



A Structural Equation Model (SEM) of Leading Factors Influencing the Quality of Sustainable Development: A Case Study in the Southern Province of Sri Lanka

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Abstract

The Sri Lanka government which assumed office in 1977 embarked on economic liberalization reforms. The main thrust of the liberalized economic reforms has been to standardize private sector investment by providing infrastructure facilities through public investment with the aim of achieving high economic growth and employment levels. All these efforts were not as successful as the expected level since some policies were implemented without appropriate prior examinations. With the objective to fulfill the targets of sustainable development in a county, there should be equal distribution of the benefit of the development among the people. Thus, decentralization could be identified as the path to enhancing sustainable development. On this basis, the study makes an effort to offer government officials and decision-makers insights to better comprehend and raise the caliber of sustainable development in the area, as well as to bridge the knowledge gap. The suggested model is experimentally evaluated using data analysis from 1000 survey units representing all divisional secretariats' divisions in Sri Lanka's Southern region using a two-stage systematic sampling technique and the structural equation modeling method using the R tool. The findings demonstrate a strong and positive relationship between the constructions of the scales of economic, social, human, and environmental development and the quality of sustainable development. The findings of this study provide government officials and decision-makers in Sri Lanka, in particular, with valuable recommendations for understanding how various elements impact the execution of the quality of sustainable development.

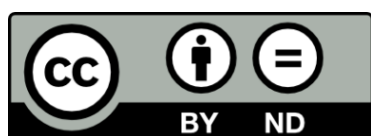
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INTRODUCTION

The centralized system of Sri Lanka is still trying to achieve the target of the aspiration of rapid sustainable development as a particular overall management controller. Even after political independence in 1948, the government of Sri Lanka introduced and implemented several national action plans, which highlighted island-wide spatial development. The government which assumed office in 1977 embarked on economic liberalization reforms (CBSL, 2019). The main thrust of the liberalized economic reforms has been to standardize private sector investment by providing infrastructure facilities through public investment with the aim of achieving high economic growth and employment levels. After this new political era, investments rapidly increased to fulfill the achievements of government targets. Even though liberalization has been remarkable in different sectors, Sri Lanka had to face imbalanced conditions, especially in macroeconomics. In the late 1970s, the Central bank of Sri Lanka clearly shows with evidence that there were large internal and external imbalances (CBSL, 2019).

In view of this fact, several governments have been desperate to restructure the economy, in the face of the adverse balance of payment circumstances. In the mid-eighties, the prevalent government focused on macroeconomic policy strategies. Structural Adjustment Programmes

were initiated in consultation with the World Bank and International Monetary Fund (CBSL, 2019). Under the different types of development reforms and policies, governments up to now have made an effort to centralize the administrative and public bodies from the central government bodies towards the national level to achieve the target of Sustainable Development (SD) (Fernando, Samita, & Abeynayake, 2012). In Sri Lanka, the Cabinet of Ministers is the council of ministers that forms the central government of Sri Lanka (ADB, 2018). All these efforts were not as successful as the expected level since some policies were implemented without appropriate prior examinations. Therefore, poverty alleviation, rural development, employment, social equality, and economic development degenerated year by year (CBSL, 2019).

The general administrative hierarchy of Sri Lanka consists of five main levels: national, provincial, district, divisional and village level (Leitan, 1979). The 13th amendment to the Sri Lankan constitution states that social services are a delegated matter at the national level (Cooray & Abeyratne, 2017). Nevertheless, the Ministry of Social Services continues to serve as the National level body responsible for developing and coordinating the work programs for the Social Services Department, the National Disaster Management Center, the Social Security Board, probation, and

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childcare, as well as overseeing the administration of the pertinent laws and agreements. The administration's "uplift" strategy has been replaced with a partnership system by the provincial councils (Pollitt, 2016). Three institutions, namely the national government, province councils, and local authorities, entered the new administrative structure. Provincial planning and the translation of federal policies into province development plans are the responsibilities of the provincial level administration. The Chief Minister is in charge of the provincial government. Moreover, there is a board of ministers. The Chief Secretary and several ministries personnel are modelled after the national ministry's organizational structure. The District Secretary, who serves as the liaison between national ministries and district level government organizations, is the main administrative officer at the district level. As a place of gathering and power exchange, the division will serve as the setting in which the Divisional Secretary will supply services and carry out development program initiatives. The administrative and decision-making level closest to the populace is still the village level. This is the unit that provides fundamental services to the populace and, to a large part, serves as the agency responsible for carrying out development programs (ADB, 2018). The leader of the village level government and the community is known as the Grama Niladari (GN). The administrative framework's

integrated structure, which uses the division and village as administrative entities, is a key component.

