

## **FOSTERING INTRINSIC MOTIVATION: THE ROLE OF SDT AND TAM THEORY IN SHAPING BEHAVIORAL INTENTIONS FOR SUSTAINABLE RECRUITMENT**

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### **ABSTRACT**

The study aims at analyzing the direct and indirect effects of intrinsic motivation, perceived ease of use, and behavioral intention on the 270 employees of eco-oriented startups in Bali. This study was conducted based on research gaps, namely: 1) the limitations of research that emphasizes intrinsic motivation in the behavioral intention of using recruitment games; and 2) the lack of studies that enrich the combination of SDT and TAM theory. The data were collected using a questionnaire, and SmartPLS was used to analyze the results. The results showed that: 1) Intrinsic motivation has a significant positive relationship to perceived ease of use; 2) Perceived ease of use has a significant positive relationship to behavioral intention; 3) Perceived ease of use mediates intrinsic motivation and behavioral intention; and 4) Intrinsic motivation has a significant positive relationship to behavioral intention.

**Keywords:** behavioral intentions, intrinsic motivation, self-determination theory, technology acceptance model

### **1. INTRODUCTION**

The recruitment literature indicates a conflict between methods and outcomes. Conventional recruitment tends to provide biased assessments, override applicant integrity factors, and produce unreliable recruits (Georgiou et al., 2019). However, companies are still competing to get talented employees who can adapt to various work situations by applying conventional methods (Ouariachi et al., 2020). Successfully attaining recruitment goals relies heavily on implementing inventive and enjoyable gamification techniques in the recruitment process. Recruitment gamification offers a solution to the highly competitive talent war. Its holistic consideration of employees' mechanical, emotional, and dynamic aspects contributes to this. (Gkorezis et al., 2021)

There has been little research into gamification in the green-oriented startup sector (Mulcahy et al., 2020). In reality, gamification research in other sectors have been conducted in various sectors such as education (Jääskä et al., 2021), business management (Larson, 2020), tourism (Widarti & Emanuel, 2020), and advertising sectors (Silic et al., 2020). Some multinational companies such as L'Oréal, PwC, and Google have even implemented gamification in their employee training and development to shape the company's positive image (Shree & Singh, 2019). Therefore, exploring gamification research in green business is an urgent necessity to ensure that it will benefit the business's sustainability in the future (Buil et al., 2020; Gkorezis et al., 2021).

A handful of companies have integrated gamification into their recruitment process. Green-oriented startups often seek candidates whose values align with sustainability, innovation, and environmental responsibility (Buil et al., 2020; Gkorezis et al., 2021). Traditional recruitment methods may not fully reveal a candidate's alignment with these values. Integrating a more

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interactive approach, such as gamification, can provide a dynamic way to gauge candidates' intrinsic motivation for green values and their ability to solve environmental challenges. By adding game elements to the recruitment process companies can engage candidates in scenarios that simulate real-world sustainability tasks. This helps recruiters observe how candidates think critically and creatively in problem-solving, decision-making, and collaboration within a green context. Gamification can also make the recruitment experience more memorable and appealing to top talent, particularly among younger generations who are drawn to companies with a strong purpose and innovative hiring processes.

However, the expectations encountered in gamification simulations are often not mirrored in actual work scenarios (Georgiou et al., 2019). For example, prospective employees observe and believe the organization is devoted to environmental causes on a simulated virtual tour. The work environment does not live up to what is portrayed in the virtual tour (Armstrong et al., 2015). This highlights the asynchronized nature of recruitment gamification, which can dampen employee enthusiasm and desire to participate in future recruitment games.

There is a need for greater exploration into the factors determining recruitment gamification technology utilization. Innovative and creative ideas are needed in the recruitment process to attract talented personnel, using new approaches that are more enjoyable, testing, and reliable (Buil et al., 2020). However, most gamification research emphasizes the adoption of gamification games without considering the users' intrinsic motivation. Therefore, combining motivation theory and technology acceptance level in recruitment is a novelty.

