

Original Article

Toward Financial Preparedness: Understanding Voluntary Plan Participation

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Abstract. Despite the growing concerns about retirement preparedness among Filipino private sector employees, very few studies explore voluntary retirement plan participation using the Technology-Organization-Environment (TOE) framework. This study used the Technology-Organization-Environment (TOE) framework in assessing factors driving retirement planning intention and voluntary retirement participation. A quantitative correlational research design was employed. This method involved 393 employees in the private sector in General Santos City, Philippines, and used a validated, pilot-tested survey questionnaire. Pearson and Spearman's rho correlation and multiple regression were utilized in the data analysis. The role of technological accessibility, organizational assistance, and work environment conditions in retirement planning intention and voluntary retirement participation was found to be significant. Moreover, this study concludes that the TOE framework is an appropriate model to illustrate private sector employees' retirement planning behavior in the Philippines. The findings suggest that digital financial tools, employer financial advice/training, retirement plans, and dependable financial service providers might boost one's retirement preparedness and long-term financial security.

Keywords: *Behavioral finance; Retirement planning behavior; Retirement preparedness; Technology-Organization-Environment framework; Voluntary retirement plans.*

Retirement readiness is a global issue, with individuals facing growing challenges in preserving the quality of life desired in retirement due to high inflation and the turbulence of labor and capital markets. The increase in inflation and the volatility of the labor market have caused a higher proportion of the labor force in the private sector to be unable to save adequately and to maintain the same quality of life during retirement (Lusardi, 2023; OECD, 2022). This has resulted in broader concerns, as it is not only viewed as an individual dilemma but also as a broader socio-economic concern that requires urgent solutions from different institutions.

One of the measures in place is the Voluntary Retirement Plans (VRPs). VRPs are non-statutory plans that are offered by private financial organizations aside from the statutory plans offered by their employers. This option has also been increasingly promoted as a complementary instrument that could supplement mandated pension systems to improve financial well-being. The VRP is already widely accepted in many countries and acts as a useful accompaniment to state pension schemes in improving the individual's savings position and their post-retirement situation. However, in Asia, the OECD (2022) recorded that the participation rates in VRPs are only 6% of the working-age population. This poor and minimal participation in VRPs highlights the larger issue concerning

preparedness for retirement, which could lead to people lacking the necessary funds for future costs and lifestyle, leading to financial vulnerability among elderly people (Alliance Global Investors, 2022; Nomura Research Institute, 2022).

Retirement readiness among Filipino workers remains relatively low and unprioritized. This was true as more Filipino retirees continue to engage in daily income-generating activities because of insufficient retirement savings (Bangko Sentral ng Pilipinas [BSP], 2021). Although the Social Security System (SSS) is the primary retirement institution in the Philippines, its benefits did not keep pace with the increase in the cost of living, especially in the city (Lugay et al., 2024), even if mandatory contributions have been imposed for many years. This is especially true in the private sector, as they are usually the least informed group regarding retirement education, planning, investment opportunities/schemes, etc. In many cases, they are also unfamiliar with alternative retirement savings mechanisms that could improve their long-term financial security.

In General Santos City, private employees are also still burdened and exposed to this dilemma in retirement planning. Workers in this private sector may lack knowledge of and participation in voluntary retirement plans due to limited access to education on retirement and workplace-sponsored retirement schemes. Low financial literacy may lead to low voluntary retirement scheme participation and low savings strength. For an employee from a collectivist country like the Philippines, the employee might consider and value immediate family obligations over savings in a retirement scheme.

The TOE framework, originally derived to understand an organization's technology adoption, serves as an umbrella for analyzing the impact of technology, organization, and environmental factors on individual retirement planning behaviors. This technology feature addresses issues concerning an individual's capacity to adopt and apply digital and financial technologies used in retirement plans. Although several studies have demonstrated that the TOE model is applicable to the domain of financial behavior, the present research provides a more explicit account of the factors influencing retirement plan behavior using the TOE model. Additionally, it can be explained as several technical precursors affecting an individual's likelihood of adopting a retirement savings account through accessibility of the information, digital literacy (Aguilar et al., 2023), usability of the digital interface, and availability of the digital channels and mobile devices (Golden & Cordie, 2022; Wang et al., 2020).

