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Testing the Unified Theory of Acceptance and Use of Technology Constructs in Responsible Investment: Case of Insurance and Pension Firms in Zimbabwe

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Abstract

This paper sought to provide an understanding of drivers surrounding the acceptance and adoption of responsible investment and investor behavior shift by insurance and pension firms in Zimbabwe using the unified theory of acceptance and use of technology model. Data were obtained through a questionnaire survey of insurance and pension firms, and correlations, regressions, and path analysis were employed to test critical links between key variables in the model. Many of the unified theory of acceptance and use of technology constructs' relationships to responsible investment adoption and investor behavior change proved to be weak save for social influence. The findings further propose that facilitating conditions and effort expectancy have a moderate impact on responsible investment adoption and investor behavior change whilst performance expectancy has a very weak impact. It was concluded that with accelerated responsible investment information dissemination targeting main insurance and pension firms in Zimbabwe, greater policy influence, more conducive investment environment and cultural change towards more publication of environmental, social and governance issues by firms, more insurance and pension firms in Zimbabwe will opt for responsible investment.

Keywords: Environmental, Social, Governance, Adoption and Technology, Insurance, Pension, Responsible Investment, UTAUT, Sustainable

Introduction

The Zimbabwe insurance and pension industry is under the regulatory authority of the Insurance and Pension Commission (IPEC). According to former IPEC Commissioner, Mpofu (2013), assurance companies have a fiduciary duty to invest in assets which would enhance their ability to settle claims in time, settle maturing policies as well as pay fair and reasonable pensions. Thus, such firms are expected to invest with a long term view by investing in sustainable investments. However, as noted by his successor IPEC Commissioner, Karonga (2017a), most assurers are owner managed hence there is no separation between management and control. 'This

implies that decision made by the company maybe in favor of the shareholders and at the expense of policyholders in most cases', Karonga (2017a). The fiduciary duty to the end beneficiary is therefore compromised. As quoted in Risk & Insurance Zimbabwe (2017), Karonga (2017b) also highlighted that, 'poor corporate governance principles and lack of accountability in the insurance industry has led many policy holders to be prejudiced'. Karonga (2017c) also noted that, in addition to poor governance standards, some trustees lack competence to make good investment decisions. From 2010 to 2016 IPEC had closed more than 130 companies due to poor ethical governance, corruption, failure to meet minimum capital requirements or failure to pay claims amounting to millions of dollars. Such firms were obviously not taking into account responsible investment (RI) in their investment decisions. To this end, and in an effort 'to protect the rights, benefits and other interests of policyholders the Commissioner, Karonga, issued a directive that insurance companies in Zimbabwe should have corporate governance structures by January 2018.

Responsible investment (RI) and unified theory of acceptance and use of technology (UTAUT) model are two issues that emerge from two distinct worlds. RI, also known differently as, Socially Responsible Investing (SRI), Ethical Investing, Sustainable Investing, Triple-Bottom-Line Investing, Green Investing, (Financial Times, 2017), by definition is an approach to investing that aims to incorporate environmental, social and governance (ESG) factors into investment decisions, to better manage risk and generate sustainable, long-term returns, (Principles of Responsible Investment - PRI, 2016). This element is still a peripheral concern in most Zimbabwean corporate fiscal discourse, Maphosa (1997) and Chisaira and Ndamba (2016). UTAUT, as advocated by Venkatesh, et al (2003), aims at explaining user intentions to use an information system and subsequent usage behavior. It is premised on four key constructs, namely: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions. The first three of these constructs are direct determinants of usage intention and behavior, whilst the fourth is a direct determinant of user behavior.

In Zimbabwe research on ESG issues is still very minimal. Thus, for investors, there is still need for a lot of conditional development. Facilitating conditions tend to improve as more and more investors test the factors and provide their recommendations. Currently institutional investors mainly consider corporate governance, and not the whole spectrum of ESG factors in their investment screening processes. This paper therefore, borrows UTAUT from information system (IS) and uses it to try and identify insurance and pension companies in Zimbabwe's usage intention and behavior in RI. Such is the first analysis ever made in this area of RI.

Literature Review

Responsible Investment

The term responsible investment (RI) relates to the idea that investors should examine investment targets' sustainability practices and performance in relation to ESG factors because they can have a material impact on the financial performance of companies, (Business for Social Responsibility, 2012).As noted by CFA (2015), whilst a critical factor in the financial

performance of investments is the investor's ability to identify drivers of the expected risk and return of investments, it is important to note that issues that do not form part of traditional financial metrics also affect the risk and return of investments, and sometimes decisively. Such issues have come to be known generally as environmental, social, and governance (ESG) issues, and their continued and systematic consideration in investment profiles will likely lead to more complete analyses and better-informed investment decisions. For more than a decade, some investors have embraced RI strategies to manage risk and fulfill fiduciary duties (Kim,2016). According to Voorhes and Humphreys (2011), investors are driven by various motives, amongst them, personal values, institutional mission, or demands of their clients to embrace RI. Some are seeking a hidden competitive advantage, whilst some are seeking a long-term sustainable social, environmental and governance impact.