To achieve the goal of sustainable development of a county, there should be equal distribution of the benefits of the development among all the people in that country. Therefore, the decentralization of administrative and economic sectors could be identified as the path to enhancing sustainable development. Over the past several decades Sri Lanka has experienced different types of regional action plans, development programs, and different implementations. However, there is a significant disparity in regional development.

It is worthy to note that to achieve sustainable development, the transfer of responsibilities of planning, management, decision-making, and resource mobilization of the central government and the local government bodies should be equally distributed among themselves. Because of this, Sri Lanka ought to be able to realize the notion of sustainable development as a whole.

According to the sustainable development report 2022, Sri Lanka has achieved 65.9 regional averages keeping the 76th place from among 163 countries in the world with a value of 72.6 in the overall statistical performance index (United Nations, 2022). According to the Sustainable Development Goals (SDGs), "no poverty, excellent education, climate



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actions, responsible consumption, and production" were shown to be on track and were sustaining SDG success, according to the study "the crisis to sustainable development: the SDGs as a roadmap to 2030 and beyond." In addition, other objectives including "zero hunger, excellent health and wellbeing, clean water and sanitation, inexpensive and clean energy, industrial innovation and communities, and life below water" were listed as still-existing difficulties preventing "moderately improved" achievements. However, important obstacles to stagnant economic progress have been highlighted as "gender equality, decent work, and economic growth, living on land, peace and justice, and strong institutions, partnerships for the goals." (United Nations, 2022).

Identifying the leading factors influencing the quality of sustainable development in local government bodies in Sri Lanka would enable to use them as a multidimensional phenomenon mission. Development evaluation is the methodical and unbiased examination of a development intervention that is underway or has already been finished, as well as its design, execution, and outcomes. When people began to develop a region in order to meet their requirements, evaluating the quality of sustainable development was the most crucial factor. The quality of sustainable development is evaluated through open channels of

communication (Yusoff, 2020). In general, the quality of sustainable development is related to changes in society or the social system from the level of dissatisfaction to the level of satisfaction when there is improvement in life conditions under the sustainable development targets of a country. Identifying the leading factors influencing the quality of sustainable development in local government bodies in Sri Lanka will allow for different settings of national benchmarks and also further international comparisons among regional development. The identification of such situations; the government, policy implications, recommendations, local and foreign investors, and all other responsible parties would be able to focus on how to accomplish the targets of sustainable development by region to region. It would be a great platform for analysis and discussion of the current situation of the sustainable development concept in Sri Lanka. However, there is still inadequate investigation into the important factors that can affect the quality of sustainable development in the context of Sri Lankan personal perceptions.

This paper aims at identifying and analyzing the influencing factors on the quality of sustainable development in the Southern province, Sri Lanka. The suggested model is experimentally evaluated using data analysis from 1000 survey units representing all Divisional Secretariat Divisions in Sri



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Lanka's southern region using a two-stage systematic sampling technique and the Structural Equation Modeling (SEM) method using the R tool. The SEM is used to identify and analyze the structural relationships (Hair, Black, & Babin, 2010). Through a single analysis, it helps to estimate the multiple and interrelated dependence (Mueller, 1997). With the goal of filling a research vacuum, this study aims to offer government officials and decision-makers insights on how to better analyze and advance the region's degree of the quality of sustainable development.

The structure of this essay is as follows: The literature review is presented in section 2 in two sections that include definitions and theoretical consideration, and empirical evidence. The methodology for this study, which covers the model specification, the research hypothesis, and data collection, is provided in section 3. The results and findings are shown in section 4. Finally, section 5 provides the conclusions of the study and section 6 provides the references.