Additionally, another aspect covered by the theory is the organizational supports. They are the treatments provided by the employer to enhance employees' engagement with VRPs. Organizational factors include employer-sponsored retirement plans, financial education initiatives, human resource practices, employer incentives, and a supportive organizational culture (Alharthi & Dhar, 2023). The last dimension involved is environmental influences. Environmental factors include trust in financial institutions, family and peer influence, supportive public policies, and perceptions regarding the adequacy of statutory pension systems (Lusardi, 2023). They contribute positively to retirement planning, which would lead to confidence and security for employees in getting the benefits of VRPs.

Moreover, the evidence from the latest contributions to retirement planning literature also advocates for the interplay between technology, organization, and the environment instead of treating them as individual entities. It was found that the effectiveness of the digital retirement platform depends on organizational training, employee motivation based on employer incentives, and a supportive external environment, and can be strengthened when people become confident about their participation behavior (Daminato et al., 2024).

In the Philippine context, limited awareness of voluntary retirement programs, low institutional trust, unequal access to employer-sponsored retirement benefits, and gaps in digital financial capability remain major barriers to retirement preparedness, particularly among employees working in small and medium-sized enterprises. There has been an increased focus on retirement planning; however, studies employing the TOE framework to examine workforce participation in voluntary retirement plans are limited and particularly scarce in developing economies like the Philippines. Consequently, how technology, organizational, and environmental factors are associated with and affect the retirement planning behavior of private sector workers in the Philippines has not yet been thoroughly investigated. Investigating the combined effect of technological accessibility, the support structure of the organization, and the conditions in the external environment on retirement planning behavior is a contribution to behavioral finance and policy development for retirement.

By extending the application of the TOE framework to retirement planning and behavioral finance research, the study contributes to the limited literature on retirement preparedness in developing economies and regional Philippine contexts. The results are anticipated to offer the practical knowledge needed by employers, policymakers, and financial institutions to develop effective evidence-based policies to improve retirement saving participation rates, financial knowledge, and long-term financial security of workers.

Methodology

The quantitative correlational research design used in this study sought to determine how technology, organization, and environment relate to employees' likelihood of enrolling in voluntary retirement plans (VRPs). The correlational design is suitable for reporting the degree and direction of the relationship between several variables while at the same time not manipulating any of the independent variables (Deshpande, 2024). This study collected survey data from participants in a natural environment and conducted statistical analyses on the applicability of the Technology–Organization–Environment (TOE) framework in assessing retirement planning behaviors. Correlational research is seen as appropriate for examining the associated behaviors and finance because the purpose is to determine whether there is an association and to assess predictive relationships, without establishing causation.

The research sample consisted of 393 individuals (private sector) aged 21 years and above who had been employed at their respective companies for over 1 year in General Santos City and who voluntarily chose to take part in this study. To determine how many responses were needed, Cochran's sampling formula with a 5% error margin was employed. Stratified random sampling was utilized to select participants equally from different firms, as well as from different-sized organizations (small, medium, and large). Employees were randomly selected from the names provided by their employers, thereby increasing both the reliability of the results and their generalizability to other employees in the same situation. Data were collected from March 2026 to April 2026 through face-to-face distribution using a structured survey instrument created from previously validated empirical studies related to digital financial services, organizational support, institutional trust, and retirement planning behavior. A total of 415 were distributed, but only 393 were completed and deemed usable for analysis, resulting in a response rate of 95%. This high response rate enhanced the representativeness of the sample and minimized the potential influence of nonresponse bias.

The survey instrument comprises six sections: demographic profile, technological context, organizational context, environmental context, intent to participate in a voluntary retirement plan (VRP), and actual participation in VRP. Technological dimension indicators (digital literacy, accessibility of information, ease of using digital platforms, availability of digital tools) based on three reference studies, Nguyen & Nguyen (2022), Alharthi & Dhar (2023), Amirludin et al. (2024); organizational context (employer's availability of VRPs, financial education and Human Resource (HR) practices, employer sponsored-incentives and workplace retirement culture) based on three reference studies, Alharthi & Dhar (2023), Marfo et al. (2021), Magwegwe & Lim (2021); environmental context (perceived insufficiency of statutory plans, peer and family influence, trust in financial institutions and regulatory policies) based on three reference studies, Amirludin et al (2024), Haupt (2023), Marfo et al. (2021); to measure intent and actual participation in VRP also based on three reference studies Haupt (2023) and Magwegwe & Lim (2021). Since the questionnaire was contextually adapted to private sector employees (Philippines), validation by experts and testing using 30 respondents occurred before the collection of data. The questionnaire demonstrated highly reliable internal consistency with a Cronbach's alpha coefficient of .978.

