

Impact of Introverted and Extroverted Personality Traits on Innovative Behaviour of Entrepreneurs in E-Commerce Businesses

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Abstract: Entrepreneurship is a pivotal driver of economic progress, yet society has a common misconception that extroverts are entrepreneurial due to their leadership potential and interpersonal skills. This research aims at dispelling this stereotype by exploring the role of introvert and extrovert personality traits in driving entrepreneurs' innovative behaviour, with e-commerce businesses in the Colombo District in Sri Lanka as the setting. The academic contribution of this study is that it advances literature by filling the gap concerning the influence of personality traits, i.e., introversion and extroversion, in producing innovation in Sri Lanka's entrepreneurial environment. The study employed a quantitative method and gathered data using structured questionnaires from 381 e-commerce entrepreneurs of Colombo District. Sample size was determined using Cochran's formula, and convenience sampling was used as the data collection technique. Correlation analysis was used to test the relationship between the variables, and the regression model was used in assessing the impact of the introversion and extroversion independent variables on innovative behaviour, the dependent variable. The findings revealed that introversion has a significant positive impact on innovation, while extroversion negatively affects innovative behaviour in this context. These results revealed that extroversion is more advantageous for entrepreneurship, particularly in innovation-driven sectors like e-commerce. The research bridges a knowledge gap in existing literature by providing an even understanding of the effect of personality traits on innovation and making practical recommendations to organizations for creating environments that support introvert and extrovert entrepreneurs to neutralize each other for sustainable innovation. It also suggests that introverts, who possess problem-solving expertise, be encouraged to pursue entrepreneurship, particularly in sectors like e-commerce, where their strategic thinking gives a competitive edge.

Keywords: *E-Commerce, Entrepreneurs, Extroversion of Personality Trait, Innovative Behaviour, Introversion Personality Trait*

Introduction

Entrepreneurship is considered a crucial driver of economic and social development. Entrepreneurship is typically viewed as a way for individuals to pursue autonomously defined goals and ambitions. However, it is much more than a way to enhance one's personal situation. It is a significant tool to address critical public problems such as unemployment, poverty, and inequality. When individuals create new ventures, they impact not only their lives, but the life of their community and the economy of nations. By establishing

new businesses, entrepreneurs not only change their own conditions, but generate jobs, spur innovation, and expand a country's economy (Acs et al., 2020; Audretsch et al., 2023). In a broad sense, Olakitan (2011) argues that entrepreneurship supports economic development in a country by engaging in new entrepreneurial ventures, products, or services, in which competitiveness and productivity are leveraged.

The role of entrepreneurship, particularly small and medium enterprises (SMEs), continues to be held as a principal



mechanism for sustainable development and job creation in emerging economies and contexts of development, such as Sri Lanka (Wickramaratne, 2022). Nonetheless, while the importance of entrepreneurship is evident, the level of success of individuals varies greatly throughout the entrepreneurial landscape. The key determinants of entrepreneurial success and successful innovation is personality (Leutner et al., 2014; Obschonka & Fisch, 2020). Personality affects how entrepreneurs both perceive opportunities and risk and make decisions. More specifically, personality dimensions, especially introversion and extroversion, have received increasing attention as they are the two critical lenses for understanding how personality affects entrepreneurial behavior (Zhao & Seibert, 2006). Extroverts tend to be sociable, expressive, and energetic. They are typically good at networking, generating sales, and forging relationships - all of which are necessary for service entrepreneurs to grow and succeed. Successful introverts may be more resourceful, and solution driven, which are also important components of innovative thinking (Cain, 2012; Grant, 2013).

Current scholarly literature suggests both introverts and extroverts can experience success as entrepreneurs, but they do not understand how these traits relate to innovative opportunities (in specific context). An important specific context to consider is e-commerce. The connection is particularly relevant, as e-commerce spaces require quite a unique and particular social interaction and digital competency element while providing opportunities for innovative, online business engagement. Entrepreneurs in e-commerce spaces must continuously adapt to ongoing technological advancements or disruptions, manage relationships with customers within the digital spaces, and create or identify creative innovations in implementing new competitive digital strategies (Liu et. al, 2021). The developing and emerging entrepreneurial landscape in

the Colombo District was used to contextualize the lands of the study. The Colombo District is important because it is the leading commercial/entrepreneurial space in the country of Sri Lanka. Colombo represents a large share of entrepreneurs engaged in e-commerce and advancing technology usages. Colombo creates a dynamic and competitive place/space/market for both introvert and extrovert entrepreneurs to engage with customers and clients through various forms of digital platform engagement. As the prime business hub of Sri Lanka, Colombo boasts reliable and accessible infrastructure, as well as a talent pool and adequate digital connectivity, that makes it a suitable environment to investigate the interaction between personality and innovation in the e-commerce industry (Department of Census and Statistics, 2023).