LITERATURE REVIEW

Definitions and Theoretical Consideration

The word *development* emerged in the early post-second world war period (Rostow, 1952). Usually, the concepts of development efforts have sought to enhance national income while reducing the poverty of people by

improving their life quality. From the 1960s to the present day, different perspectives of development have been used to develop poor countries. In the 1960s, "modernization" has been identified as a significant approach to development. In the 1970s, they introduced the "dependency" approach. Then, in the 1980s, "neoliberalism" emerged as a universal development ideology while "sustainable development" has been welcomed among the countries. In the 1990s, the governments considered "human development" as a new method that could be used to lift the poor out of poverty in countries. From the 2000s to the present day, the "post-development" approach has been used related to the development concept (Todaro & Smith, 2000). According to Preston (2000) the development theory has slight worth by itself unless it is used, converts to results and expands the life of people (Todaro & Smith, 2000). The approaches have covered the economic, social, political, and institutional aspects of development in any country in order to achieve the enhancements in living standards (Belkaoui, 1994) and (Todaro & Smith, 2000).

Sustainable Development (SD) is a phenomenal theory under development theories. Although it has been defined in a variety of ways, the most frequently used definition comes from the Brundtland report, "Our common future," by the World Commission on Environmental



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Development (WCED), which states that it is "the development that meets the needs of the present without jeopardizing the ability of future generations to meet their own needs (WCED, 1987)." The study has been translated into more than 24 languages since it was published (Finger, 1994). As a result, the meaning of the phrase is what is most frequently used and cited. The commission asserts that they looked at the environmental issues brought on by development processes from economic, social, and political angles. The 2030 Agenda for Sustainable Development and its Sustainable Development Goals are proposed as a foundation for the current global framework for international cooperation (SDGs) (IISD, 2021). Therefore, SD is identified as a basic strategy to guide the transformation of social and economic sectors in the world.

Since late 1980, the term "Sustainable Development" (SD) has become a model of development (Barbier, 1987), (IUCN, WWF, UNEP, 1980) & (WCED, 1987).

The main goal of the 1992 "Earth Summit" in Rio de Janeiro, Brazil, the largest worldwide gathering ever, was to establish the fundamentals of a future action plan for SD (United Nations, 1992). As the outcome of it, a document "Agenda 21" was issued and the discussion was about achieving SD by the beginning of the 21st century (United Nations, 2015).

The outcome, a document "Agenda 21" was issued, and the discussion was about achieving SD by the beginning of the 21st century (UNDP, 2002). The UN summit "Rio+20" in 2012 in Brazil was aimed at securing a renewed political obligation to SD (United Nations, 2012). The fundamental objective of SD is to maintain economic and environmental stability while taking social factors into account when making decisions (Emas, 2015).

The key principles of SD that defined integrating social, economic, and environmental issues were transferred into every phase of decision making (Stoddart, 2011). According to Soubbotina (2004), SD is characterized as being fair and balanced, which is precisely defined as ensuring that all people have equal access to possibilities for happiness and meeting all of their goals (Soubbotina, 2004). He has argued that SD is the effective and equitable transfer of resources through generations while allowing socioeconomic activity to run within the constraints of a finite ecosystem (Elliott, 2013).

Agenda 2030 consists of five overarching themes of people, planet, prosperity, peace, and partnerships named the "5 Ps" which encompass the 17 SDGs (United Nations, 2015). In 2015, leaders from 193 countries collaborated to face the future through a proper road map. They set 17 goals of fulfillment within 15 years of the period as a bold strategy. The main institution striving to meet the objectives by the



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year 2030 is the United Nations Development Programme (UNDP) (United Nations, 2015).

Through proper indicators, a country can measure and translate knowledge into important, meaningful, and practicable units of information. Policy analysis, research, planning, and decision-making can gain sustenance while comparing national and international social, economic and environmental systems (Bossel, 1999). Through evaluating the indicators, the countries can prove their critical problems and get maximum corporation from decision-makers and planners to produce policy interventions, assesses the impacts, and design long-term development strategies (Soubotina, 2004).

People want to live and work in sustainable communities today and in the future. They contribute to a good quality of life by accommodating the many demands of both current and future inhabitants. Enhancing decision-making about community and sustainability may be accomplished by investigating community and neighborhood profiles and determining if they exhibit the characteristics of sustainable development.