Descriptive and inferential analyses were conducted using IBM SPSS Statistics (Version 27.0). The mean and standard deviations of the technological, organizational, and environmental contexts and the intention and participation levels of employees in VRPs were ascertained based on the 5-point Likert scale. The Pearson product-moment correlation, Spearman rank-order correlation, and multiple regression analyses were used to assess the relationship(s) among the variables within the study, as well as to examine the predictive influence of the independent variables on the dependent variables.

Before regression analysis, the assumptions of linearity, normality of residuals, homoscedasticity, independence of errors, and absence of multicollinearity were assessed. Linearity and homoscedasticity were examined through scatterplots of standardized residuals, while normality was evaluated using histograms and normal probability

(P-P) plots of standardized residuals. Independence of errors was assessed using the Durbin-Watson statistic, whereas multicollinearity was evaluated through Variance Inflation Factor (VIF) and tolerance values. All diagnostic results satisfied the recommended thresholds (Hair et al., 2019), indicating that the assumptions for multiple regression analysis were met. The level of statistical significance was set at 0.05.

Following the principles of prioritizing participant welfare by adhering to ethical guidelines for human subject research, this study received approval from the Institutional Ethics Review Board, was conducted with informed consent, and guarantees respondents' privacy, confidentiality, and anonymity. Participation has been voluntary, and the risks associated with participating in this study were minimal (only completing a questionnaire on retirement planning). Data collection was performed in a manner that guarantees data security through properly secured storage and limited access. The researcher strove to provide transparency and clarity throughout all phases of the study process, in their communications about the study's purpose and methodology (including reviewing the ethical guidelines for conducting this study) and in the honest reporting of results.

Results and Discussion

Level of Technological Context Among Private Employees in General Santos City

The findings in Table 1 show a favorable level of technological context among private sector employees of the city of General Santos when they engaged in voluntary retirement planning, as indicated by the overall average score of 3.76 (agree).

Table 1. *Level of Technological Context Among Private Employees in General Santos City*

Dimension	Mean	Standard Deviation	Interpretation
Accessibility of Information	3.76	0.79	High
Digital Literacy	3.81	0.75	High
Ease of Use of Digital Platforms	3.64	0.79	High
Availability of Digital/Mobile Tools	3.67	0.89	High
Overall Technological Context	3.72	0.81	High

Among the technology dimensions, the one that stood out most positively was digital literacy, which could indicate that respondents have sufficient technological capacity for the digital retirement services. However, the comparatively lower rating for platform usability indicates opportunities to improve the accessibility and user experience of retirement-related technologies. Employees expressed high levels of confidence using online banking, mobile apps, and digital retirement tools, leading to the conclusion that employees' competency with technology is not a barrier to participating in retirement. Another implication of the results supports the assertion that an employee's ability to access retirement information, communicate in multiple languages, and easily navigate financial technologies increases the employee's ability to engage in retirement planning and make informed decisions related to retirement. These results are consistent with those of Aguilar et al. (2023) and Setaiwan and Maulida (2023), who recently published a study about how digital literacy, access to financial technology, and digital financial inclusion contribute to improving employees' retirement preparedness and their long-term financial behaviors. These results also add to the existing TOE literature, as technology readiness is shown to have an impact on individual retirement behavior, not solely organizational technology adoption. For the private-sector employees in General Santos City, digital literacy and availability of technology resources for retirement may decrease some of the barriers to participation in a voluntary retirement plan. These may be incorporated into the delivery of digital financial services, together with other retirement programs, in a developing economy.

Level of Organizational Context Among Private Employees in General Santos City

Table 2 summarizes data about four indicators of the organizational context. Generally, the organizational context is perceived by private sector employees in General Santos City as providing a supportive environment for voluntary retirement planning, as evidenced by an overall mean score of 3.64 or "Agree."