The association between personality and entrepreneurship has been examined in other parts of the world, though empirical evidence is limited within a Sri Lankan context, particularly in analysing how introversion and extroversion may relate to entrepreneurial innovative behaviour. Prior studies, such as Denis, Ariyaratne, and Perera (2016), concentrated primarily on intentions to be an entrepreneur rather than real business indicators. Moreover, the previous research focused on the wider, multiple Big 5 personality traits (Rauch & Frese, 2020) as opposed to specifically the contribution of introversion and extroversion characteristics on innovation and performance. Thus, this study attempts to close a significant gap in the literature by examining the relationship between introversion and extroversion and innovative behaviour in entrepreneurial activities in an evolving digital business setting in Sri Lanka. Exploring this relationship contributes theoretically to the literature on entrepreneurial personality and innovation overall and practically to educators, support organizations, and policy makers. Understanding how

personality traits impact innovation more clearly can inform the design of training, mentoring, and capacity-building programs that may be more specifically targeted to accommodate different personality types, which if all variants are developed may help to create a more inclusive entrepreneurial ecosystem. In this regard, the study focusses out to assess the impact that extroverted and introverted personality traits have on the innovative behaviour of entrepreneurs in the e-commerce sector in Sri Lanka. The set objectives for the study are:

- To investigate the impact of introverted personality traits on the establishment and growth of e-commerce businesses in the Colombo District.
- To investigate the impact of extroverted personality traits on the establishment and growth of e-commerce businesses in the Colombo District.

Literature Review

Richard Cantillon was one of the first economists to establish a definition of entrepreneurship by stressing the entrepreneur's role in navigating uncertainty and uncertainty-taking (Cantillon, 1755). While Cantillon laid the groundwork to measure entrepreneurial behaviour, the current literature has expanded the ideology to encompass more than just individual risk taking. Entrepreneurship has been conceptualized as a process that is constituted in social contexts, social networks, and collaborative ecosystems, rather than taken on at the individual level (Steyaert & Katz, 2004; Anderson & Starnawska, 2008; Audretsch, 2021). The notion of risk taking has been integral to how entrepreneurs have been conceptualized traditionally, but the modern perspective emphasizes different attributes such as creativity, leadership, and adaptability. Recently, technological and global

contexts have also extended entrepreneurs to their former understanding. Entrepreneurs of the modern day, such as Jeff Bezos of Amazon, and Jack Ma of Alibaba, have harnessed technological advancements to redefine traditional business models. E-commerce entrepreneurs have adopted a marketplace model in the age of e-commerce to defy traditional business modalities where platforms have allowed entrepreneurs direct access worldwide without the need for a significant capital investment (Nambisan, 2017). Not only do entrepreneurs define the notion of scalability in the modern era (i.e., technology to grow the size of their enterprise while maintaining marginal costs), but they are also equalizing the entrepreneurial process giving individuals from various social strata the equal opportunity to launch and create a company where recourse to globalized markets is also normalized. Moreover, the idea of innovation which is a fundamental element of entrepreneurship, is now typically viewed as an idea and practice of generating, developing, and implementing (Brush et al., 2009; Anderson, Potočnik, & Zhou, 2014; Li, Chen, & Wang, 2022). The first step of an innovative activity, idea generation, is commonly considered a reflection of, or a result of, creativeness or problem-solving ability that is often inherent to an individual's personality traits. This fact holds true particularly in the digital economy where co-creation and collective intelligence are key enablers of business innovation. Moreover, traditional perspectives have tended to ignore the contributions that women and other minority entrepreneurs have made to their entrepreneurial experiences and innovative processes, which may include distinct challenges and opportunities (Brush et al., 2009).

