ARE ENVIRONMENTAL, SOCIAL, AND GOVERNANCE FACTORS IMPACTING MALAYSIAN INVESTORS' DECISIONS? AN EMPIRICAL ANALYSIS

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Abstract. Incorporating environmental, social, and governance (ESG) considerations into stock market investment decisions is crucial amidst the onset of the COVID-19 pandemic and world turmoil, as these are essential to sustainable development. The underpinning theory of the Theory of Planned Behaviour (TPB) is employed, and the ESG aspects are examined. A survey approach is adopted, and a total of 300 respondents are collected. Partial least squares (PLS) analysis is used to analyse the obtained data. The findings suggest that environmental, social, and governance factors have a significant impact on Malaysian investment decisions following geopolitical conflicts and the ongoing COVID-19 pandemic-related distortions. However, their investment horizon has no moderating effect on their investment decisions. This research has provided valuable insights for investors, institutions, communities, and regulators. Increased awareness of the impact of ESG on individual investment decisions in Malaysia could prompt private and public institutions to prioritise ESG practises for both long-term and short-term attributes as they strive to respond to the needs of individuals and society. Regulators should provide incentives to corporations that integrate EGS practises, which include providing subsidies and stimulating greater strategic flexibility through deregulation of establishments, thereby contributing to a more positive impact on the country's financial system.
Keywords: *environmental, social, governance, investment decisions, investment horizon*

Introduction

The global sustainable investment, AUM has expanded its asset base to USD 35.3 trillion at the start of 2020, a growth rate of 15% since the 2018 report (GSIA, 2020). The sustainable notion has many labels, such as ESG, Ethical, Green, Impact, Mission, Responsible, Socially Responsible, and Values, which adopt various approaches including environmental, social, and corporate governance criteria to improve positive societal impact while creating long-term competitive financial returns (USSIF, 2014). According to Adam and Shauki (2014), investors' choices regarding SRI (Socially Responsible Investment) are influenced by their behaviours towards social, ethical, and environmental (SEE) concerns and financial objectives. However, in the post-COVID-19 era, investors' awareness of ESG is growing. The global uncertainty and the pandemic COVID-19 have conveyed to the world that sustainability entails more than just addressing environmental issues. It involved building resilience infrastructure as an economic prospect, which is precisely where the ESG discussion becomes relevant. It is undeniable that giving due attention to ESG matters has become essential for achieving long-term competitive success in today's rapidly evolving corporate context. The benefits of proactively addressing ESG concerns extend beyond creating a positive public relations story and satisfying institutional shareholders. Today, a successful ESG programme enables organisations to tap into substantial funding opportunities, promote sustainable growth, and establish a superior corporate image. Individual and

institutional investors are placing large sums of capital into companies that prioritise sustainable and ethical operations and governance. Many financial institutions are now integrating ESG assessments into their portfolio risk evaluations, suggesting that capital will continue to be directed towards companies with robust ESG initiatives. Furthermore, corporations that grasp the importance of responding to changing environmental and socioeconomic conditions are well equipped to overcome competitive challenges and identify strategic opportunities. Overall, embracing comprehensive and proactive ESG practises can enhance a company's internal control system and increase its competitive moat over other industry participants.

ESG considerations share many common interests with Islamic investment in Malaysia, which originated from the concept of excluding unethical activities. Wilson (1997) highlighted the similarities between these two types of investment approaches, including the practise of screening investments for ethical acceptability and the prohibition of investing in harmful activities. Consequently, the Malaysian government is expected to promote and accelerate the development of ESG funds in the country. Notably, in 2017, the Securities Commission Malaysia (SC) issued SRI Guidelines and introduced various Shariah-compliant financial products, including the world's first green SRI Sukuk. According to Ong (2021), the Malaysian government plans to issue sustainability Sukuk denominated in ringgit worth up to RM10 billion in 2022 to fund eligible environmentally and socially friendly projects. So far, the Sukuk has been oversubscribed 5.6 times, demonstrating investors' dedication to sustainable development. When investing, ESG factors require an examination of a company's diverse non-financial performance, including the impact of its practises on the natural environment (such as carbon emissions, water use, and energy use), social considerations (namely fair trade principles, product safety, philanthropy, and health and safety), and the quality of corporate governance (that is, bribery and corruption, stakeholders' activity, and board independence) (Przychodzen et al., 2016). In developed nations, the incorporation of non-financial information, including ethical and ESG information, into investment decisions has grown into a common phenomenon (CFA Institute, 2019; Dahlberg and Wiklund, 2018; Berry and Junkus, 2013). In Malaysia, the domestic stock exchange, Bursa Malaysia, launched the FTSE4Good ESG Index in 2014 to cater to investors' demand for ESG index solutions. But, ESG investment is still in its infant stage in Malaysia (Ng, 2020). Therefore, significant efforts are needed to strengthen the influence of ESG factors and shape sustainable development in the industry.

Problem statement

Non-compliance with ESG can risk losing massive investment opportunities, which is now a key factor for achieving sustainable growth, equity, and inclusivity (Yusof, 2021). In July 2020, US Customs and Border Protection issued a detention order for specific Top Glove shipments (Nakano, 2020) due to governance concerns. The 1MDB scandals have also had an impact on investor reasoning, the country's image, and the Malaysian population, who are outraged by the case (Wong et al., 2019). Poor corporate governance is the main failure for 1MDB, and the company's performance has been disappointing, with a Ra debt of M50 billion as of January 2016. Next, environmental concerns are also prevalent, with frequent water disruptions caused by improper chemical dumping in Malaysia's rivers. This issue has sparked a local movement for stricter punishment against industrial polluters, as more than a million residences in

Malaysia's largely populated Klang Valley region encountered extended water cut-offs in September 2020 due to illegal chemical dumping, which disrupted the state's ageing water filtration facilities.