ESG issues proved to be investment key decision making factors in firms like Petrobras, Enron, Banco Espírito Santo, Parmalat, Toshiba and most liquidated banks in Zimbabwe where governance risk proved to be so costly for investors. Cases involving BP, in the run-up to the Gulf of Mexico oil spill in 2010, climate change, fossil fuel and the ongoing drought in California have heightened the need to consider environmental risk quite seriously. Social issues, especially breakdown of labor relations, became significant after the South African mining company Lonmin's Marikana massacre in 2012. Social issues related to labor relations have also, to some extent, affected Walmart's reputations as the company is frequently criticized for its labor practices, CFA (2015).

Whilst investors may choose to incorporate the evaluation of ESG risk exposures as part of their investment process for diverse reasons, a growing realization is now that, whether motivated by economic value or moral values, ESG issues are relevant for all long-term investors, CFA (2008). To this end, as of August 2017, more than 1,760 global institutions, representing over US$65 trillion in assets under management were backed by the UN Global Compact Principles for Responsible Investment (PRI). The guiding ideology is that investors worldwide have a duty to act in the best interests of their clients and end beneficiaries, and increasingly investors are realizing that the inclusion of pure-play ESG factors (not based on political or emotional perceptions) in investment risk and return analysis is the only way to completely fulfill this duty, (Freshfields,Bruckhaus and Deringer, 2005).

Ways of ESG Inclusion

According to CFA (2015) investors can use six non-mutually exclusive methods for bringing ESG considerations into their decision making, and these are: exclusionary screening, best-in-class selection, active ownership, thematic investing, impact investing, and ESG integration.

Exclusionary Screening: Involves avoiding securities of companies or countries on the basis of traditional moral values (e.g., products or services involving alcohol, tobacco, or gambling) and standards and norms (e.g., those pertaining to human rights and environmental protection).

Best-in-class selection (also called positive selection or positive alignment): Involves preferring companies with better or fast improving ESG performance relative to sector peers.

Active ownership: Involves the practice of investors entering into a dialogue with companies on ESG issues and exercising both ownership rights and voice through monitoring or influencing outcomes and practices to effect change. This is in sharp contrast to the idea that investors should vote with their feet by simply selling off the investments with questionable practices.

Thematic investing: It refers to investing that is based on trends, such as social, industrial, and demographic trends including clean tech, green real estate, sustainable forestry, agriculture, education, and health.

Impact investing: This involves investing with the disclosed intention to generate and measure social and environmental benefits alongside a financial return. It is guided by four core characteristics namely: (1) investors intend to have a social and/or an environmental impact, (2) investments are expected to generate a financial return on capital and, at a minimum, a return of capital, (3) investments are to generate returns that range from below market to risk-adjusted market rate, and (4) investors are committed to measuring and reporting the social and environmental impacts, (Global Impact Investing Network, 2017);

ESG integration: Involves a systematic and explicit inclusion of ESG risks and opportunities in investment analysis without necessarily having to require peer group benchmarking as required in Best-in-Class.

Impact of ESG Factors on Investment

Whilst institutional investors invested largely in equity and debt securities, of late investments have diversified into real estate, hedge funds, private equity and other alternative investments, Fresh fields Bruckhaus Deringer (2005). Because of this, investment decisions made by such investors have considerable impact on the environment and on society as a whole, and without proper corporate governance structures the impact can be worsened.

Pension funds are pre-funded by employer and/or employee contributions and those contributions are managed/invested by trustees or managers to produce are turn anticipated to provide a pension for contributors/members or their survivors on retirement or death. On the other hand, to generate profit, insurers invest the premium they receive from individuals and organizations seeking to protect themselves against risk. Given the magnitude of insurance and pension reserves held by insurance and pension companies, they rank among the most powerful institutional investors in Zimbabwe and globally. As such, investments of this nature are long-term; hence the need to embrace fiduciary duty to the end beneficiary in their investments by integrating ESG factors in investment decisions.

ESG factors have the capacity to detrimentally affect a company's operations even to the extent that one or more product lines or possibly entire operations could be severely affected, and in some cases shut down. Thus, in the process of doing whatever a firm does to create value for its shareowners, firms are expected to understand and act on the ESG factors relevant to their operating activities in order to mitigate operating risks. Hence the identification of such firms by

insurance and pension funds investors is key. Whilst the operating risks for industries dependent on finite natural resources, like fossil fuel or precious metals may be straight forward and easily anticipated, it is important to note that every industry faces ESG-related factors somewhere along its supply chain. Thus, it is important to consider such factors regardless of industry. However, in a study assessing the impact of ESG factors on individual investment decision in Zimbabwe, Chiromba (2019) notes a weak influence of ESG factors on investment decision. As shown in Table 1 below, investors need to understand that ESG factors are many and vary from industry to industry, including second-order effects. The list shown here is not exhaustive.