Empirical Evidence

Turkoglu (2015) conducted a research to examine how Istanbul's quality of life is impacted by environmental, economic, social, physical, and health-

related parameters. A questionnaire survey was used as a research tool to assess Istanbul's quality of life. The Detroit Area Study (DAS) 2001 model is closely tied to the questionnaire framework chosen. 1635 in-person interviews were done from a random sample of dwellings, resulting in a response rate of 66%. The QOUL questionnaire was used to gather a variety of data. The purpose of the survey, which was conducted as part of a strategic planning process, was to provide decision-makers and planners with information on the perceptions of urban life in a vast and quickly expanding territory (Turkoglu, 2015).

In order to support both a good quality of life and sustainable development, Wiesli et al. (2021) conducted research to establish a model for regional management bodies of rural regions. The research area of four areas in the Swiss Federal was vast enough for the sample of 90 participants to represent the opinions of a wide range of groupings among the rural population. Nine components make up the notion that resulted from our research: social relations and equality; nature and landscape; education and knowledge; participation, identification, and collective emotions; living; mobility; health and safety; leisure and recreation; and income and employment. Each element is developed in an integrated manner, combining social, environmental, and personal aspects. The idea offers a framework for directing regional



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development and fostering long-term quality of life in rural communities. They have suggested launching sites in the fields of social relations and equality, nature and landscape, and education and knowledge. (XeniaWiesli, Liebe, & Hamm, 2021).

In a research conducted in 2012, Fernando, Samita, and Abeynayake created composite indices to represent the urbanization index. Six indicator variables were utilized by them; population density, student population density, the density of houses and common residences, the density of non-residence buildings, and the density of business establishments and vehicles. The indicator variables' internal consistency has been confirmed using Cronbach's alpha. Preliminary FA and PCA have been used to identify the group pattern and to build the indicators. To examine the sub-indicator sets' organizational structure, the FA has used. The secondary data has been gathered from the DCS, the Divisional Secretariat offices, and provincial and education offices. Based on the 2001 population and housing census survey, projected figures for 2006 have been created. The study covered 247 Divisional Secretariats in Sri Lanka without eight districts due to the problems of data availability. The results of the study provided a beneficial recommendation for a more logical cataloging of local government authorities, key players in the government's growth and policy-

making processes (Fernando, Samita, & Abeynayake, 2012).

A research on the identification of the poor in Sri Lanka using composite indicators and regional poverty lines was conducted by Siddhisena and Jayathilaka in 2006. By utilizing the percapita minimum needed adult equivalent food expenditure as the secondary data source published by the DCS, they were able to determine the number of poor families and the people living in poverty. The multidimensional composite poverty index is based on seven factors namely, nutrition, primary education, health care, sanitation, safe water, household factors, and income. The factors have been scaled and weighted using PC-based FA (PCFA), generalized Canonical analysis, and multiple correspondence analysis. Through the methodological overview, they emphasized providing an accurate formation of poverty in Sri Lanka in each district. According to the results, it is discovered that the Head Count Index (HCI) is less reliable than the ranking order based on the composite poverty indicator which has a ranking order base. It has been confirmed through the values of Spearman's rank correlation coefficient values. The districts of Monaragala, Polonnaruwa, Anuradhapura, and Matale were determined to be extremely impoverished districts. The findings show that Colombo is the district with the greatest income inequality. The



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regional variations in poverty have been exposed by the sector, province, and district ranking orders (Siddhisena & Jayathilaka, 2004).

A study of regulating variables in assembling composite indices by Colombo district data has been done by Dharmawardena and Samita (2015). The study's goal was to find a remedy for the problem of unit dependency when performing PCA without standardizing the variables. To achieve the objectives, they have used two methods. The original variables' data were divided by their mean to create the new set of variables in the first technique. The following strategy made significant adjustments to the variables while maintaining a smaller unit of measurement and limiting the impact of high values on larger variations. 557 Grama Niladhari Divisions (GND) in the Colombo district have been considered for the study, and the supplemental information was gathered from the Population and Housing Census (2012) data and Economic Census in 2013. According to the results, they have found that two improvements that significantly reduced the number of variables in the index were to express some characteristics on a per-household basis and to divide GN density by total density. As a result, altering factors in composite index building might produce incredibly relevant information (Dharmawardena, Thattil, & Samita, 2015).