ESG issues are not only constraining investors and corporations but also affecting the daily lives of all populations. The adoption of ESG criteria is seen as an economically and ethically wise decision as it promotes sustainable development for businesses and communities. The pandemic and global upheaval has raised the relevance of ESG factors, leading to a shift towards more inclusive capitalism. Investors now recognise that organisations that integrate ESG considerations are better positioned for long term success, less susceptible to risk, and more adaptable to market volatility. Socially responsible investors, who prioritise factors beyond financial returns, have been the driving force behind the rise of ESG investing. Thus, this study aims to explore the impact of ESG factors on the investment decisions of Malaysians in the light of geopolitical turmoil and the ongoing distortion caused by the COVID-19 epidemic. The specific objectives of this paper are as follow: (1) to explore whether there is a positive relationship between environmental factors and individual investment decision among Malaysians; (2) to examine whether there is a positive relationship between social factors and individual investment decision among Malaysians; (3) to analyse whether there is a positive relationship between governance factors and individual decision among Malaysians; and (4) to investigate whether investment horizon moderates the relationship between ESG factors and individual investment decision among Malaysians.

The findings help interested parties understand how ESG is perceived by investors, both existing and potential, and enable insight into the current trend of ESG in Malaysia. The findings extend beyond the individual level and can benefit industry players, including investors, managers, fund companies, regulators, and society. In times of uncertainty following the COVID-19 crisis, investors' decisions may not always be influenced by the same factors, which makes this research especially valuable as it can provide better insight and facilitate the stock market's smooth and efficient functioning.

Literature review and hypotheses development

Theory of planned behavior (TPB)

The theoretical underpinning of this study is based on the Theory of Planned Behaviour (TPB), developed by Icek Ajzen in 1985 as an enhancement of the Theory of Reasoned Action (Ajzen, 1985), itself grounded in the Expectancy-Value Theory (Ajzen, 1980). TPB posits that an individual's attitudes towards a behaviour, their subjective norm, and their perceived behavioural control are major determinants that directly affect their intention to perform that behaviour (Ajzen, 1991). In this research, only the attitudes of TPB (of stock market investors towards ESG factors) are evaluated. Previous studies by Fang et al. (2017) as well as Yang and Jolly (2009) investigated the effects of consumer perceived value and subjective norms on using mobile data services. Attitude is an inherent psychological property that includes conative tendencies, cognitive aspects, and affective aspects that demonstrate persistence and consistency in behaviours (Gifford, 2007) (*Figure 1*). According to Ajzen (1991), attitude towards behaviour indicates a person's evaluation of the behaviour. In investing decisions, investors' attitudes towards different investment criteria are important

(Alleyne and Broome, 2011; East, 1993). A positive attitude towards ESG is more likely to lead to ESG investment practises. The effect of attitude on intention has been supported in many studies (Warsame and Ireri, 2016; Gopi and Ramayah, 2007; May, 2005; Wu and Chen, 2005). Adam and Shauki (2014) find that attitude has a strong impact on investor decision-making in SRI. Warsame and Ireri (2016) show that attitude influences Islamic bank customers' intentions to use Sukuk in Doha and Qatar. Yadav and Pathak (2016) find that attitude and environmental concerns can influence young Indian consumers' intentions to purchase green products. Hence, TPB is effectively applied, either partially or wholly, in numerous disciplines by various researchers. However, there is a gap in understanding stock market investor attitudes and investment decisions regarding ESG investing by employing TPB. Hence, this framework also explores the moderating effect of investment horizons on the impact of ESG factors on investment decisions.

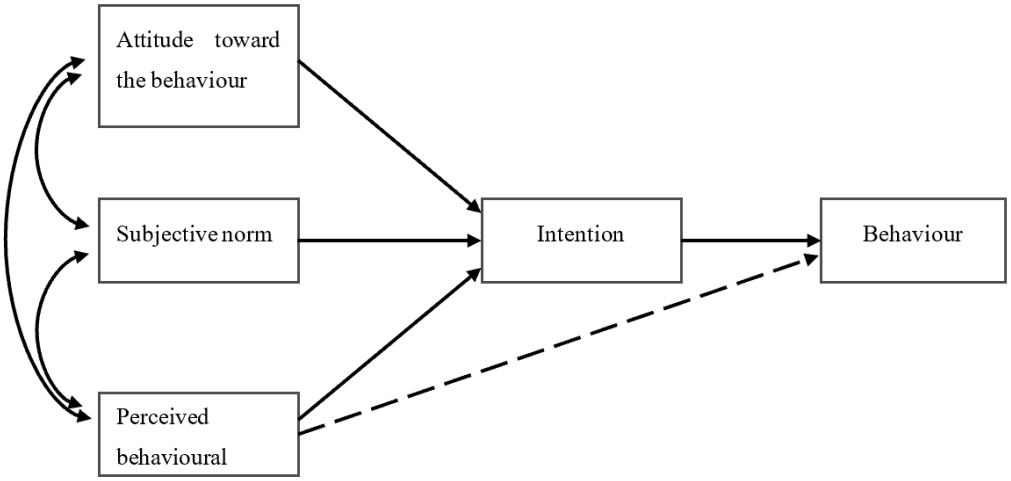

Figure 1. *Research framework.*
Source: Gifford (2007).