Table 1: List of ESG Factors

Environmental	Social	Governance
▪ **Carbon and greenhouse gas emissions, disclosure/ measurement and reporting** ▪ **Climate change; effect on Company/risk exposure/opportunities** ▪ **Ecosystem change** ▪ **Facilities citing environmental risks** ▪ **Hazardous waste disposal/cleanup** ▪ **License to operate in communities** ▪ **Pollution** ▪ **Renewable energy** ▪ **Resource depletion** ▪ **Toxic chemical use and disposal**	▪ Animal welfare ▪ Child labor ▪ Community relations ▪ Discrimination ▪ Diversity (employee/Board diversity) ▪ Facilities, citing social risks ▪ Genetically modified organisms ▪ Living wage disputes ▪ Predatory lending ▪ Political contributions ▪ Political risk of involvement in troubled markets, countries ▪ Sexual harassment ▪ Shareowner advisory vote on executive compensation ▪ Forced/Slave labor	▪ Cumulative voting ▪ Dual-class share structure ▪ Executive compensation (pay for performance, pay equity) ▪ Majority voting ▪ Poison pills ▪ Say on pay ▪ Separation of chairman/CEO position ▪ Shareowner rights ▪ Staggered Boards ▪ Takeover defenses/market for control

Source: CFA Institute (2008)

Insurance and Pension Funds in Zimbabwe

As at March 31, 2019Zimbabwe had 11 direct life assurance companies, 5 composite life reassurance companies and1,436life assurance agents (IPEC 2019a); 9 funeral assurers (IPEC 2019b) and 18short-term-non-life insurance companies, IPEC (2019c). The country also had 1,088 registered private occupational pension funds of which 900 were insured funds, 172 were self-administered funds and 16 stand-alone-self-administered funds (IPEC 2019d). Table 2 below shows a brief overview of business volume as measured by gross premium written (GPW), total assets and investment in prescribed assets as at March 31, 2019.

Table 2: Insurance and Pension Firms Business Snap Shot

Sector	Volume (GPW)	Assets	Investment in Prescribed Assets
Funeral Assurance	$11.11 Million	$77.31 Million	$1.25 Million
Short Term Non-Life	$131.59 Million	$393.95 Million	$22.21 Million
Life Insurance	$112.02 Million	$54.95 Billion	$477.44 Million
Pension	$214.40 Million	$5.38 Billion	$393.91 million

Pension funds in New Zealand and Australia are enjoying the befits of low-carbon investments, which saw the re-allocation of NZ$950 million away from 297 companies with high exposure to carbon emissions and reserves into companies deemed less vulnerable to tighter regulation in this area, Newell (2017). As reported by Mpofu (2016), in Zimbabwe pension funds are lowering their exposure in equities and investing more in property portfolios. As at June 2015, standalone funds had invested $601million or 46% in properties, $150million or12% in capital market securities, $34million or 3% in money market investments,$451million or 36% in other securities, whilst prescribed assets had an investment of 3%. With prevailing poor economic conditions in Zimbabwe, pension funds are increasingly being used as a cheap source of funding for long-term projects. IPEC, in 2013, did set the upper levels of investment for prescribed assets at 40%, properties 50%,quoted shares 50%, unquoted shares 10%, money market investments 45%, cash 10%, other investments 10%, cash in any one bank should not exceed 5% of an insurance company's investments and the combined total of properties and equity investments should not exceed 70%. Also, not more than 10% of a fund should be invested in a single listed equity counter and the insurance firm cannot put more than 10% of its investments in an associate company and neither can a pension fund invest, or lend more than 10% to the employer organization, Zim-treasury (2013).

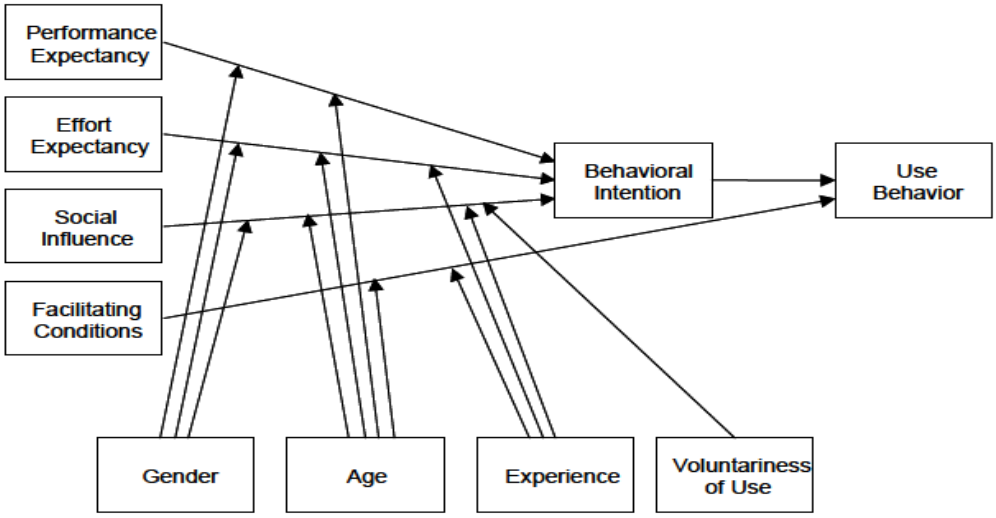
Theoretical Grounding

Unified Theory of Acceptance and Usage of Technology (UTAUT)

The individual's acceptance of information technology is generally based on three important interlinked elements namely, 1) the individual reactions to using information technology, 2) the intentions to use information technology, and 3) the actual use of information technology, Venkatesh et a (2003).Generally speaking, such three elements can equally be used in situations where one is dealing with individual's acceptance of new ideas or new mode of doing things. That is, one's acceptance of new mode of doing things is generally based on 1) the individual reactions to using new ideas, 2) the intentions to use new ideas, and 3) the actual use of new ideas.