## 2. LITERATURE REVIEW

Prospective employees' behavior in using the game can be determined through the collaboration of motivation theories, namely the Self-Determination Theory (SDT) (Deci, 1975) and The Technology Acceptance Model (TAM) (Davis, 1989). Establishing a positive attitude in prospective employees helps minimize problems such as mismatched work expectations, demotivation, and misperceptions on the job (Vanduhe et al., 2020). Integrating multiple theories into a comprehensive model allows us to leverage the strengths of each theory, enrich the literature, and gain a better understanding of the phenomenon under study.

In gamified recruitment, SDT and TAM provide a valuable framework for analyzing job applicants' reactions from multiple perspectives (Buil et al., 2020; Vanduhe et al., 2020). Applicants' attitudes towards gamification technology selection procedures in recruitment can be explained by their beliefs about the technology used (e.g., perceived ease of use and usefulness). On the other hand, based on SDT theory, applicants' attitudes can be determined by their motivation to engage in the process. Their attitudes are more likely to be positive when applicants are self-motivated, i.e., involved in the recruitment procedure.

SDT is a macro theory of motivation divided into three psychological needs: competence, autonomy, and relatedness (Buil et al., 2020). Competencies are all traits that enable an individual to do a job well (Ahmed & Hashim, 2022). Competence emphasizes beliefs about an individual's ability to complete a task or job (Suen et al., 2022). In general, the need for competence refers to the experience of effective behavior and is related to the need for challenge and the ability to achieve desired results (Chen & Zhao, 2022).

Autonomy describes the psychological space to accomplish specific tasks without external pressure or coercion (Raman et al., 2022). Freedom of autonomy refers to the skills of (a) flexibility of choice, which means having the ability to choose among many strategies, and (b) meaningfulness of the experienced task, which indicates that the available strategies are appropriate to the goals set. Motivational strategies such as rewards and threats can limit autonomy and thus decrease intrinsic motivation, creativity, and poorer problem-solving. Conversely, providing flexibility of choice can increase the sense of self-initiative, thus satisfying the need for autonomy and increasing intrinsic motivation (Deci & Ryan, 2000).

The linkage of competence and autonomy to intrinsic motivation is indicated by utilizing competence and autonomy in activities that are considered attractive, provide novelty, and optimal

challenge. Video games can increase intrinsic motivation by providing players with experiences satisfying users' psychological needs (Buil et al., 2020). Furthermore, studies on intrinsic motivation show several game elements that increase and decrease competence. These elements include (a) rewards that tend to decrease intrinsic motivation, while choice tends to increase intrinsic motivation; (b) negative feedback that encourages perceptions of incompetence tends to decrease intrinsic motivation, while positive feedback tends to foster competence while increasing intrinsic motivation (Deci & Ryan, 2000).

The research found that competence and autonomy need both influence play enjoyment and intentions to play games in the future (Buil et al., 2020). It indicates that competence and autonomy can increase intrinsic motivation when individuals feel responsible for their game performance (Neys et al., 2014). Another study shows that intrinsic motivation and demonstrated behavior to use gamified applications are higher when employees gain autonomy and competence in gaming (G. E. Mitchell & Schmitz, 2018). Furthermore, studies on energy conservation games support the finding of a positive relationship between competence and game users' intrinsic motivation (Wee & Choong, 2019). So, it can be concluded that some gamification elements satisfy the need for competence, thereby increasing the intrinsic motivation of game users. Based on the description above, the following hypothesis can be formulated:

The study suggests that managers develop gamification applications that utilize game design elements that support autonomy and competence needs satisfaction (G. E. Mitchell & Schmitz, 2018). Game elements such as badges, leaderboards, and performance graphs positively influence competence need satisfaction, while avatar customization, player choice, and dialogue options positively influence autonomy need satisfaction (Gkorezis et al., 2021).