Investment decision making post COVID-19 amidst global turmoil

There has been a considerable increase in the number of money managers and institutional investors that evaluate ESG concerns to identify responsible, well-managed firms that are resilient in the long run (USSIF, 2020). Berry and Junkus (2013) portray that there have been a few research projects and surveys conducted to answer the question of what defines SRI and investor intention towards SRI. These scholars conducted a study on the intentions and decision-making of investors who had previously invested in SRI or ESG funds. According to the findings of Berry and Junkus (2013), firms that invest in SRI, either through managed funds or direct equity investment, should screen out investments connected with social problems. Common social problems are alcohol, tobacco, gambling, and weapons. SRI is a type of investment that focuses on screening equities for social or environmental attributes rather than financial performance (Pan and Mardfin, 2001). Therefore, an SRI investor could avoid supporting or purchasing from firms that are perceived to be detrimental to the investor's social beliefs. Alternatively, the investor may abstain from those already held, a process called divesting. According to Derwall et al. (2011), a socially responsible investor will opt for not-for-profit investment products and abstain from abusing social norms.

Cheah et al. (2011) describe two sets of investor views, one of which shows that attitudes play a role in the decision to invest in SRIs. Investors see a firm's financial performance as less essential than its social and environmental performance. Research by McLachlan and Gardner (2004) explains that investors place a greater emphasis on social benefit than shareholder return. In other words, investors are more concerned with encouraging ESG goals than maximising shareholder wealth. The second set of investors' views in Cheah et al. (2011) reveal that corporations should be more responsible to their shareholders than to society, and vice versa. This view expresses opposing perspectives on whether management can maximise a company's value by solely focusing on maximising the wealth of shareholders instead of addressing the interests of external stakeholders. The extent to which a corporation engages in corporate social responsibility (CSR) initiatives is interpreted as an indication that management places a lower or higher priority on external stakeholders' interests versus shareholders' interests. As a result of these two perspectives, individuals with a strong PSA are more likely to pick SRIs as they see such investments as a way to encourage social and environmental concerns, and companies that respond to a broader stakeholder interest would be more effective in maximising shareholder value in the long run. Institutional investors are one of the most important target groups for SRI, because this group has a large sum of funds to place and can significantly impact SRI and ESG investment internationally (Gajdosova, 2011). Furthermore, many organisations acted to raise awareness globally, including foundations, the Organisation for Economic Cooperation and Development (OECD), religious groups, and charities. They have a significant impact on private investors' decisions. Consequently, it generated growth in ESG development. Moreover, government initiatives on ESG contribute to greater awareness among private investors and may ultimately cause them to implement ESG practices.

According to Berry and Junkus (2013), there are problems or concerns when social responsibility is used as a criterion in the investing process. However, a theoretical model is lacking to assess how much social responsibility is reasonable or to identify the ideal trade-off between social responsibility and other investing criteria, particularly risk and return. Therefore, SRI falls outside of the conventional efficient market framework used in finance theory to determine investment attractiveness. On the other hand, it is complicated to employ ESG principles. A fundamental consideration is whether to apply an inclusionary or exclusionary SRI filter. The inclusionary technique is more challenging since it requires the firm's investment weight to be adjusted based on whether its behaviour is socially responsible or not, and the techniques available has a large degree of subjectivity, as it is difficult to quantify the behaviour of a corporation. Therefore, the exclusionary method is recommended and is often used, where one would select investments for a portfolio by screening out certain firms based on their products or behaviours that destroy social norms, such as collaborating with certain repressive regimes or being involved in labour norm violations. To summarise, investors' intentions towards ESG have been growing and could be one of the fundamental recognitions for long-term value creation. The COVID-19 outbreak and uncertainty appear to have expedited the shift to more purposeful and inclusive capitalism. Investors are keen to invest in firms that integrate with ESG. Thus, it discourages investors from supporting what violates societal standards and instead encourages them to invest in ESG products.

Environmental factors

Environmental factors are subjects related to climate change, greenhouse gas (GHG) emissions, stratospheric ozone depletion, changes to the nitrogen and phosphorus cycles, ocean acidification, air, water, or resource pollution, changes in land use, waste management, biodiversity loss, energy efficiency, renewable energy, and natural systems. Due to the severe impact of pollution, internal and external stakeholders have recently shown increased interest in the environmental performance of commercial firms (Jasch, 2006). Jasch (2006) added that internal stakeholders such as employees are impacted by pollution in the workplace, whereas external stakeholders include communities impacted by environmental activist organisations, local pollution, investors, shareholders, suppliers, government regulators, consumers, and others. The economy and the general population must understand the planet and environmental change because of the backward and forward effects of economic development, social transformation, the scarcity of necessary resources for human beings, and population growth (Zhu, 2017; de Carvalho Ferreira et al., 2016). Hence, environmental considerations bear significance when making an investment choice. A measure of environmental factors can be used to assess a person's environmental attitude and awareness. For example, it indicates a positive attitude towards the environment, as evidenced by consumers' shopping habits (Ansar, 2013).