As noted by Venkatesh et al (2003), and as shown in Figure 1 below, UTAUT has seven significant constructs that are direct determinants of intention or usage of information technology. Of these seven constructs four were found to play a significant role as direct determinants of user acceptance and usage behavior, namely: *performance expectancy*, *effort expectancy*, *social influence*, and *facilitating conditions*. These are the only constructs considered in this paper as they were also believed to be key drivers of the general acceptance of new ideas.

Fig. 1: Unified Theory of Acceptance and Use of Technology (UTAUT) Model



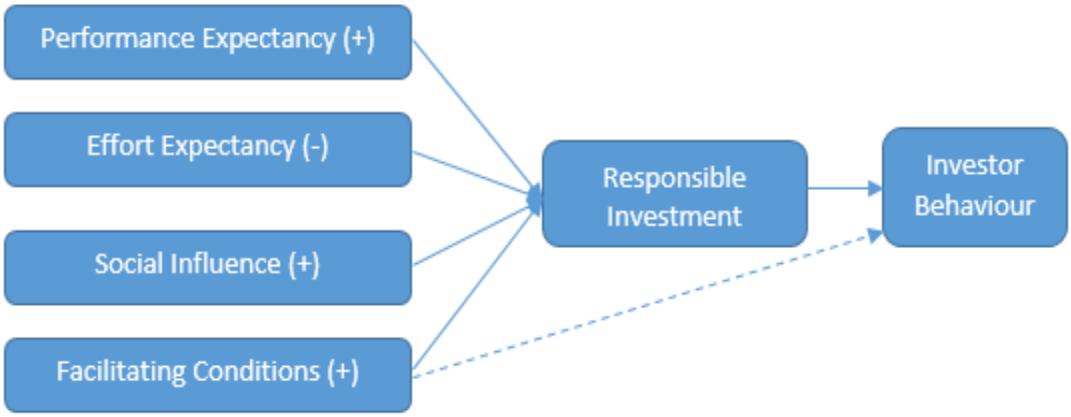
Source: Venkatesh et al (2003)

Conceptual Model and Hypothesis Development

Conceptual Model

The following conceptual model, shown in figure 2, is based on literature covered, and helps in explaining the hypotheses that are tested in this study. The underlying conception of this model is that the investor's willingness to incorporate ESG factors in investment decision is influenced by performance expectancy, effort expectancy, social influence and facilitating conditions. The first three constructs are believed to have a direct impact on the investor's application of responsible investment whilst the fourth has an impact on both responsible investment and investor behavior.

Figure 2: Constructs influencing investors' decision to incorporate ESG factors in investment screening and behavior



Hypothesis Development

Performance Expectancy Construct

This is the degree to which an individual believes that using the system will help him or her to attain gains in job performance. According to Bos (2014), 'ESG integration in the mainstream investment process provides a clear opportunity to optimize the risk–return characteristics of a portfolio'. Barclays, in its 2013 report as quoted by Pizzani (2015), evidenced that ESG factors are becoming more important to companies. More and more investors 'are incorporating ESG screening in recognition of the material impact ESG factors can have on financial risks and returns', Barclays (2013).

Thus, we expect that investors will incorporate ESG factors in investment decision making if they feel that they will be able to beat the market and attain more profits than their investment counterparts.

H_1:*Performance Expectancy has a significant positive influence on the investor's intention to incorporate ESG factors in investment decision.*

Effort Expectancy Construct

It is the degree of ease associated with the use of the system. Pizzani (2015), noted that ESG market norms are still emerging and they are still far from being standardized. The inclusion of ESG in investment screening involves the assessment of more data in addition to the basic risk and return approach. Some factors needed to be included, depending on the analysis being done(such as government impact) are quite difficult to stick a value tag on them. Because of this, approaches to ESG screening vary as more and more investors are taking an integrated approach to ESG analysis across equity, fixed-income, and private investment markets.

Whilst investors are still using several different ways of applying ESG factors in investment and company valuations, three methods have proved, so far, to be quite popular. Bos (2014) outlined these methods as:

i. *Adjusting the discount rate in the Discounted Cash Flow (DCF)*: Using this method, companies that score poorly on ESG metrics will have a higher risk profile on average hence higher discount rate - resulting in a lower valuation - in the DCF. The reverse holds true for companies that score well on ESG metrics.
ii. *Adjusting future cash flows*: This method is related to the DCF only that what is being adjusted in this case are future cash flows and not the discount rate. It is premised on the understanding that firms that do not consider ESG issues in their operating processes are bound to suffer high legal, safety and operational disruption costs in future should there be any disruptions to environmental, social or governance related items due to their operations. Examples include BP Oil spill in 2010 and apparel factory collapse in Bangladesh in 2013, amongst others. Such companies are bound to have lower future cash flows due to additional costs than those that incorporate ESG factors in their operating processes.
iii. *The multiples analysis method*: This involves an assessment of price/earnings or price/book multiples where the investor integrates ESG factors by adjusting the target multiple. A premium is added to the target multiple for companies that do well on ESG and a discount to the target multiple for companies that score poorly on the same.