The Technology Acceptance Model (TAM) has been used in various studies to explain predictors of human behavior toward potential acceptance or rejection of technology. According to TAM, user acceptance of technology can be influenced by three antecedents: perceived usefulness, perceived ease of use, and behavioral intention (Chen & Zhao, 2022). Perceived usefulness helps technology users improve performance, while perceived ease of use provides ease of navigation in using technology (Vanduhe et al., 2020). Furthermore, the premise of TAM explains perceived usefulness and ease of use that influence individual behavioral intentions directly.

Intrinsic motivation can be explained through competence and autonomy. Studies have found that individuals who feel competent when using technology tend to perceive the technology as helpful in achieving desired goals. This relationship has been demonstrated in the context of learning (Chen & Zhao, 2022). In contrast, autonomy research has shown that autonomy affects an individual's perceived ease of use (Fathali & Okada, 2018). Furthermore, other studies have highlighted the positive impact of perceived autonomy when using technology on ease of use in recruitment (Buil et al., 2020). Similarly, satisfaction with the need for autonomy is also associated with perceived benefits within the workplace (Buil et al., 2020).

### ***H1. Intrinsic motivation is significantly positively related to perceived ease of use***

Several studies have shown that the more people find human resource recruitment technology easy to use, the more useful they find it (Buil et al., 2020). These perceptions determine the intention to use various human resource technologies in recruitment and *training* (Buell et al., 2022; Obaid et al., 2020; Silic et al., 2020). Theoretically, when employees perceive more ease of use towards a technology, they will perceive its usefulness, and when they perceive more ease of use and usefulness, they will have more behavioral intention to accept and use the technology. Therefore, it can be concluded that *perceived ease of use* can predict employees' behavioral intentions.

### ***H2. Perceived ease of use is significantly positively related to behavioral intention***

Employee intrinsic motivation influences *perceived ease of use* on technology usage intention (Buil et al., 2020). Intrinsically motivated employees will use recruitment technologies

for the pleasure they find. When employees enjoy a gamified recruitment process, they tend to forget about the difficulties in using the technology and find it easier to use it (Chen & Zhao, 2022).

### **H3. Perceived ease of use mediates intrinsic motivation and behavioral intention**

The researchers found that two intrinsic motivation factors, autonomy, and competence, positively influenced behavioral intention (Raman et al., 2022). When employees have autonomy and competence in gamified recruitment applications, they show higher levels of intrinsic motivation, perceived ease, and behavioral intention to use gamified recruitment applications (R. Mitchell et al., 2020). It suggests that managers should develop gamification applications that utilize game design elements that support autonomy and competence needs satisfaction.

### **H4. Intrinsic motivation is significantly positively related to behavioral intention**

## **3. METOHDS**

This research uses a human resource management approach which includes: the operationalization of variables, data, and information collection methods, determining the population, calculating sample size and sampling, and designing the analysis to test the research hypothesis. Sample and population calculation methods refer to (Krejcie & Morgan, 1970). The research study involved 270 prospective employees of eco-oriented *startups* in Bali in 2020 - 2023 (table 1).

Based on the characteristics of the research phenomenon, this study involves the variables that are the focus of the study (Leguina, 2015). Therefore, a quantitative methodology was used to address this research problem. The preparation in this study uses the causality analysis method. Causality analysis studies determine the effect of one or more independent variables on the dependent variable through a mediating variable. Therefore, this research uses descriptive and verification methods.

The measurement of each variable in this study uses a 5-point Likert scale technique to measure the variables to be studied through the assumptions of respondents using a Likert scale approach. The Likert scale is designed to assess the attitudes, opinions, and perceptions of an individual or a group of individuals toward a social phenomenon. Variable operationalization describes the research variables, dimensions, and indicators needed to measure the relationship between variables. The operationalization of *intrinsic motivation* and *perceived ease of use* variables refers to previous research (Buil et al., 2020). Meanwhile, the operationalization of *behavioral intention* variables refers to previous research (R. Mitchell et al., 2020).