According to Sultana et al. (2018), due to the visible, widespread repercussions on biodiversity, the devastation to natural resources, and the hastened global warming produced by corporate business, the consequences corporations have on the environment have gradually gained prominence, as seen by the abundance of literature. As a result, businesses with environmentally friendly practises can be trusted to generate profits that are both reasonable and sustainable and to uphold their environmental responsibilities. Hence, firms that engage in socially responsible investment typically attract investors that have significant environmental concerns (Berry and Junkus, 2013), along with fulfilling their environmental responsibilities. The relationship between environmental considerations and investment decision-making processes has been studied in the past, for instance, in Australia, China, Denmark, and the USA. Investors in Australia expressed that environmental information was crucial for decision-making, while brokers and financial analysts downplayed its importance (Deegan and Rankin, 1997). In addition, despite the investment horizon, environmental data has a positive impact on Danish investment decisions (Holm and Rikhardsson, 2008). In the USA context, environmental communication on decreasing costs of pollution does impact the investment decisions of potential users of financial statements (Belkaoui, 1980). In contrast, there is no substantial association between environmental factors and the choice to invest for Zimbabwean investors (Chiromba, 2020). With the growing attention of investors across the world concerning the influence of environmental issues on investment decisions, it is necessary to study whether investors in Malaysia consider environmental factors in their investment decisions. Hence the first hypothesis is developed.

Hypothesis 1 (H1): There is a positive significant relationship between environmental factor and individual investment decision among Malaysians following the outbreak of the COVID-19 pandemic.

Social factors

Social factors include the well-being, interests, and rights of societies and people, primarily including human rights; workplace safety and health; diversity; freedom of expression and freedom of association; bonded labour, child labour, and slave labour; labour standards in the supply chain; access to medicine and health; human capital management and employee relations; relations with local communities; controversial weapons and consumer protection; and activities in conflict zones. Companies that have a strong social performance have an easier time recruiting qualified employees (Turban and Greening, 1997). Retail investors believe that higher management quality is a proxy for improved financial performance (Frieder and Subrahmanyam, 2005). Additionally, social factors are rated higher than environmental factors to influence socially responsible investors (Khemir et al., 2019). In contrast, social factors are not associated with stock market investors in Zimbabwe (Chiromba, 2020). In light of the increased worldwide awareness of the role that governance concerns have in investment decisions, this generated a chance to explore whether social factors impacted the investment decision in Malaysia following the COVID-19 pandemic.

Hypothesis 2 (H2): There is a positive significant relationship between social factor and individual investment decision among Malaysians following the outbreak of the COVID-19 pandemic.

Governance factors

Corporate governance is designed to maintain shareholders' interests and oversee management's decision-making behaviour (Naveed et al., 2020). Environmental practises and social responsibilities are more likely to be employed by corporations with good governance procedures. Governance issues relate to the governance of firms and other investee entities, and include board size, structure, diversity, skills, independence, internal controls and risk management, executive pay, disclosure of information, business ethics, shareholder rights, stakeholder interaction, the relationship between a company's management staff and other stakeholders, bribery, and corruption. Most members of the Australian pension fund demonstrate a preference for examining corporate governance issues over social and environmental concerns and perceive that effective corporate governance has a positive impact on financial performance while remaining neutral on the financial implications of environmental and social concerns (De Zwaan et al., 2015), whereas governance factors are not considered by Zimbabwean investors (Chiromba, 2020). Due to the 2008 global financial crisis, various stakeholder groups have demanded better governance. However, it is uncertain if stock market investors are taking corporate governance concerns into account when considering a nation where investors have recently faced a stock market crash due to the COVID-19 pandemic. Globally, investors are increasingly considering the governance issues of the firms they invest in, mostly for investment indemnity. Therefore, the following is postulated.

Hypothesis 3 (H3): There is a positive significant relationship between governance factor and individual investment decision among Malaysians following the outbreak of the COVID-19 pandemic.

Moderating variable: Investment horizon

Individual investors have investment horizons spanning from days to years and are generally grouped into three categories: long-term, medium-term, and short-term investment approaches. The investment horizon, the time span that investors intend to retain their investments and realise their investment returns, is critical to ESG investing decisions (Liu et al., 2020; CFA Institute, 2013). Given that sustainable investment returns are associated with long-term strategies, the investment horizon can play a vital role in ESG investment decision-making and value development (Sultana et al., 2018). Short-term CSR implementation expenditures generally outweigh immediate financial gains (Meng and Wang, 2019). Likewise, Bushee (1998) suggests that short-term institutional investors tend to persuade managers to participate in the investment with myopic behaviour that results in suboptimal decisions. Hence, they are less inclined to support ESG practises. Institutions with a short-term portfolio horizon prefer to improve short-term earnings forecasts, even if it reduces the long-term value of a firm (Bushee, 2001). Such behaviours place the company at a competitive disadvantage, which has a negative impact on the company's valuation and profitability. Besides, when CSR initiatives give additional incentives for stakeholders to enhance a firm's performance and match stakeholders' and shareholders' interests, shareholders ultimately gain in the long run. Consequently, long-term investors are more likely to prefer ESG, which is consistent with the view of maximising stakeholder value (Jensen, 2010; Freeman et al., 2004; Jawahar and McLaughlin, 2001).