These three methods, though being a starting point, are marred with their own challenges. As noted by Bos (2014), the magnitude of discount rate and target multiple adjustments still remain subjective, and there may as well be issues related to double counting. The future cash flow adjustment method is still haunted by difficulties in estimating cash flow impact on low-probability, high-impact events, like an oil spill, or trying to assign monetary value to ESG factors for which there is no market, such as governance factors.

Because of this, we expect that incorporation of ESG in investment screening by investors will be lower the higher the effort that is expected to be used in ESG evaluation process.

H_2:*Effort Expectancy has a significant but negative influence on the investor's intention to incorporate ESG factors in investment decision.*

Social Influence Construct

Social influence construct is the degree to which an individual perceives that important others believe he or she should use the new system. As noted by Pizzani (2015), whatever the name given, the screening for environmental, social, and governance (ESG) practices approaches for investing has definitely gone mainstream. The focus is continuously diversifying from equity investing to even fixed-income analysis. According to the joint CFA Institute and Investor Responsibility Research Center Institute 2015 survey results, 73% of investment professionals worldwide consider ESG factors in their investment analysis and decisions.

As of July 2017 PRI had a total signatory of 1,755 and of these 1,182 (or 67%) where investment management firms. This shows that a growing number of investors, in the quest to arrive at a more thorough understanding of risks and opportunities that face the firms they invest in, have begun to focus on ESG factors. Guided by their fiduciary duty and the understanding that a prudent investor ought to consider ESG issues in his or her analysis, more and more investors have begun to use ESG investment screening as their guiding light.

Generally investors understand that if more and more professional investors believe that the market will move in a certain direction after incorporating certain factors in the computation process, then the market will surely move in that direction. This is true for as long as the trading volumes of professional investors is large enough to offset any opposite predictions by unprofessional noise-makers. Because of this, we believe that social influence is expected to force more and more professional investors to incorporate ESG factors in their investment decision.

H_3:*Social Influence has a significant positive influence on the investor's intention to incorporate ESG factors in investment decision.*

Facilitating Conditions Construct

Facilitating conditions are the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. According to Pizzani (2015), more and more investment professionals are taking an integrated approach to ESG analysis across equity, fixed-income, and private investment markets. Barclays (2013) report notes that this growth is due to the fact that more ESG information is being made available. At the same time a number of stock exchanges have launched listed company ESG disclosure requirements or guidelines in their countries, Zhao, et al (2018). However, most firms are reporting ESG data as nonfinancial reports and the content of these reports varies widely making data comparability across firms and countries difficult, Yu, et al (2018).Because of these, facilitating conditions for the inclusion of ESG factors in investment decision making becomes clogged and unfriendly asmore investors are still looking for statistical and empirical evidence that incorporating ESG factors help control risk and helps create opportunities for firms.

As noted by Venkatesh et a (2003), generally'when both performance expectancy constructs and effort expectancy constructs are present, facilitating conditions becomes non-significant in predicting' the investor's intention to incorporate ESG factors in investment decision.

Because of this we believe that the more advanced facilitating conditions are for investors the more likely investors are to incorporate ESG factors in their investment decision making process. The level of facilitating conditions' contribution however, is not significant.

H_4:*Facilitating Conditions have a positive, but not significant, influence on the investor's intention to incorporate ESG factors in investment decision.*

Investors' Behavior

Traditional finance theory assumes investors to be rational wealth-maximizers who follow basic financial rules and base their investment strategies primarily on the risk-return consideration, Byrne and Brooks (2008). That is, investors are efficient and unbiased processors of relevant information whose decisions are consistent with utility maximization, Byrne (2008).Nilsson (2008) whilst examining the impact of pro-social attitudes and perceived financial performance on socially responsible investment behavior noted that both financial perceptions and pro-social attitudes are connected to investment behavior. Shefrin (2000), Shleifer (2000), Warneryd (2001) and Shefrin&Statman (2011), in behavioral finance, also provided evidence that investors' financial decisions are affected by both internal and external behavioral or ethical factors which tend to contradict traditional finance understanding.

Because of this literature, we believe that investment decision is influenced not only by basic risk and return factors but also by other external factors that can be grouped into environmental, social and governance (ESG). When an investor is influenced by ESG factors to act responsibly, then that desire to be a responsible investor will have a positive impact on the investor's behavior. This paper, therefore, looked at the extent to which insurance and pension firms are willing to incorporate ESG factors in their investment decision and whether the prevailing conditions permit investors to incorporate the same. The willingness of an investor to incorporate ESG factors in investment decision is determined by his or her view that:

- ESG incorporation will help him or her to attain gains in job performance,
- ESG factors will be fairly easy to use in investment screening,
- Important others believe he or she should use ESG factors in investment screening, and
- Published information, organizational and technical infrastructure exists to support incorporation of ESG factors.