Table 2. *Level of Organizational Context Among Private Employees in General Santos City*

Dimension	Mean	Standard Deviation	Interpretation
Employers' Availability of VRPs	3.77	0.87	High / Agree
Financial Education and HR Practices	3.57	0.91	High / Agree
Employer-Provided Incentives	3.62	0.90	High / Agree
Organizational Culture and Support	3.61	0.89	High / Agree
Overall Organizational Context	3.64	0.89	High/ Agree

Of the four dimensions of the organizational context, the dimension with the highest mean score ($M = 3.77$) was employers' availability of VRPs (voluntary retirement plans). The next highest mean score was for employer-provided incentives ($M = 3.62$). Next were the mean scores for both organizational culture/support and financial education/HR practices ($M = 3.61$ and $M = 3.57$, respectively). Employees also identified access to employer-sponsored retirement plans, employer matching contributions, and portability of their employer-sponsored retirement plans as important factors in providing support for their long-term financial preparedness. Additionally, the results indicate that workplace incentives offered to employees by their organization and support from their organization's leaders contribute positively to the employees' willingness to engage in retirement planning. Daminato et al. (2024) and Yankikaya et al. (2024) corroborate this finding by concluding that employer sponsorship of retirement plans, provision of financial incentives, and offering workplace financial education significantly enhance employee participation in and preparedness for retirement.

The study results confirm the importance of organizational support for retirement readiness. The presence of employer-sponsored retirement plans, workplace financial education programs, or financial incentives creates a context in which employees are more likely to act on their intentions to save for retirement. This further explains the scope of the TOE model as showing that organizational contexts influence financial behavior at the individual level beyond technology implementation.

Level of Environmental Context among Private Employees in General Santos City

Table 3 summarizes the results of the level of environmental context employed by private sector employees in General Santos City, Philippines, and shows that they positively rate their level of environmental context toward voluntary retirement planning, with an average overall score of 3.74 ("Agree").

Table 3. *Level of Environmental Context Among Private Employees in General Santos City*

Dimension	Mean	Standard Deviation	Interpretation
Perceived Insufficiency of Statutory Plans	3.93	0.75	High / Agree
Peer and Family Influence	3.64	0.83	High / Agree
Trust in Financial Institutions	3.77	0.79	High / Agree
Regulatory Policies	3.62	0.85	High / Agree
Overall Environmental Context	3.74	0.81	High/ Agree

Of the different aspects within the area of the environmental context, the aspect of the perceived insufficiency of statutory retirement plans showed the highest mean rating ($M = 3.93$), which indicated that the majority of the respondents do not believe that receiving only SSS retirement benefits will allow them to live up to their standard of living after they retire. The respondents have a positive trust level in financial institutions ($M = 3.77$), peer and family influence ($M = 3.64$), and regulatory policy ($M = 3.62$), demonstrating that the respondents recognize that institutional transparency, degree of social influence, and level of support by the government are significant factors in influencing their retirement planning behavior. Employees also indicated that being aware of insufficient pension levels, concerns related to their retirement security, and knowing about people who are or have been struggling to support themselves financially during retirement were reasons for pursuing additional savings for retirement outside of statutory pensions. This evidence supports the findings of Demirgüç-Kunt et al. (2022), which highlighted the importance of trust in institutions, awareness of financial matters, and supportive policy environments in contributing to the enhancement of individuals' retirement preparation and long-term financial decision-making.

The results suggest that retirement planning choices are a function of both individuals and the environment around them; that individuals' choices are a result of government policy and confidence in institutions. The

evidence suggests that the TOE, at least in the environment element, may have some use in explaining the retirement planning of Filipinos in the Philippines.

Level of Intention to Avail Voluntary Retirement Plans Among Private Employees in General Santos City

Table 4 represents the level of intention to avail voluntary retirement plans among private employees in General Santos City.

Table 4. *Level of Intention to Avail VRPs Among Private Employees in General Santos City*

Variable	Mean	Standard Deviation	Interpretation
Intention to Avail VRPs	3.63	0.80	High / Agree

It indicates that willingness to participate in VRPs was present ($M=3.63$) and that the employees have a high intention to avail of the voluntary retirement plans. It has also been identified that employees recognized the relevance and value of voluntary retirement planning and were mentally receptive to the process of voluntary retirement planning. The mean score for intention ($M = 3.63$) was quite similar to the overall mean of the organizational context ($M = 3.64$), suggesting that an individual's intention was consistent with the organizational environment and received support. Consequently, the organizational context (the existence of a plan, education, compensation, and culture) predicted individuals' intention to join an organization. It was worth noting that interventions at work to build financial knowledge and plans have been found to positively affect retirement planning in developing countries (Aguilar et al., 2023).