Furthermore, long-term investors would not be bothered by a short-term fall in their investment if the return is good, as described by Pérez-Gladish et al. (2012). Conversely, Swedish institutional investors regard the short-term investment horizon as a key impediment to SRI (Jansson et al., 2011). However, according to Busch et al. (2016), the extent to which an investment strategy truly supports a long-term paradigm is determined by the sophistication and scope of the individual concept and approach. Additionally, the investment horizon is associated with time diversification and, hence, related to risk diversification, and considering the key instrument of the investment horizon in ESG factors and investment decisions is essential (Fisher and Statman, 1999). The investment horizon could determine the riskiness of an investment. In a nutshell, the following three hypotheses are developed to evaluate the moderation of the investment horizon between the three elements of ESG factors and the investors' investment decisions in Malaysia (*Figure 2*).

Hypothesis 4 (H4): The positive relationship between environmental factor and individual investment decision among Malaysians following the outbreak of COVID-19 pandemic is stronger with a longer investment horizon.

Hypothesis 5 (H5): The positive relationship between social factor and individual investment decision among Malaysians following the outbreak of COVID-19 pandemic is stronger with a longer investment horizon.

Hypothesis 6 (H6): The positive relationship between governance factor and individual investment decision among Malaysians following the outbreak of COVID-19 pandemic is stronger with a longer investment horizon.

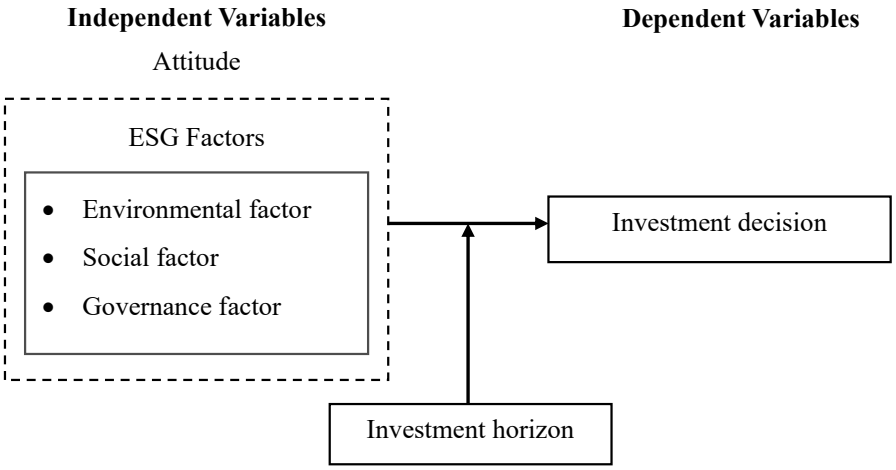

Figure 2. *Research framework.*
Source: Sultana et al. (2017).

Materials and Methods

This study employed primary data and a quantitative research method to investigate the variable relationships. The method involved objective measurement and numerical analysis with structured collection tools, such as questionnaires, to address research questions.

Measurements

The investment decision is explored using five items adapted from Chai et al. (2019). Environmental factors are explored using six items improved from Sultana et al. (2017) and Chai et al. (2019). Social factors are measured by four items modified from Sultana et al. (2017); and governance factors are researched by seven items revised from Sultana et al. (2017) (*Table 1*). This study employs a questionnaire-survey approach to collect data from 300 potential and existing Malaysian investors. The final survey consists of 23 closed-ended questions rated on a 6-point Likert scale, with 1 being "strongly disagree" and 6 being "strongly agree" (Saunders et al., 2009). Non-probability sampling, being cost-effective and highly accessible, is used for data collection, with the questionnaires distributed through social media platforms. The collected data is checked, cleaned, encoded, and transcribed. Partial least squares (PLS) path modelling using Smart PLS 3.0 software is used. Descriptive analysis, Cronbach's alpha test, discriminant validity, and bootstrapping analysis are performed to obtain the results.

Table 1*. Measurement instrument.*

Factor	Questions
Environmental factor	Invest in the companies that care about the risk of climate changing issues like global warming, greenhouse effects, etc. Invest in the companies that care about proper waste management of harmful wastes from the production process. Invest in the companies that care about optimum use of materials, energy or water, and to find more environment-friendly solutions like solar power. Invest in the companies that care about reducing harmful gases (carbon

	dioxide and chlorofluorocarbon) from the production process. Am very worried about air pollution and the issue of ozone depletion. Get frustrated and angry when I think about the ways in which firms caused pollution.
Social factor	Invest in the companies that care about workplace health and safety of the employees and workers. Invest in the companies that care about maintaining good relation with the government and general community (local, national and global) by donating cash, good, etc. Invest in the companies that care about developing the employees skills, competencies, employability and careers by arranging training and education. Invest in the companies that care about increasing employee loyalty and productivity (by promoting an effective life-work balance, a family friendly environment and equal opportunities regardly of gender, age, ethnicity or religion).
Governance factor	Invest in the companies that care about the independent and accountability of board of directors. Invest in the companies that care about setting up an effective board with allocated duties and responsibilities. Invest in the companies that care about financial reporting requirements. Invest in the companies that care about audit committee structure and its funtions. Invest in the companies that care about independence of auditors. Invest in the companies that care about taking necessary actions to control corruption and bribery issues in the organisation. Invest in the companies that care about ensuring equal rights and privilages of the shareholders including minority shareholders.
Investment decision	Have intention to switch from convention investment to invest in social responsibility investment. Have intention to invest in social responsibilityinvestment because of its positive environment contribution. When I have choice between two investment, I choose the one less harmful to people and environment. Am willing to include social responsibility investment in my investment portfolio. Will invest in ESG in near future.