Methodology

Secondary data was used in forming the background of this research and in the creation of the framework for conducting other qualitative methods. For primary data collection a total of 63 questionnaires were distributed to a sample of registered insurance and pension firms selected through stratified random sampling. In each organization personnel dealing in the treasury and/or investment departments were targeted. The questionnaire was split into seven sections covering demographic information, responsible investment analysis, performance expectancy, effort expectancy, social influence and facilitating conditions constructs. The last section covered user behavior.

Respondents Characteristics

Out of 63 questionnaires distributed, a total of 54were returned constituting an 85.71% response rate. Table 3below shows the demographics and general information of respondents whose responses were usable. The limited number of female participants continued to loom despite calls

for gender equity in business operations. The general age of respondents was well spread indicating the high level of energetic young respondents who have gained a lot of experience in the industry as shown by 55.6% of them having between 5 and 10 years of experience. At the same time, all respondents proved to be quite learned as they all possessed at least a first degree.

Table 3: Respondents' Demographic and General Data *(N = 54)*

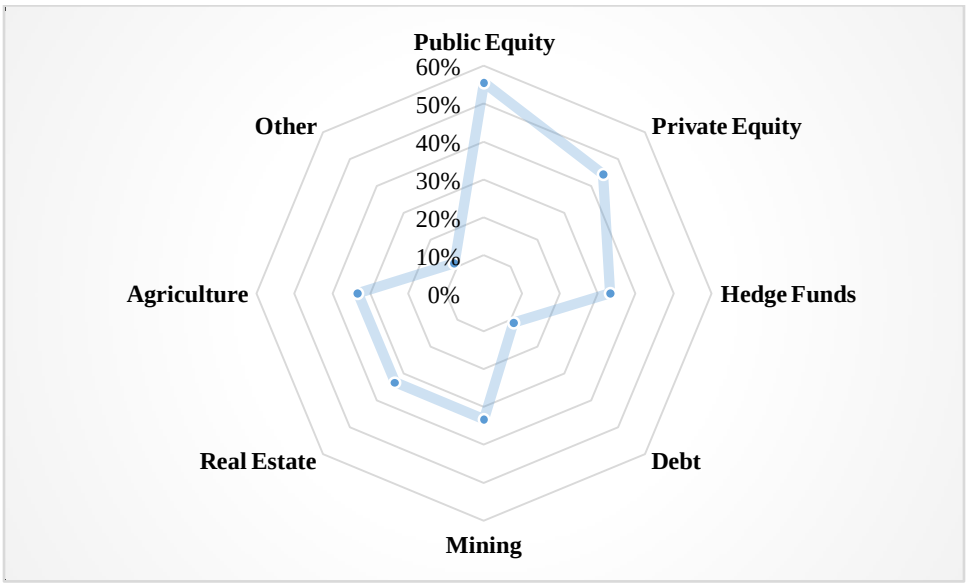
Character		Percentage
Gender	Male	77.8%
	Female	22.2%
Age	< 30 Years	22.2%
	30 – 40 Years	33.3%
	41 – 50 Years	33.3%
	51 – 60 Years	11.2%
Highest Academic Qualification	First Degree	55.6%
	Masters Degree	44.4%
Experience	< 1 Year	11.1%
	1 – < 5 Years	11.1%
	5 - < 10 Years	55.6%
	10 - < 15 Years	22.2%

Research Findings

Investment

The diversification in investment sectors noted by Fresh fields, Bruckhaus and Deringer (2005) also proved to be true in Zimbabwe's insurance and pension industry investment sectors as firms invest in more than seven sectors. Figure 3 below shows the distribution of investment sectors insurance and pension firms invest in.