In the framework of the Theory of Planned Behavior, behavioral intention was viewed traditionally as the most significant and closest antecedent of behavior in a specific domain (Ajzen, 1991). In the present study, behavioral intention is interpreted as individuals' desire and readiness to engage in the actions required for retirement financial planning. Those with strong career orientation and high proactive approaches to finance in the long run may likely exhibit higher intention to engage in retirement planning behaviors. Moreover, Formal financial planning behavior contributes to preparation for old age and financial well-being. The long-run impacts of formal financial planning behavior toward financial preparedness and well-being are significant because the measure of the latter had a dimension of financial decision-making, as shown by Mitchell et al. (2022).

In relation to the findings, the intention-behavior gap was found in retirement savings behavior, as occurs with decision-making within the financial sphere. Employee participation was lower despite some employees holding positive thoughts about the pension and retirement savings scheme. It could be inferred that employees failed to participate in a voluntary retirement plan due to a lack of financial knowledge, limited financial access, a lack of knowledge on retirement products, weak financial planning, and limited financial confidence in investing in retirement, etc. Findings conclude that higher knowledge and better financial planning capacity were associated with the acquisition and utilization of information on retirement financial matters (Kumar et al., 2023; OECD, 2022). Hence, enhancing financial knowledge and information on retirement, as well as an easy enrollment process, can narrow down the intention-behavior gap for voluntary retirement scheme participation behavior.

Level of Actual Participation in Voluntary Retirement Plans Among Private Employees in General Santos City

Table 5 shows the descriptive statistics about the actual participation rate in voluntary retirement plans for the respondents. In summary, the respondents have a high level of actual voluntary retirement plan participation.

Table 5. *Level of Actual Participation in VRPs Among Private Employees in General Santos City*

Variable	Mean	Standard Deviation	Interpretation
Actual Participation in VRPs	3.63	0.93	High / Agree

The actual participation in a voluntary retirement plan reached $M = 3.63$ (interpretation: Agree), the same mean as the intention mean. The difference between participation intention and behavior was encouraging and seems to highlight a strong intention-behavior link when planning a voluntary retirement plan. Furthermore, the mean participation score ($M = 3.63$) revealed that most individuals participate in their voluntary retirement plan (enrollment, contribution, managing a plan). It was an optimistic result and suggested that voluntary retirement planning is gaining favor among private sector employees. However, this result showed that not all employees participated, and that the number of employees who participated only at a low level or did not participate was quite large.

This indicates that respondents tend to engage in simple retirement behavior (e.g., enrollment, continued contribution, account tracking) at a reasonable level but tend to engage in more "forward-looking" behaviors or "advanced" activities less. This is confirmed by other research showing that even those who enrolled in a retirement plan may not proactively manage and optimize their savings behaviors or get advice from financial professionals (Clark et al., 2021; Lusardi et al., 2021). It indicates that financial discipline and awareness through regular contribution and tracking are essential components of retirement success in the long run (Klapper et al., 2022; OECD, 2022).

The passive actions of higher financial participation reflect deficiencies in applying complex or high-functioning financial practice. Numerous studies have previously shown that most participants will do nothing or only select what has become a default option when the opportunity to make an active choice is available (Beshears et al., 2022). Participants will not make an individual re-evaluation of their retirement or request assistance when they cannot obtain a specific adviser or when there are doubts as to whether they have sufficient time or knowledge to calculate their retirement savings plan (Kaiser et al., 2022; Mitchell et al., 2023).

Therefore, although a substantial degree of participation in retirement planning can be observed in the samples, an absence of regular consultation, financial services or technology to facilitate decisions and of financial education will eventually lead to individuals' decisions concerning retirement planning. Lastly, because participation alone shows activity in retirement planning and not ongoing, educated action in retirement planning, there should be increased opportunities for organizations and financial services to offer opportunities of sustained participation and tools and resources for financial literacy and active decision-making of participants in plan at retirement.

Relationship Between Technological-Organizational-Environmental Context and Intention to Avail VRPs

Table 6 demonstrates the correlation coefficients of the three contexts in the TOE framework. Moreover, it also presents the correlation coefficient of the indicators per context. The table presents how each indicator relates to the intent of the private employees in General Santos City to participate in voluntary retirement plans.