**Table 1. Population and Sample Drawing**

<b>No</b>	<b>Eco-oriented startups</b>	<b>Population</b>	<b>Percentage of Population</b>	<b>(x) Sample</b>	<b>Sample</b>	<b>Respondents</b>
1	Craft Startup	17	0,309	16,808	17	85
2	Agribusiness Startup	18	0,327	17,785	18	90
3	Tourism and Service startups	20	0.36	19,235	19	95
	Total	55	1	54,328	54	270

Source: Data Analysis of SmartPLS

The population of this study was 270 prospective employees of environmentally oriented *startups* in Bali in 2020 - 2023. This study is based on random sampling selected based on the population of Table 1. It is considered sufficient to support the sampling test. Data collection

procedures were performed by distributing questionnaires with a 5-point Likert scale. In particular, this study will implement a self-administered questionnaire to ensure respondents' privacy and to reduce respondents' hesitation when answering questions.

The collected data will be analyzed using Smart PLS. It is a structural equation modeling (SEM) software intended to analyze the significance of each relationship between research variables. A fit index is unnecessary since the variance is based on the statistical algorithm (Leguina, 2015). Data analysis will be conducted based on two steps: (1) outer model, which includes testing composite reliability (CR), discriminant and convergent validity, outer loading, and collinearity assessment; (2) inner model, which includes evaluating t values for hypothesis testing, coefficient of determination (R2), effect size (f2), and predictive relevance (Q2).

#### 4. RESULT AND DISCUSSION

##### Evaluation of the Measurement Model (Outer Model)

In evaluating the measurement model, there are two tests, namely validity and reliability tests, the results of which are as follows:

##### Validity Test

The loading factor value on the intrinsic motivation and behavioral Intention variables is available in Table 4.5; namely, all indicators have a loading value above 0.50 and a p-value below 5%. While the loading value for the perceived ease of use variable is as follows:

**Table 2. Combined Loadings on PEOU Variables**

Variables	Loading	p-value
PEOU1	0,870	0,000
PEOU2	0,855	0,000
PEOU3	0,749	0,000

Source: Data Analysis of SmartPLS

Based on the combined loading test results in Table 2, it can explain that all indicators on the *perceived ease of use* variable have a loading value of more than 0.50 and a p-value of less than 5% so that all statement items have good convergent validity. The next check of convergent validity is by looking at the AVE output. Constructs have good convergent validity if the AVE value exceeds 0.50. The results of the AVE value can be shown in Table 3.

**Table 3. AVE Value on PEOU Variable**

Variables	Average Variance Extracted (AVE)
PEOU	0,683

Source: Data Analysis of SmartPLS

Table 3 explains that the AVE value of the *perceived ease of use* variable is more than 0.50, so a conclusion can be made that the research variables have good convergent validity values. In addition to the *loading* value of each indicator to the construct that must meet the requirements, *loading* between indicators must also be considered, where the *loading* value to other constructs is lower than the construct (*cross-loading*). The cross-loading results are available in Table 4.

**Table 4. Cross-Loadings on PEOU Variables**

Variables	BI	IM	PEOU
PEOU1	0,424	0,586	0,870
PEOU2	0,305	0,546	0,855
PEOU3	0,472	0,252	0,749

Source: Data Analysis of SmartPLS

Discriminant validity in this study can be seen from the *cross-loading*, which can be seen in Table 4, which states that each research indicator has a loading value that is bigger on its variable than to other variables, so it can be said that each indicator of this research variable has good discriminant validity.

**Table 5. Correlation Value of Construct Variables on PEOU Variables**

Variables	BI	IM	PEOU
PEOU	0,477	0,579	0,827

Source: Data Analysis of SmartPLS

The correlation between constructs (latent variables) shows the reliability of a construct if the root AVE value is greater than the correlation value between the construct and other constructs. The research results in Table 5 show that all constructs have high reliability where the diagonal values are bigger than the correlation of other constructs, so all constructs have good discriminant validity.