Even though there is a significant contribution with relation to the idea of the quality of life in sustainable development by a qualitative analysis, there is a lack of quantitative evaluation of the quality of sustainable development. The research gap is emerging into what extent citizens feel about the quality of sustainable development respective to their regions under personal perception. Especially in the Sri Lankan context, the literature contribution is specially aimed only at the indexes built through secondary data. By addressing the primary goal of the study, the research gap will be filled.

RESEARCH METHODOLOGY

Model Specification

The study's methodology is a survey research design (Cohen & Mankin, 2002). In quantitative research, cross-sectional survey research designs provide researchers the chance to survey a sample or the complete population to learn about their perceptions related to the economic development, social development, and environmental development or characteristics of the population.

The objective of the study is to Identify leading factors influencing the quality of sustainable development in the Southern province of Sri Lanka. In Figure 1, the study's research model is displayed. Based on the pertinent literature connected to the SDGs in Table 1, the constructs used in the



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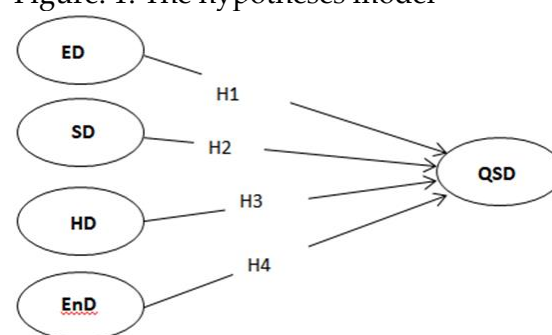
model were selected from the variables. The variables were built based on the 17 SDGs that the country should achieve in 2030 under three main pillars of SD (United Nations, 2022).

Table 1: Leading factors influencing the quality of sustainable development.

Constructs	Items
Economic development	<p>I have enough resources to meet my daily needs.</p> <p>It is rare to stay hungry or have less food than one needs.</p> <p>I am satisfied with the service of the government hospital in my DS division.</p> <p>After completing my degree I would be able to have remunerative jobs and decent work.</p> <p>My household has been located in less than 2km from all essential economic centers.</p>
Social Development	<p>I am satisfied about my education level.</p> <p>I am satisfied with the opportunities I have in my community, even if male/female members have more.</p> <p>My household relies on remittances from abroad for survival.</p> <p>Mobility (access to public transport) in my area is relatively easy.</p> <p>I am not afraid of going out at day or night in my area since I am not worried about my safety.</p>

Environment development	<p>I can see new projects that started to strengthen the international partnership for the development in my area.</p> <p>My household has extensive access to water and sanitation.</p> <p>My household has access to electricity.</p> <p>In my household there is a proper mechanism to deal with waste.</p> <p>I believe climate change is affecting my country, but not really my division (production, availability of resources).</p> <p>In my area, we do not use enough marine resources, we could be using more.</p> <p>In my area, people make a proper use of land so as to preserve the current environment.</p>
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Figure. 1. The hypotheses model



According to Figure 1 the economic development construct is labelled as ED, the social development construct is labelled as SD, the human development construct is labelled as HD and the environment development construct is labelled as EnD under the



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hypotheses of the model. Even though the variables were categories under three main pillars of SD, constructed principal component analysis has extracted four factors. Therefore, the hypotheses model has been restructured under the four main pillars of SD under economic, environment, social and human development (Goodland, 2002).

Research Hypothesis

The Table 2 illustrates the hypothesis built that investigates in the study through modelling.