Fig. 3: Insurance and Pension Firms Investment Sectors

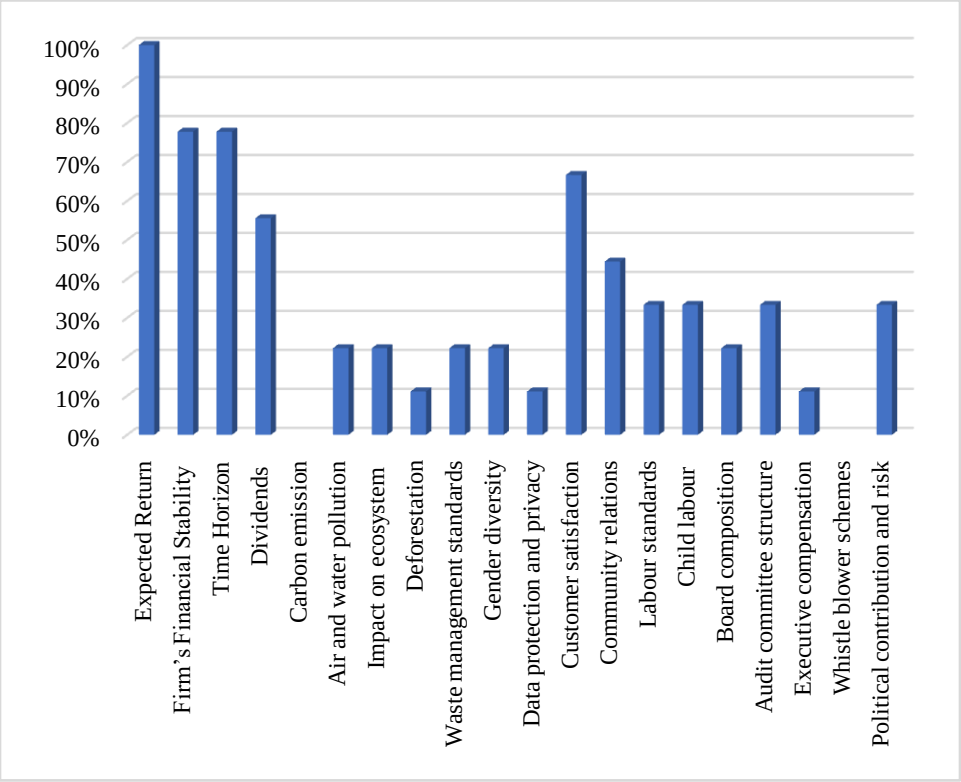


Most firms (56%) invest in the public sector followed by 44% in the private sector. A total of 33% each invest in hedged funds, mining, real estate and agriculture. This diversification could be due to the setting up of upper limits on sectoral investment levels by IPEC in 2013.

As shown in figure 4 below, respondents were also asked to identify factors they take into account during investment analysis and decision making. It proved that investment personnel in insurance and pension firms mainly consider the traditional factors of expected return (100%), financial stability (78%), time horizon (78%) and dividends (56%). None of the firms consider issues related to carbon emission and whistle blower schemes despite them being some of the key elements in responsible investment. Customer satisfaction, because of its relationship with financial stability, is also considered by 67% of respondents followed by community relations 44%.

Of the three methods of incorporating ESG factors in investment analysis and company valuations namely, adjusting the discount rate in DCF, adjusting future cash flows, and multiple analysis method, Bos (2014); adjusting future cash flows proved to be the most favorable of them all with 56% of respondents selecting the method. The other two methods received 22% each.

Fig. 4: Investment Analysis & Decision Factors



Respondents also identified a number of measures that should be put in place to encourage more incorporation of ESG factors in investment analysis and decision. Some of the measures identified includes the following:

- Providing regulations that ensure that investments in the insurance and pension industry consider ESG factors;
- Awarding tax rebates to companies that incorporate ESG factors in investment analysis and decisions;
- Publishing companies that have investments that incorporate ESG factors to the public;
- Making the inclusion of ESG factors in investment evaluation a condition precedent to awarding insurance tenders;
- Start off the inclusion of ESG factors in investment decision as optional and recognized in the reporting standards then gravitate into being a requirement and consideration for every organization;
- Provide training on ESG issues to staff and boards of directors (BODs) including the general provision of ESG information to the public;
- Encourage each insurance and pension company to come up with an ESG policy on investment;

Statistical Analysis

For the purpose of analysis, questions were grouped into clusters comprised of 1) Responsible Investment (as dependent variable), Performance Expectancy Construct, Effort Expectancy Construct, Social Influence Construct, Facilitating Conditions Construct and Individual Behavior Construct (as independent variables). According to Jeyaraj et al. (2006), a weight of at least 80% is required for an independent variable to qualify as having an influence on the dependent variable. This was adopted in this analysis.

The Pearson Correlations in Table 4and as summarized in Figure 5 show a weak, and in some cases a negative, predictive power of UTAUT constructs on responsible investment and individual behavior.

Table 4: Pearson Correlations

		Responsible Investment	Performance Expectancy Construct	Effort Expectancy Construct	Social Influence Construct	Facilitating Conditions Construct	Individual Behaviour Construct
Responsible Investment	Pearson Correlation	1	.186	-.320*	.723**	.230	.278*
	Sig. (2-tailed)		.178	.019	.000	.095	.042
	N	54	54	54	54	54	54
Performance Expectancy Construct	Pearson Correlation	.186	1	.738**	-.372**	-.198	.368**
	Sig. (2-tailed)	.178		.000	.006	.152	.006
	N	54	54	54	54	54	54
Effort Expectancy Construct	Pearson Correlation	-.320*	.738**	1	.196	-.141	.380**
	Sig. (2-tailed)	.019	.000		.155	.311	.005
	N	54	54	54	54	54	54
Social Influence Construct	Pearson Correlation	.723**	-.372**	.196	1	-.275*	.243
	Sig. (2-tailed)	.000	.006	.155		.044	.076
	N	54	54	54	54	54	54
Facilitating Conditions Construct	Pearson Correlation	.230	-.198	-.141	-.275*	1	-.037
	Sig. (2-tailed)	.095	.152	.311	.044		.790
	N	54	54	54	54	54	54
Individual	Pearson Correlation	.278*	.368**	.380**	.243	-.037	1