**Reliability Test**

The composite reliability and Cronbach alpha value on each research variable in Table 6 below show that the composite reliability and Cronbach's alpha values of the PEOU variable have a value of more than 0.70, so it can be concluded that the PEOU variable has high reliability.

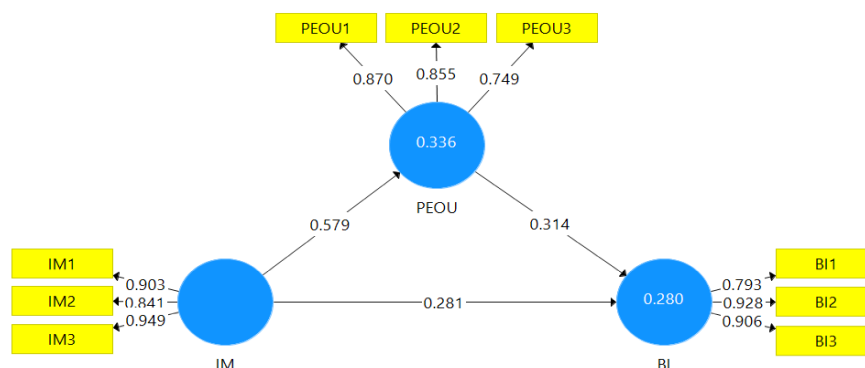
**Table 6. Composite Reliability and Cronbach's Alpha on PEOU Variable**

Variables	Composite Reliability	Cronbach's Alpha
PEOU	0,866	0,769

Source: Data Analysis of SmartPLS

**PLS Model Equation**

This research consists of 3 variables: *intrinsic motivation*, *behavioral intention*, and *perceived ease of use*. The resulting research model is as follows (figure 1):



**Figure 1. PLS Research Model**

The path coefficient of the two equations is positive, which means that if there is an increase in *intrinsic motivation*, *perceived ease of use* will also increase. Similarly, *if intrinsic motivation and perceived ease of use increase, behavioral intention will increase*. In assessing the structural model with structural PLS, it can be seen from the *R-Square* value for each endogenous latent variable as the predictive power of the structural model. The *R-Square* value is a *goodness fit model* test used to explain the effect of certain exogenous latent variables on endogenous latent variables. The following are the R-Square results:

**Table 7. R-Square Value**

	R Square	Q square
BI	0,280	0.208
PEOU	0,336	0.220

Source: Data Analysis of SmartPLS

Table 7 shows that the R-Square value generated by the BI (*behavioral intention*) variable is 0.280, which means that the influence of *intrinsic motivation* and *perceived ease of use* on *behavioral intention* is 28%. Other variables outside this research model influence the remaining 72%. While the R-Square value produced by the PEOU (*perceived ease of use*) variable is 0.336, which means that the influence of *intrinsic motivation* on *perceived ease of use* is 33.6%, and other variables outside this research model influence the remaining 66.4%.

The resulting Predictive relevance (Q-Square) value is above zero, namely 0.208 and 0.220, which means the resulting model has a good observation value (predictive relevance). While the resulting F-Square value is:

**Table 8. F-Square Value**

	BI	PEOU
IM	0,073	0,505
PEOU	0,091	

Source: Data Analysis of SmartPLS

Table 8 shows that the F-Square value on the *perceived ease of use* variable is more than 0.35, which means that the exogenous latent variable has a great influence. In the *behavioral intention* variable, it is less than 0.35, which means that the exogenous latent variable has little influence.