Results and Discussion

Descriptive analysis

Table 2 shows the demographic profile of the respondents. There are a total of 300 respondents, 49% male and 51% female. In terms of age group, most respondents are between 21 and 30 years old (167 respondents/55.7%); 18% of respondents aged 31-40; 16.7% of those aged 20 and below; 8.3% of them aged between 41–50; 1.3% of them aged 51-60; and 0% of those aged above 60. In terms of ethnicity, 76% are Chinese, Malay 14.7%, Indians 9%, and the remaining 0.3% are others. Most of the respondents are currently students. Of the 300 employed respondents, 49.7% are employed, and 14% are self-employed. Students account for 32.7% of the total; retired 1.3%; not employed 1.7%; and the remaining 0.6% are others. In terms of education level, most respondents

(54.7%) have a bachelor's degree, 27.3% are diploma or advanced diploma graduates, 9% of them are SPM or O-level, 4% are STPM or A-level, 2.3% have a master's degree, 1% have a PhD, 1% have professional certification, and 0.7% have other education. In terms of monthly income, 44.3% of respondents have a monthly income of RM1,000 or less. 19.3% of the respondents have an income range of RM1,001-RM3,000, 16% between RM3,001-RM5,000, 14.7% between RM5,001-RM10,000, and 5.7% have an income above RM10,000.

Table 2. *Demographic profile of respondent.*

Category	Frequency (N)	Frequency(%)
Gender		
Male	147	49.0
Female	153	51.0
Age range		
<20	50	16.7
21-30	167	55.7
31-40	54	18.0
41-50	25	8.3
51-60	4	1.3
>60	0	0.0
Race		
Malay	44	14.7
Chinese	228	76.0
Indian	27	9.0
Others	1	0.3
Employment status		
Student	98	32.7
Employed	149	49.7
Self-employed	42	14.0
Retired	4	1.3
Not employed	5	1.7
Others	2	0.6
Highest educational level attained		
SPM / O-Level	27	9.0
STPM / A-Level	12	4.0
Diploma / Advance Diploma	82	27.3
Bachelor Degree	164	54.7
Master Degree	7	2.3
PhD	3	1.0
Professional Certification	3	1.0
Others	2	0.7
Personal income levelper month		
<RM 1000	133	44.3
RM 1001-RM3000	58	19.3
RM3001-RM5000	48	16.0
RM5001-RM10000	44	14.7
>RM10000	17	5.7

Measurement model assessment

Reliability tests such as Outer loading, Cronbach's alpha, and composite reliability, as well as validity tests including convergent and discriminant validity, are conducted (Hair Jr et al., 2021). The results of these tests are presented in *Table* 3.

***Table 3**. Results of testing construct reliability.*

Variables	Items	Other loadings	Reliability test		Discriminant validity
			Cronbach alpha	Composite reliability	AVE
Environment factor	EF1	0.8	0.88	0.909	0.626
	EF2	0.81			
	EF3	0.839			
	EF4	0.82			
	EF5	0.735			
	EF6	0.736			
Social factor	SF1	0.785	0.793	0.865	0.617
	SF2	0.788			
	SF3	0.769			
	SF4	0.799			
Governance	GF1	0.842	0.912	0.93	0.655
	GF2	0.774			
	GF3	0.791			
	GF4	0.817			
	GF5	0.801			
	GF6	0.823			
	GF7	0.814			
Investment decision	ID1	0.832	0.875	0.909	0.668
	ID2	0.862			
	ID3	0.727			
	ID4	0.838			
	ID5	0.821			
Investment Horizon	IH1	1	1	1	1

Reliability tests

To ensure the reliability of the constructs, indicators should have an outer loading greater than 0.7, and the composite reliability (CR) and Cronbach's alpha values should exceed 0.80 (Hair et al., 2012, 2011; Chin, 1998; Fornell and Larcker, 1981). In this study, all scales demonstrated acceptable reliability, as their CR and Cronbach's alpha values are above 0.80 (*Figure 3*).