Table 6. Relationship of the Level of TOE Contexts and Intention to Participate in VRPs Among Private Employees in General Santos City

Dimension	Indicator	Pearson <i>r</i>	<i>p</i> -value	Interpretation
Technological Context	Accessibility of Information	.509**	<.001	Moderate positive, significant
	Digital Literacy	.491**	<.001	Moderate positive, significant
	Ease of Use of Digital Platforms	.577**	<.001	Moderate positive, significant
	Availability of Digital/Mobile Tools	.607**	<.001	Strong positive, significant
Organizational Context	Employers' Availability of VRPs	.616**	<.001	Strong Positive, Significant
	Financial Education and HR Practices	.566**	<.001	Moderate to strong positive, significant
	Employer-Provided Incentives	.634**	<.001	Strong positive, significant
	Organizational Culture and Support	.545**	<.001	Moderate Positive Significant
Environmental Context	Perceived Insufficiency of Statutory Plans	.547**	<.001	Moderate Positive, Significant Relationship
	Peer and Family Influence	.615**	<.001	Strong positive, significant
	Trust in Financial Institutions	.577**	<.001	Moderate positive, significant
	Regulatory Policies	.636**	<.001	Strong Positive, Significant

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

Results showed a significant and positive relationship between the technological, organizational, and environmental contexts and employees' intent to participate in a voluntary retirement plan (VRP), confirming the importance of context in retirement planning behavior among private sector employees. There was a statistically significant and positive relationship between retirement-related information accessible to employees using technology ($r = .509$; $p < .001$) and digital literacy ($r = .491$; $p < .001$), with employees who could readily access and understand retirement-related information believed to be more likely to participate in retirement planning. The availability of digital/mobile tools and ease of use of digital platforms were the strongest correlations to retirement planning intention demonstrated by technology; therefore, user-friendly digital financial technologies will decrease barriers to retirement participation. These findings are supported by Daminato et al. (2024) and Yadav et al. (2024), who recognize the role of financial technology, digital inclusion, and digital financial literacy

in increasing retirement preparedness and financial participation behavior.

Employer-provided incentives turned out to be one of the strongest predictors of retirement participation intention ($r = 0.616$; $p < 0.001$) from the organizational context, with the availability of VRPs following closely behind ($r = 0.616$; $p < 0.001$); financial education and HR practices ($r = 0.566$; $p < 0.001$); and organizational culture and support ($r = 0.545$; $p = 0.001$). These data suggest that employees' willingness to participate in retirement programs can be significantly improved by utilizing investment programs, financial literacy initiatives, and workplace retirement incentives. The results suggest that providing accessible retirement programs, financial education, and engagement incentives (e.g., Matching Contributions and Automatic Enrollment Mechanisms) will facilitate employers' ability to turn employees' intent to plan for retirement into actual participation in their plans. Yanikkaya et al. (2023) have also confirmed that retirement support provided by organizations, along with financial literacy programs, will increase employees' preparedness for retirement and increase their long-term financial confidence.

Retirement participation intention was influenced by environmental factors that had both clear and statistically substantial associations within the study. The regulatory policies were found to be the greatest environmental predictor ($r = .636$, $p < .001$) of retirement participation intentions, while peer and family influences ($r = .615$, $p < .001$), trust in financial institutions ($r = .577$, $p < .001$), and perceived insufficiencies of statutory retirement plans ($r = .547$, $p = .001$) also had statistically significant associations with retirement participation intentions. These findings illustrate that an enabling environment for future retirement planning will be created for employees when governments offer supportive policies that enhance employee trust in financial institutions and provide positive social influence. Additionally, the study extends the TOE framework by showing that broader institutional and social conditions influence employees' retirement planning behavior more than organizational readiness to support planning and employees' technological readiness to plan.

Statistical relationships across the three dimensions of the TOE support the theoretical premise that individual behavior, as it relates to financial management and active participation in retirement planning, is the product of multiple processes that are affected by technology, organization, and environment interconnected to one another. Thus, this study adds to the existing body of literature on retirement preparedness and behavioral finance by expanding upon the use of the TOE framework from technology adoption at the organizational level to retirement planning behavior at the individual level, all within the context of developing countries.