**Hypothesis Test**

**The Effect of Intrinsic Motivation on Behavioral Intention**

The table below illustrates the relationship between intrinsic motivation and behavioral intention

**Table 9. Hypothesis Test 4**

ID.	Variables	Coefficient Value	T Statistics ( O/STDEV )	P-Value
1	IM -> BI	0,463	9,351	0,000

Source: Data Analysis of SmartPLS

Based on Table 9, a conclusion can be made that *intrinsic motivation* has a significant positive effect on *behavioral intention* seen from the t-test value of 9.351 with a significant level (p-value) of less than 5%, and the coefficient value is positive. So the hypothesis states that "the *intrinsic motivation* is significantly positively related to *behavioral intention*" is tested. This finding supports previous research showing that when employees have autonomy and competence in playing recruitment games, the level of intrinsic motivation and intention to use gamified recruitment applications is higher (R. Mitchell et al., 2020).

### ***The Effect of Perceived Ease of Use in Mediating Intrinsic Motivation with Behavioral Intention***

This study has three hypotheses, and based on the PLS results, the results obtained are as follows:

**Table 10. Hypothesis Test 1 and 2**

ID.	Variables	Coefficient Value	T Statistics ( O/STDEV )	P-Value
1	IM -> PEOU	0,579	11,395	0,000
2	PEOU -> BI	0,314	4,405	0,000

Source: Data Analysis of SmartPLS

Based on Table 10, it can be concluded that intrinsic motivation has a positive effect significantly on perceived ease of use seen from the t-test value of 11.395 with a significant level (p-value) of less than 5%. So the hypothesis states that "intrinsic motivation is significantly positively related to perceived ease of use" is tested. The research findings support previous research findings showing that autonomy, research has shown that autonomy affects individuals' perceptions of perceived ease of use (Fathali & Okada, 2018)

Perceived ease of use has a positive effect significantly on behavioral intention seen from the t-test value of 4.405 with a significant level (p-value) of less than 5%. So that the hypothesis which states that perceived ease of use has a significant positive relationship to behavioral intention" is tested. This research finding supports previous findings that show that the more people find human resource recruitment technology easy to use, the more helpful they find it (Buil et al., 2020). These perceptions determine the intention to use various human resource technologies in recruitment and training (Buell et al., 2022; Obaid et al., 2020; Silic et al., 2020).

**Table 11. Hypothesis Test 3**

	Original Sample (O)	T Statistics ( O/STDEV )	P Values
IM -> BI	0,182	3,822	0,000

Source: Data Analysis of SmartPLS

Based on Table 11, it can be seen that the t-test value is 3.822 with a significant level (p-value) of less than 5%, which means that *perceived ease of use* significantly mediates *intrinsic motivation* and *behavioral intention*, so the hypothesis is tested. This finding supports previous research showing that employees who are intrinsically motivated and enjoy the gamified recruitment process tend to overlook the difficulties in using the technology and find it easier to adopt (Chen & Zhao, 2022).



This study has implications for scientific and applied research in several ways: First, this research provides an in-depth understanding of how job candidates in eco-oriented *startups* perceive and respond to recruitment tools that are gamified through the incorporation of SDT and TAM theories into recruitment (Clark et al., 2021). SDT and TAM theories help explain applicants' attitudes from the perspective of intrinsic motivations that drive pro-environmental behavior. Second, this research explores the determinants of *behavioral intention* in gamified recruitment. This study will help human resource managers view and use gamification recruitment tools effectively.

## 5 CONCLUSIONS

Environmentally-oriented *startups* need several factors that support the implementation of recruitment gamification for their prospective employees. The role of *intrinsic motivation* is one of the different factors contributing to the success of recruitment gamification. When employees have autonomy and competence in recruitment gamification applications, they show higher levels of intrinsic motivation and behavioral intention to use gamification applications. Another antecedent affecting behavioral intention in recruitment games is *perceived ease of use*. It is because potential employees enjoy a gamified recruitment process; they tend to forget about the difficulties in using the technology and find it easier to use the technology. Both factors produce significant *behavioral intention*. Future research can focus on the role of antecedents of *perceived usefulness* to enrich the *self-determination theory* and *technology acceptance model* literature. This study has limitations, including respondents who may not be able to be generalized into larger-scale research. This research only examines three types of green-oriented startups, which cannot be generalized to different types of companies and industries.

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