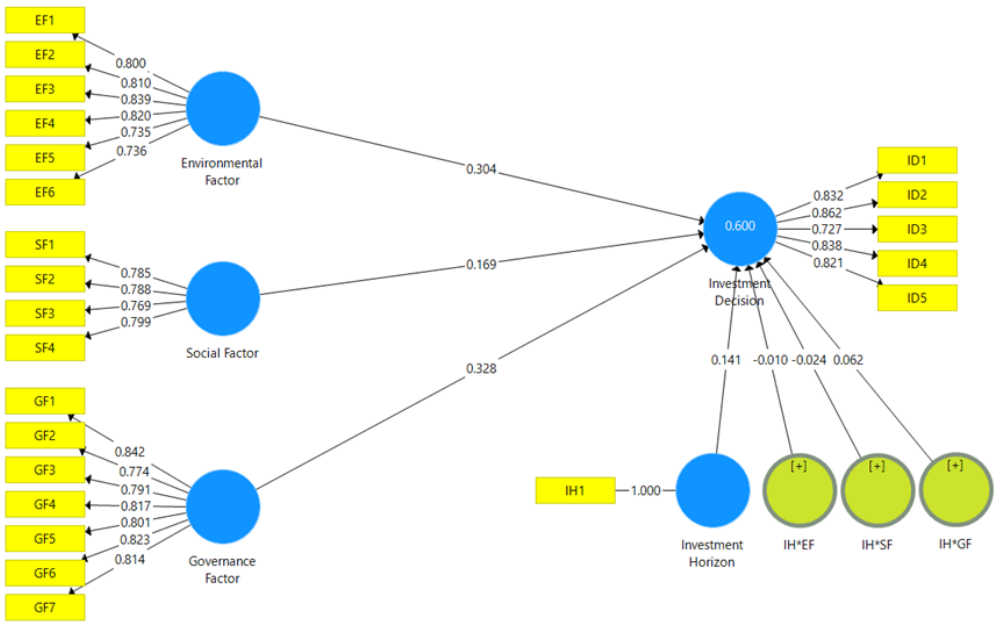

Figure 3. *Measurement model.*

Discriminant validity

Table 4 depicts the results of discriminant validity using the Fornell-Larcker criterion. The results indicate that the square roots of AVE on the diagonal for an environmental factor, a social factor, a governance factor, an investment horizon, and an investment decision are higher than the values of the inter-construct in the associated columns or rows. The result between the constructs is well-established and considered fit and valid.

Table 4*. Results of Fornell-Larcker criterion.*

Category	Environmental factor	Social factor	Governance factor	Investment horizon	Investment decision
Environment factor	**0.791**	-	-	-	-
Social factor	0.774	**0.785**	-	-	-
Governance factor	0.711	0.756	**0.809**	-	-
Investment horizon	0.275	0.222	0.260	**1.000**	-
Investment decision	0.702	0.679	0.695	0.346	**0.817**

Structural equalition modelling

Structural equation modelling (SEM) illustrated the relationships between the constructs and their corresponding indicator variables, while the latent variable relationship was depicted by the structural model (Hair Jr et al., 2021). A structural model examines whether the hypothesised research model is a good fit to the observed data. The relationships among the variables specified in the theoretical model are

evaluated via the path coefficient (β), effect size (f2), predictive relevance (Q2), and coefficient of determination. The coefficient of determination (R2) describes the predictive power of the research model, the path coefficient (β) is the measure of the hypothesised relationship between the constructs, the p-value assesses the significance level (Hair Jr et al., 2021), and the nonparametric measure, the Q-squared coefficient (Stone-Geisser Q-squared coefficients, Q^2), is used to evaluate the model's predictivity (Kock and Hadaya, 2018).

Table 5 lists the structural model parameters with an indication of the test results for the hypotheses, and *Figure 4* depicts the structural model of the study. The R^2 for the structural model is 0.600, indicates that 60 percent of the overall variance in the extent of collaboration is explained by the environmental factor, social factor, and governance factor. The path coefficient (β) between the environmental factor (EF) and the investment decision (ID), is positive and significant (β=0.073, t=4.137, p<0.01), with a small to moderate effect size (f^2=0.070). The positive influence of environmental factors (EF) on investors' investment decisions, as stated in H1, has been confirmed. Moreover, the path coefficient (β) between the social factor (SF) and the investment decision (ID), indicates that the relationship is positive and significant (β=0.071, t=2.389, p<0.05), with a small to moderate effect size (f^2=0.022). The results affirmed H2, indicating that the social factor (SF) of corporations has a significant impact on investors' investment decisions. In addition, the path coefficient (β) between governance factors (GF), and the investment decision (ID) was positive and significant (β=0.083, t=3.963, p<0.01), with a small to moderate effect size (f^2=0.086). H3 is supported, indicating that a higher preference for governance factors (GF) corresponds to a stronger impact on the investment decision, and vice versa. In addition, the moderating effect of the investment horizon was tested in H4, H5, and H6. Through the findings, the investment horizon was not significantly moderating the relationship between environmental factors and the investment decision (β=0.069, t=0.146, p>0.05) with an effect size (f^2=0.000). Likewise, the insignificant moderating effect of investment horizon was discovered (β=0.073, t=0.333, p>0.05, f^2=0.001) for the relationship between social factors and investment decisions and (β=0.082, t=0.755, p>0.05, f^2=0.003) for the governance factor and investment decisions. Investment horizon only slightly strengthened the relationship between the dimensions of ESG factors and individuals' investment decisions, but it was insignificant. Hence, the moderating hypotheses of H4, H5, and H6 were not supported.

Table 5. *Bootstrapping results.*

Hypothesis	Path	Std. Deviation	t-value	p-value	Decisions	R^2	f^2	Q^2
H1	EF->ID	0.073	4.137	0	Supported	0.6	0.07	0.387
H2	SF->ID	0.071	2.389	0.017	Supported		0.022	
H3	GF->ID	0.083	3.963	0	Supported		0.086	
H4	Moderating effect (IH*EF->ID)	0.069	0.146	0.884	Not supported		0	
H5	Moderating effect (IH*SF->ID)	0.073	0.333	0.739	Not supported		0.001	
H6	Moderating effect (IH*GF->ID)	0.082	0.755	0.45	Not supported		0.003	