Table 2: Research Hypothesis

No	Hypotheses
H1	The scale of economic development is positively influencing the quality of sustainable development
H2	The scale of social development is positively influencing the quality of sustainable development
H3	The scale of human development is positively influencing the quality of sustainable development
H4	The scale of environment development is positively influencing the quality of sustainable development

Data Collection

With tools like a survey, this study has used a quantitative research methodology. To ensure that respondents could comprehend the survey, it was broken up into sections and a Likert scale with five levels of potential responses was employed (from Strongly Agree to Strongly Disagree). The survey was conducted in The Southern province in Sri Lanka covering all divisional secretariats'

divisions. The sampling units were all forty-seven DS divisions in three districts of the Southern province, Sri Lanka. The election registration list of selected GN divisions of all DS divisions was used as the sampling frame of the study. Thousand (n=1,000) respondents were selected as sample units of the study. A two-stage systematic sampling technique has been utilized to collect the primary data of the study. The primary data was collected through the face to face interviewing method using a structured questionnaire.

RESULTS AND FINDINGS

The study used R software to test the assumptions between the model's variables using the Structural Equation Modelling (SEM) approach. With the use of the statistical approach known as structural equation modeling (SEM), researchers may evaluate several interconnected dependent connections in a single model. (Hair, Black, & Babin, 2010), (Kline, 2011) and (Mueller, 1997). In social science research, SEM is a common methodology. It is a well-liked analytical method because it allows for freedom in interpreting the hypothesis to be tested and the test findings (Mueller, 1997). More information about the study's analysis is provided in the section that follows.

Descriptive Statistical Perspective

Four demographic questions were included in the survey to gather data on demographics: gender, highest



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education qualification, employment status, and the number of members in a family. The majority (52.7 percent) of those surveyed was of an age range between 31 and 45 years – male and more than (46 percent) have completed their tertiary education. More than (54 percent) of the respondents were employers; more than (12 percent) of the respondents were job seekers. Table 3 provides a summary of the respondent's demographic data.

Table 3: Demographic Information

Demographic Variables		Frequency	Percent %
Gender	Male	473	47.3
	Female	527	52.7
Highest educational qualification	No education	29	2.9
	Primary education	56	5.6
	(Kindergarten to grade 5)		
	Secondary education (Grade 6-13/ Junior & Senior secondary)	446	44.6
	Tertiary education (Formal post-secondary education)	469	46.9
Number of members in the family	Less than 3 members	275	27.5
	4-6 members	708	70.8
	Greater than 7 members	17	0.17

Employment	Paid employment	199	19.9
	Employer (Anybody who hires a worker or on whose behalf another person does so)	542	54.2
	Own account worker	31	3.1
	Contributing to the family enterprise	58	5.8
	Available/ Seeking work	125	12.5
	Non-economic activities	45	4.5

Source: Author's computation, 2022, using R

Reliability Verification

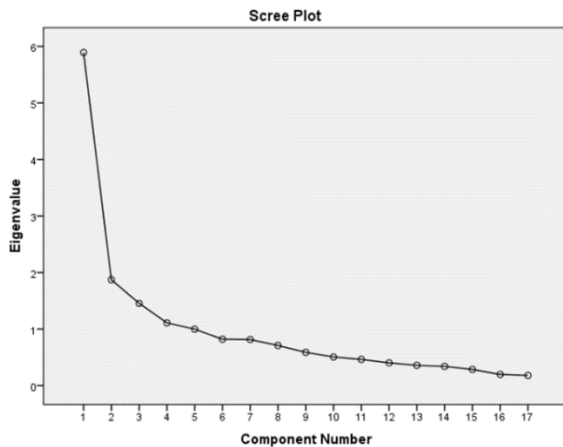
The Kaiser-Meyer-Olkin (KMO) value, Bartlett's value (0.795), factor loading, eigenvalue, scree plot, and varimax rotation were all identified in this study. The KMO index ranges from 0 to 1, with values over 0.50 being suitable for factor analysis and scores above 0.80 deemed extremely good. The questionnaire's validity was confirmed using Bartlett's Test of Sphericity, which was significant ($p < 0.05$) for an overall value of factor loading for each item over 0.50. Factors with an eigenvalue less than 1.0 were eliminated from the factor list, and the scree plot and eigenvalue also showed



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the percentage of variance contribution each factor retrieved during the factor analysis. (Hair, Black, & Babin, 2010).

Figure.2. Scree plot of the 17 items for quality of suitable development.



