., Marcikic Horvat, A., & Karovic, V. (2020). Using a Two-Stage DEA Model to Measure Tourism Potentials of EU Countries and Western Balkan Countries: An Approach to Sustainable Development. *Sustainability*, 12(12), 4903. doi:<https://doi.org/10.3390/su12124903>
- Rasoolimanesh, S. M., Ramakrishna, S., Hall, C. M., Esfandiari, K., & Seyfi, S. (2020). A systematic scoping review of sustainable tourism indicators in relation to the sustainable development goals. *Journal of Sustainable Tourism*, 1-21. doi:<https://doi.org/10.1080/09669582.2020.1775621>
- Ristić, D., Vukočić, D., & Milinčić, M. (2019). Tourism and sustainable development of rural settlements in protected areas - Example NP Kopaonik (Serbia). *Land Use Policy*, 89, 104231. doi:<https://doi.org/10.1016/j.landusepol.2019.104231>
- Rodriguez-Ward, D., Larson, A. M., & Ruesta, H. G. (2018). Top-down, Bottom-up and Sideways: The Multilayered Complexities of Multi-level Actors Shaping Forest Governance and REDD+ Arrangements in Madre de Dios, Peru. *Environmental Management*, 62(1), 98-116. doi:<https://doi.org/10.1007/s00267-017-0982-5>
- Saarinen, J. (2018). Beyond growth thinking: the need to revisit sustainable development in tourism. *Tourism*

- Geographies*, 20(2), 337-340.
doi:<https://doi.org/10.1080/14616688.2018.1434817>
- Schaltegger, S., Beckmann, M., & Hockerts, K. (2018). Collaborative entrepreneurship for sustainability. Creating solutions in light of the UN sustainable development goals. *International Journal of Entrepreneurial Venturing*, 10(2), 131-152.
doi:<https://doi.org/10.1504/IJEV.2018.092709>
- Scheyvens, R., & Hughes, E. (2019). Can tourism help to “end poverty in all its forms everywhere”? The challenge of tourism addressing SDG1. *Journal of Sustainable Tourism*, 27(7), 1061-1079.
doi:<https://doi.org/10.1080/09669582.2018.1551404>
- Scott, D., Hall, C. M., & Gössling, S. (2019). Global tourism vulnerability to climate change. *Annals of Tourism Research*, 77, 49-61.
doi:<https://doi.org/10.1016/j.annals.2019.05.007>
- Sharif, A., Godil, D. I., Xu, B., Sinha, A., Rehman Khan, S. A., & Jermisittiparsert, K. (2020). Revisiting the role of tourism and globalization in environmental degradation in China: Fresh insights from the quantile ARDL approach. *Journal of Cleaner Production*, 272, 122906.
doi:<https://doi.org/10.1016/j.jclepro.2020.122906>
- Sharpley, R. (2020). Tourism, sustainable development and the theoretical divide: 20 years on. *Journal of Sustainable Tourism*, 28(11), 1932-1946.
doi:<https://doi.org/10.1080/09669582.2020.1779732>
- Siakwah, P., Musavengane, R., & Leonard, L. (2020). Tourism Governance and Attainment of the Sustainable Development Goals in Africa. *Tourism Planning & Development*, 17(4), 355-383.
doi:<https://doi.org/10.1080/21568316.2019.1600160>
- Swamy, L., Drazen, E., Johnson, W. R., & Bukoski, J. J. (2018). The future of tropical forests under the United Nations Sustainable Development Goals. *Journal of Sustainable Forestry*, 37(2), 221-256.
doi:<https://doi.org/10.1080/10549811.2017.1416477>
- Tien, N. H., Thai, T. M., Hau, T. H., Vinh, P., & Long, N. (2019). Solutions for Tuyen Quang and Binh Phuoc tourism industry sustainable development. Comparative analysis. *International Journal of Research in Marketing Management and Sales*, 2(1), 101-107.
- Tseng, M.-L., Wu, K.-J., Lee, C.-H., Lim, M. K., Bui, T.-D., & Chen, C.-C. (2018). Assessing sustainable tourism in Vietnam: A hierarchical structure approach. *Journal of Cleaner Production*, 195, 406-417.
doi:<https://doi.org/10.1016/j.jclepro.2018.05.198>
- Tuan, V. K., & Rajagopal, P. (2019). Analyzing factors affecting tourism sustainable development towards vietnam in the new era. *European Journal of Business and Innovation Research*, 7(1), 30-42.
- VU, H. M., LAM, T. M., & PRABHAKARAN, S. (2021). Perceptions of Key Stakeholders Towards Sustainable Tourism Development: A Case Study in Mekong Delta, Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(4), 717-726.
doi:<https://doi.org/10.13106/jafeb.2021.vol8.no4.0717>
- Xiao, Y., Norris, C. B., Lenzen, M., Norris, G., & Murray, J. (2017). How Social Footprints of Nations Can Assist in Achieving the Sustainable Development Goals. *Ecological Economics*, 135, 55-65.
doi:<https://doi.org/10.1016/j.ecolecon.2016.12.003>
- Yoopetch, C., & Nimsai, S. (2019). Science Mapping the Knowledge Base on Sustainable Tourism Development, 1990-2018. *Sustainability*, 11(13), 3631.
doi:<https://doi.org/10.3390/su11133631>