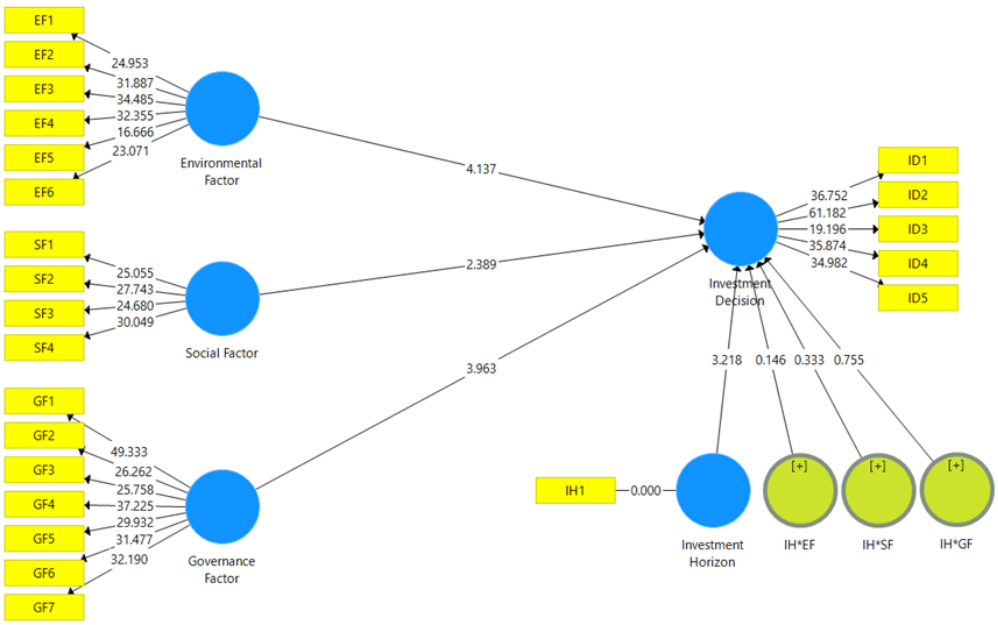

Figure 4. *Structural model.*

Environmental factor

There is a significant positive relationship between environmental factors and investors' investment decisions. This finding is consistent with several studies, including Shamini and Hariharan (2019), Berry and Junkus (2013), Owen and Qian (2008), Jasch (2006), as well as Kim and Choi (2005). The more an investor cares about the environment, the more likely they are to invest in ESG due to the influence of environmental considerations on their attitude and actions.

Social factor

Our result indicates that social factors have a significant positive influence on an individual's investment decision-making. This is in line with Naveed et al. (2020), Khemir et al. (2019), Bradford et al. (2017), Wins and Zwergel (2016), Rakotomavo (2011), as well as Frieder and Subrahmanyam (2005). This is because individuals who are concerned about social issues, such as workplace and human rights, employment benefits, competencies, and skills, are more likely to invest in ESG.

Governance factor

Governance in ESG encompasses a wide variety of business operations, such as a company's rules, standards, information disclosure, compliance, and audits, as well as its management and board structures. In this research, governance factors have a significant effect on the investment decisions of Malaysians following the COVID-19 pandemic. This finding is consistent with Kothari (2019), Aguilera et al. (2018), De Zwaan et al. (2015), and Gregory (2014). Investors prioritise the establishment of an effective board with clearly defined responsibilities and duties for all aspects of corporate governance. This is followed by ensuring compliance with financial reporting standards and maintaining auditor independence. Additionally, among corporate

governance concerns, the independence and responsibility of the board of directors, as well as the form and activities of the audit committee, are seen as essential aspects.

Investment horizon

There is no evidence of moderating effect in the relationship between the various dimensions of ESG factors and the investment decision, suggests that the Malaysian investors failed to recognise the significance of incorporating a longer time horizon as one of the most crucial elements to focus on. This is contrasted to Sultana et al. (2018), who revealed that Bangladesh investors believed that ESG concerns take time to exercise and execute to reap large returns on investment, while Chiromba (2020) study indicated that the time horizon of the investment has emerged as being of great importance for investors in Zimbabwe. According to Eccles and Klimenko (2019), individuals who plan to hold stocks for a longer period of time or permanently have an incentive to prioritise material ESG challenges that could boost the financial performance of corporations. However, the respondents in this study lacked concern for the role of the investment horizon as a moderator between ESG challenges and investment decisions, possibly due to the very strong concern on ESG considerations and investment decisions and hence ignoring the concern of the investment horizon. Despite this, the unexpected risks posed by the COVID-19 pandemic and climate crisis have made ESG investment a priority for Malaysian investors, who prioritise companies that integrate ESG into their business for attitudinal bonding and commitment rather than relying on the investment horizon to make investment decisions.

Conclusion

This study aims to determine whether Malaysians investment decisions are influenced by the ESG components, namely the environmental, social, and governance factors. Our study shows that there is a significant relationship between the ESG variables and individuals' investment decisions in Malaysia following COVID-19 pandemic outbreak. However, there is no moderating influence of the investment horizon on the relationship between various ESG dimensions and investment choices. Companies that prioritise ESG factors and integrate them into their business practises can attract more investment, which can subsequently lead to increased financial performance, a competitive advantage, and long-term growth. Conversely, companies that disregard ESG factors may lose out on potential investment and risk reputational damage should they fail to meet ethical or sustainability requirements. Moreover, stakeholders such as employees, customers, and communities can benefit from responsible businesses that focus on ESG factors, as a sustainable practices, social justice, and a sustainable environment. Additionally, the increased demand for ESG investing can encourage corporations to improve their ESG reporting, leading to a more accountable business environment and enhanced governance. Besides, regulators need to develop ESG policies and guidelines and increase scrutiny of corporations to ensure compliance with ESG requirements. For portfolio managers, there is a need to adjust their investment and risk assessment strategies to account for ESG elements that could affect their portfolio performance.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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