Source: Author's computation, 2022, using R

The component number and eigenvalue are shown on a scree graph. After examining figure 2: the scree plot, only four factors were extracted for analysis. Therefore, it enables us to suggest that four principal components adequately explain the variation in the data.

To gauge internal consistency, one uses Cronbach's alpha. In utilizing Cronbach's alpha, an approach that is frequently used to evaluate dependability, one may determine internal consistency (Mueller, 1997). Additionally, it has been recommended by Hair Jr., Black et al. that the reliability test be carried out prior to the start of the construct validity examination, and that the constructs are regarded as trustworthy when

Cronbach's alpha is 70 or above. (Hair, Black, & Babin, 2010).

Table 4 demonstrates that all estimated construct values were above the suggested value (0.70), demonstrating great dependability and high internal consistency in the model's connection measurements.

Table 4: Results of Cronbach's alpha reliability test

Construct	Number of Items	Cronbach's alpha Value
Economic scales	05	0.743
Social scales	06	0.762
Environment scales	06	0.804

Source: Author's computation, 2022, using R

Validity Test

According to table 5, all of the constructs appear to have Composite Reliability (CR) values above the acceptable threshold of 0.60 and Average Variance Extracted (AVE) values that are close to it. Additionally, as indicated in table 6, all the indicators (factors) significantly loaded above 0.50 ($p < 0.001$) on their respective constructions. Since they had significant factor loadings, they were kept in the measurement model. These findings demonstrated the measuring model's strong uni-dimensionality and convergent validity (Hair, Black, & Babin, 2010).

Table 5: Results of convergent validity

	CR	AVE
ED	0.83	0.4
SD	0.78	0.4



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HD	0.74	0.5
EnD	0.78	0.5

Source: Author's computation, 2022, using R

Table 6: Results of develop factor loading.

Factors	Items	Estimate
ED	X8	0.722
	X1	0.692
	X4	0.665
	X6	0.657
	X2	0.652
	X7	0.625
SD	X11	0.787
	X9	0.716
	X5	0.571
	X10	0.569
	X3	0.593
HD	X13	0.744
	X12	0.702
	X16	0.652
EnD	X14	0.791
	X15	0.761
	X17	0.644

Source: Author's computation, 2022, using R

Hypothesis Testing Results

Finding the independent variables that have a statistically significant link to the dependent variables is the goal of hypothesis testing. SEM was used in this work to examine the hypotheses. SEM offers details about the predicted effects both directly from one variable to another and via intermediary variables that are positioned by the route coefficient between the other two variables (Hair, Black, & Babin, 2010). The model's statistics, which are based on the SEM output, are in the acceptable range with *RMSEA* 0.092, *CFI* 0.893 and *TLI* 0.858. The outcomes of evaluating the current study's hypotheses are shown in Table 7

depending on the outcome of the p-value, the "Result" column indicates whether the hypothesis was supported or not.

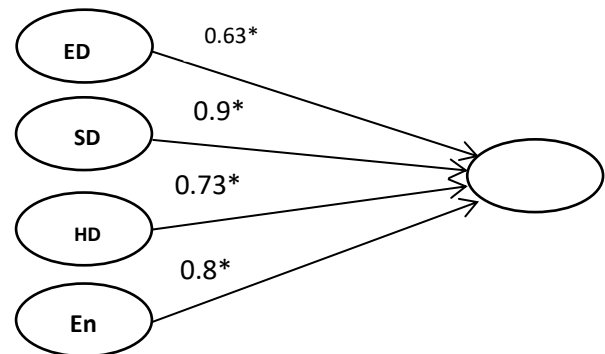
Table 7: Results of hypothesis testing

Hypotheses	Path coefficient	C.R.	P-value	Result
QSD \leftarrow ED	0.63	7.61	0.000*	Supported
QSD \leftarrow SD	0.9	4.04	0.000*	Supported
QSD \leftarrow HD	0.73	10.35	0.000*	Supported
QSD \leftarrow EnD	0.8	7.25	0.000*	Supported

* p < 0.05; ** p < 0.01; *** p < 0.001

Source: Author's computation, 2022, using R

Figure 3. Path Coefficients for the Proposed Structural Model



Source: Author's computation, 2022, using R

The quality of sustainable development would be anticipated to increase by 0.63 standard deviations from its own mean while holding all other relevant scale connections constant, as can be seen from Figure 3 and the meaning of the path coefficient theta 0.63. This is