Relationship Between Intention and Actual Participation in VRPs

Table 7 presents the correlation coefficient between the level of intention to participate and actual participation in VRPs among private employees in General Santos City.

Table 7. *Relationship Between Intention and Actual Participation in VRPs Among Private Employees in General Santos City*

Variables	Pearson r	Spearman's ρ	p -value	Interpretation
Intention to Avail VRPs and Actual Participation in VRPs	.672**	.679**	<.001	Moderate to high positive, significant

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

The relationship between intention to participate in VRPs and actual participation ($r = .672$, $p < .01$) indicated a significant positive relationship whereby the higher employees' intentions to join VRPs, the more likely employees were to participate. The result agreed with the intention-behavior link as predicted in the Theory of Planned Behavior and other related models and showed that intentions accounted for other variables explaining the rest.

Both Yanikkaya et al. (2023) and Lhaopadchan et al. (2025) determined intention to be a good predictor of behavior, and their findings support the findings of the present study. Bauer et al. (2021), however, stated that intention is not a perfect predictor of behavior and that the intention-behavior gap is present in other areas of research and the current one, too. In the current study, although the gap between intention and behavior was small compared to that in some other fields, it was present due to some unique aspects of the sample (employees with an employer-sponsored plan) or the method of measurement (behavioral intention scale vs single-item attitude question).

The highly significant positive relation ($r = .672$, $p < .01$) between intention to avail retirement plan and behavioral participation in the voluntary retirement plans supported the assumption that intention was a reliable predictor

of behavior. The null hypothesis of no relationship is rejected. However, the strength of the correlation reflects that even if the intention is a significant predictor, it cannot explain all the variance. This observation emphasized the value of not only exploring antecedents to intention (e.g., motivational influences), but also predictors that serve as enabling influences in the process of converting intention into behavior.

Multiple Regression Analysis and Predictors of Intention to Avail VRPs

Table 8 presents the summary of Model 7, which indicates the results of the final regression satisfying the assumptions of regression analysis, including multicollinearity, model stability, linearity, and homoscedasticity.

Table 8. Final Multiple Regression Model

Model Statistics	Value
Multiple R	.758
R Square	.575
Adjusted R Square	.567
Standard Error of the Estimate	.468
F-statistic	74.32
Significance F Change	.048
p-value	<.001

Predictors: (Constant), Regulatory Policies, Peer and Family Influence, Availability of Digital/Mobile Tools, Perceived Insufficiency of Statutory Plans, Employer-Provided Incentives, Organizational Culture and Support, Ease of Use of Digital Platforms

Dependent Variable: Intention to Avail

The final regression model has demonstrated a strong ability to explain the intent by employees to participate in Voluntary Retirement Plans (VRPs), with a multiple correlation coefficient (R) of .758, R^2 value of .575, and an adjusted R^2 value of .567, indicating that 57.5% of the variability of the intent to retire was explained by the Technological, Organizational, and Environmental variables contained within the model. The regression model shown in Table 8 is statistically significant ($p < .001$), which makes it robust and stable in explaining retirement planning behavior for private sector employees.

Table 9 presents the regression coefficients of the final model predicting intention to participate in VRPs.

Table 9. Significant Predictors in Final Model

Predictor	Unstandardized B	Std. Error	Standardized Beta	t-value	p-value
(Constant)	0.342	0.156	—	2.192	.029
Availability of Digital/Mobile Tools	0.168	0.041	.176	4.098	<.001
Employer-Provided Incentives	0.187	0.038	.201	4.921	<.001
Financial Education and HR Practices	0.156	0.036	.172	4.333	<.001
Regulatory Policies	0.149	0.039	.149	3.821	<.001
Trust in Financial Institutions	0.134	0.037	.138	3.622	<.001
Peer and Family Influence	0.121	0.038	.118	3.184	.002
Ease of Use of Digital Platforms	0.098	0.042	.090	2.333	.020

Note: Dependent Variable: Intention to Avail. All VIF values < 5, indicating acceptable multicollinearity.

This provides further support for the correlation results by identifying factors that remain relevant when the impact of other variables is taken out. Even though all TOE dimensions correlated with the intention to plan for retirement, employer initiatives, access to digital instruments, access to financial education, HR policies and practices, regulation, and institutional trust remain the strongest independent predictors. This means that the organizations and environment in which retirement planning will take place matter more than the technological environment.