Behaviour Construct	Sig. (2-tailed)	.042	.006	.005	.076	.790	
	N	54	54	54	54	54	54

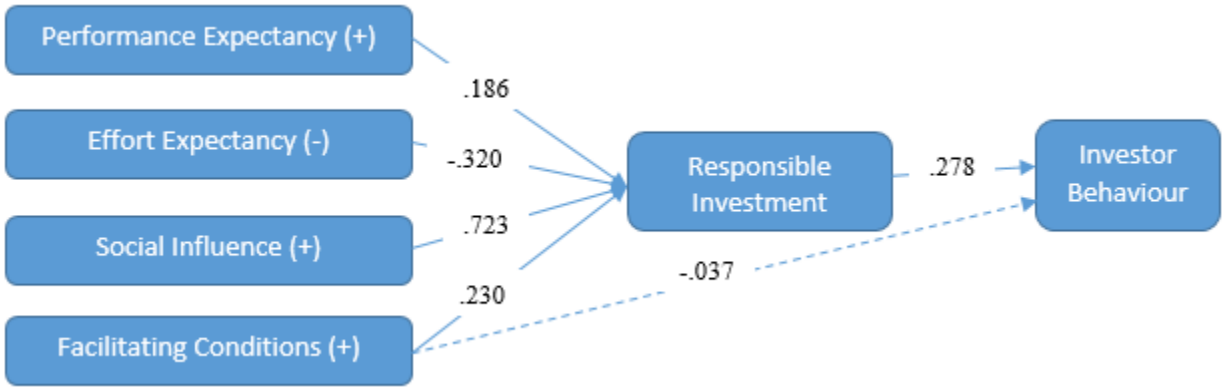
*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

All constructs did not meet the requirement by Jeyaraj et al (2006), the closest being social influence, with a predictive power of 0.723. Because of this we note that:

i. There is a weak but positive relationship between Performance Expectancy and the investor's intention to incorporate ESG factors in investment decision with p =.178 and correlation .186.
ii. There is a relatively negative relationship between Effort Expectancy and the investor's intention to incorporate ESG factors in investment decision with p = .019 and negative correlation -.320 significant at 0.05 level (2-tailed).
iii. There is a relatively strong and positive relationship between Social Influence and the investor's intention to incorporate ESG factors in investment decision with p = .000 and correlation .723 significant at 0.01 level (2-tailed).
iv. There is a positive but weak relationship between Facilitating Conditions and the investor's intention to incorporate ESG factors in investment decision with p = .095 and correlation .230.
v. The relationship between the investor's intention to incorporate ESG factors in investment decision and the change in his/her behavior is generally a weak positive one with p = .042 and correlation .278.
vi. There is generally very weak and negative relationship between the Investor's Behavior and Facilitating Conditions with p = .790 and correlation -.037.

Figure 5: Predictive Power of UTAUT Constructs



Model Fitting Information

The Ordinal regression model fitting information in Table 5support the results from the correlation analysis and shows that the model is outperforming the null with p = .001.

Table 5: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	27.413			
Final	.000	27.413	8	.001

Link function: Logit.

Discussion of Findings

According to Venkatesh et al (2003), one of the important directions for future research is to tie their mature stream of research into other established streams of work. This research has just done that. The findings of this research agree with most researches on the impact of UTAUT constructs on user behavior with regards to new technology. However, as noted in this paper, the impact of UTAUT constructs on the investor's decision to act responsibly and ultimately on the investor's behavior, is generally weak. It follows that other variables might have more impact on the decision to invest responsibly other than those outlined in UTAUT constructs. Variable such as risk, economic conditions, capital levels and investment atmosphere are bound to have more influence when compared to UTAUT constructs.

Social influence has proved to be of great influence on responsible investment when compared to other UTAUT constructs. Thus generally insurance and pension fund investors in Zimbabwe are bound to invest responsibly if they believe that important others are investing responsibly and they are expected also to do the same.

Recommendations

There is need for increased responsible investment and ESG information dissemination amongst insurance and pension firms in Zimbabwe. Such information should be targeted first at key players in the industry who will then act as launch-pads and drivers for other smaller players within the industry. Regulations must be put in place that harmonize accounting policies so that firms may publish - as part of financial statements - information on ESG factors' incorporation and investment decisions by firms. Firms that incorporate ESG factors in their investments and daily dealings should get incentives especially in the form of reduced taxes and/or more friendly regulation. The investment environment must be friendly enough for firms in insurance and pensions to incorporate ESG factors in their investment decisions and with the publication of information on ESG issues by firms, the effort necessary for the incorporation to ESG factors

should become quite low. Individuals and businesses that contribute pensions and insurance must be more willing to engage insurance and pension firms in an effort to ensure that their contributions are invested responsibly. They may also shun those insurance and pension firms that do not invest their contributions responsibly.

It is quite important that future researches look at wider samples and also cover other areas such as the mining sector where environments degradation is quite rampant. Such a research may help curb the rampant extraction of mineral resources and the destruction of natural resources that takes place in the process.

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