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because if the economic development scale increases by one standard deviation from its mean. The quality of sustainable development should rise by 0.9 standard deviations from its own mean if the social development scale increases by one standard deviation from its mean, according to the path coefficient theta 0.9, while maintaining the same relationships between all other relevant scales. The quality of sustainable development would be expected to increase by 0.73 according to the path coefficient theta value; standard deviations from its own mean if the human development scale increased by one standard deviation from its mean, and by 0.8 according to the path coefficient theta value; standard deviations from its own mean if the environment development scale increased by one standard deviation from its mean, while holding all other relevant scale connections constant.

CONCLUSION

This study attempts to identify and experimentally evaluate leading factors, namely economic development, social development, human development, and environmental development that are influencing the quality of sustainable development. It offers a framework for evaluating the elements that contribute to the execution of high-quality sustainable development in Sri Lanka's Southern Province.

Based on the information gathered and the findings of the research, this study demonstrated substantial and favourable correlations between a variety of variables, including the relationships between the economic development scale and the quality of sustainable development (H1); the relationship between the social development scale and the quality of sustainable development (H2); the relationship between the human development scale and the quality of sustainable development (H3) and the relationship between the environment development scale and the quality of sustainable development (H4).

The data from the SEM analysis confirmed the analysis, and the SEM's findings were distilled as follows:

- *The economic development scale is positively influencing the quality of sustainable development.*

The adoption of sustainable development has a substantial positive effect on the economy. This study and earlier research investigations have both supported this theory (Bonnet, Coll-Martínez, & Renou-Maissant, 2021). Based on this finding, policymakers and government representatives should take note as the sustainable development objectives are achieved. It has to be transformed into an actionable, transparent strategy that all government agencies can agree to follow.



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- *The social development scale is positively influencing the quality of sustainable development.*

This study provides evidence in favour of an agreement with that notion (Biderman, 1966) (Floridi , Pagni , & Falorni , 2011). The study discovered the effect of stakeholders on the execution of sustainable development quality. All stakeholders must participate in and collaborate on sustainable development implementation initiatives for them to be successful. On the basis of this finding, it makes sense for decision-makers and government representatives to focus on the stakeholders' engagement, commitment, management, and collaboration in order to ensure the quality of sustainable development.

- *The human development scale is positively influencing the quality of sustainable development.*

This research provides evidence in favour of an agreement with this (Cohen & Mankin, 2002). However, for government entities to move these initiatives along quickly and see them through to completion, strong leadership is required. In addition, the success of a sustainable development project is greatly influenced by competent leadership that is aware of the technology, legal requirements, and policy objectives. Determining leadership support, engagement, and cooperation with adequate knowledge and style on the quality of sustainable

development is therefore something that decision-makers and government officials should focus on more.

- *The environment development scale is positively influencing the quality of sustainable development.*

This study provides evidence in favour of this idea, which is backed by earlier research (Emas, 2015) (Floridi , Pagni , & Falorni , 2011). This assessed how stakeholders affected the quality of sustainable development being implemented. Based on this finding, it makes sense for policymakers and government representatives to focus on stakeholders' engagement, dedication, management, and collaboration with regard to the quality and success of sustainable development.

The findings of this study provide decision-makers and government representatives in developing nations generally, and particularly Sri Lanka, with valuable recommendations for understanding how various elements impact the execution of the quality of sustainable development. The study will offer a helpful direction for a logical classification of variables, assisting key entities in government policy making and development efforts. Because the Sri Lankan government and many other governments struggle with a low level of development, it is anticipated that the study's findings will help decision-makers and government officials raise the standard of sustainable development. In conclusion, this study



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has made an effort to provide a better knowledge of the pertinent elements that may have an impact on the standard of sustainable development in Sri Lanka's southern area through a literature review and survey.

This study is based on 1000 respondents, and because of its small sample size and narrow emphasis on a particular topic, further research can be done in the future to confirm the findings and test the elements in different cultural contexts. Additionally, this study might be expanded in future research by taking into account the impact of other elements related to the nation's SDGs.

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