The findings report that retirement participation behavior is influenced by a variety of interrelated environmental, technological, and organizational conditions, rather than by an individual's financial intention alone. The significant effect of organizational factors, particularly employer-provided incentives and workplace support models, suggests the importance of employers in increasing employees' preparedness for retirement and long-term financial security. The role of regulatory policies, trust in institutions, and social influence emphasizes that

retirement planning behavior is influenced by elements beyond individuals' personal motives, including institutional and environmental factors. Therefore, increasing participation in VRPs requires integrated strategies comprising workplace financial education, supportive retirement policy, a transparent financial system, and access to digital financial technologies. Present studies have validated the findings of Amirludin (2024), Yanikkaya et al. (2023), and Long (2024), as the availability of digital means and organizational support positively contributes to employees engaging in retirement planning and financial decision-making in developing economies.

This research extends the TOE model by empirically showing it as a relevant approach for individual retirement planning behavior rather than technology adoption at the organizational level. It validates that there exists a significant relationship among all three dimensions within the TOE framework, thereby indicating that deciding to retire from work is just part of a much larger system of resources available to help individuals make these decisions, such as through financial institutions, online technology, and social networks. Additionally, the aforementioned data supports that the explanatory power of the TOE framework R^2 (the amount of value or amount of variance explained by each independent variable) to the model (the number of independent variables) in relation to predicting retirement plan participation among employees and their intention to participate in retirement plans is great; thus, as a theoretical model, it is a proper model for understanding and predicting financial behavior and behavioral intention related to retirement. Therefore, this research contributes to the expanding body of literature on behavioral finance and retirement planning and demonstrates how, together, contextual and structural variables influence the speed with which employees can access voluntary retirement plan options. These results suggest that future retirement planning initiatives should take a collaborative multi-dimensional approach to improving the financial security of employees, including creating opportunities for those who have access to retirement plan benefits (i.e., employers and employees) and creating opportunities for those who have not (i.e., employees and policy-makers) to provide enhanced access to retirement planning and build upon current successes of employer-provided retirement planning.

Although the Technology-Organization-Environment (TOE) framework accounts for a significant amount of the variance ($R^2 = .575$) in participation in retirement planning intention, there was still approximately 42.5% of unexplained variation in the analysis. This implies that variables other than income, financial literacy, tendency to take risks, individual nature, family financial burden, and prior investment experience influence voluntary investment in a retirement scheme. However, these variables are not considered in the present research.

However, data were also based on self-respondents from the private sector in General Santos City. Therefore, the findings may be exposed to the possible effects of response biases and hence may not be generally applicable to employees in other regions, industries, or work sectors, and causal relationships among the variables cannot be determined. Further research may implement a longitudinal design and have a greater geographic span and a larger number of explanatory variables that might reveal more information about retirement planning behavior.

Conclusion

This study proved that the Technology-Organization-Environment (TOE) frame can significantly explain voluntary retirement plan participation among private firms' employees in General Santos City, Philippines. The findings show that technological readiness, organizational support, and the environment together predict employees' behaviors in planning for retirement; hence, individuals develop their awareness of the importance of saving because of certain environmental variables.

This research enriches the field of behavioral finance by generalizing the TOE framework beyond technology adoption by an organization to the retirement planning behavior of an individual, thus expanding its domain and demonstrating empirically that it can be applied to retirement planning preparedness in developing countries. It carries practical implications for employers, financial firms, educationalists, and governments. Providing enhanced in-workplace financial education programs, providing comprehensive employer-supported retirement schemes, improving access to digitalized retirement plan services, and creating effective retirement policies can facilitate greater adoption of voluntarily supported retirement schemes by employees and improve the financial security of individuals in the future.

Future studies can be conducted using longitudinal or mixed methods designs, more general sample groups from different regions and sectors, and the inclusion of more behavioral, psychological, and socio-economic constructs

to explain more variance in TOE. Future studies could build a theoretical and practical framework for a more informed retirement planning intervention that aims to foster the voluntary decision to join a retirement savings plan and improve the long-term financial security of Filipino employees.

Contributions of Authors

Author 1: conceptualization, data curation, data gathering, data analysis

Author 2: data analysis, data curation

Author 3: data analysis, data curation

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Conflict of Interests

There are no authors' competing interests concerning the publication of this article.

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