Today, even the topic of introversion, that was once first labelled by Carl Jung (1921), remains at the forefront of psychological and organizational

research. Process innovation encompasses modifications aimed at enhancing production efficiency or improving the service delivery process, often through automation or improving workflows (Denis, Ariyaratne, & Perera, 2016). A prime example of process innovation is Amazon's use of robotics employed within warehouses to improve and increase the efficiency of order fulfilment. Organizational innovation pertains to the use of novel structures and management processes and techniques within organizations to improve effectiveness. A clear example of organizational innovation is Google's flattening of their organizational structure and creating a culture of innovation and collaboration. Business model innovation refers to developing innovative ways to create, deliver, and capture value for the firm (Garcia & Calantone, 2002). Business model innovations will matter even more, however, in the digital economy, where entrepreneurs are continuously displacing established business models via digital platforms, subscription services (e.g., Netflix and Spotify), or peer-to-peer marketplaces, (e.g., Airbnb, Uber, & Etsy). For example, whether Airbnb or Uber are counted as "disruptions" to their respective industries and sectors, they have created platform business models that connect service providers with consumers more efficiently and simply scaled that process (Zott & Amit, 2010).

Personality types are critical for understanding human behaviour, especially in entrepreneurship and innovation. Personality, in general, refers to a person's relatively stable characteristics, tendencies, and behaviours that express how that person responds to his/her environment (McCrae & Costa, 2008). Over the years, psychologists have developed different personality typologies to classify individuals based on different personality traits, and among the earliest and most talked-about personality types are

introversion and extroversion. Personality types not only affect how people interact with the world, but their personality types also affect how they engage in innovative and entrepreneurial activity. Personality types are shown to play an important role in influencing leadership style as well. Extroverted entrepreneurs, for example, are likely to take on a transformational leadership style, which is characterized by motivating and inspiring followers, while introverted entrepreneurs may adopt a more reflective and analytical leadership style, concentrating on a thoughtful rather than charismatic decision-making process (Judge et al., 2002). In any case, both processes can indeed be equally effective depending on the industry and context. Most importantly, while some personality traits may predispose people to entrepreneurship or innovation, they are not enough alone to determine success. As Rauch and Frese (2007) note, contextual factors such as access to resources, social networks, and market contexts are also significant contributors to entrepreneurship. Also, personality characteristics can be nurtured or developed through experience and learning. For instance, introverted entrepreneurs can learn to adopt more extroverted behaviours (for instance, networking or public speaking) to the point that they are necessary in some circumstances for their business (Cain, 2012).

Introversion is a psychological dimension in contemporary psychology and is one of five broad dimensions, quantifiable in dozens of tests and questionnaires (e.g., Big Five Personality Traits model). Introversion under this model is defined as the antonym of extroversion, and people who are high in introversion are generally more reserved, reflective and independent. Introverted entrepreneurs may persevere, even in the face of setbacks and failures, thanks to what could be an advantage of reflection. Moreover, introverts appear to embrace opportunities to reflect on their

experiences and learn from their mistakes, enabling them to adapt and improve their business strategies over time. Generally, introverts appear less likely to be discouraged by external social factors (e.g., criticism, perceived failures) to the extent that they rely on their own, internal sense of purpose and motivation (Cain, 2012).

This inner resilience is an important aspect of entrepreneurial success, allowing introverts to remain committed to their long-term goals and stay focused during difficult times. Extroversion stands out most in the entrepreneurial setting due to the extrovert's natural leadership qualities associated with involvement, assertiveness, charisma, and confidence. Functioning as a natural leader not only supports the extrovert to network and develop relationships but allows them to engage with various stakeholders on behalf of the business that can provide momentum for success (Zhao & Seibert, 2006). Entrepreneurs high in extroversion are more likely to be social, outgoing, and confident in social contexts, leading to higher rates of success in persuading and motivating others to partner or seek investment. Forming relationships, or rapport, is a fundamental component of success in entrepreneurship, as entrepreneurial success often relies on developing social networks of resources and connections. While extroversion is a positive trait to embrace in entrepreneurship, in some cases, extroversion can serve as a disadvantage. Extroverts are attracted to excitement and stimulation with a desire for it, which can lead to impulse or unnecessary risk-taking behavior.

Extroverted entrepreneurs may be more inclined to plunge in without sufficient thought about the potential impact of their decisions, which can be hugely costly (Kerr et al., 2018). For instance, they might enter a business deal, or expand their business, without careful market

research, simply trusting the business partnership will work out based on confidence or charisma. But this could backfire if required risks are not properly managed. There are some theories related to the personality test to contend with this orientation. The Big Five Personality Traits, also called the Five-Factor Model (FFM) is probably the most widely accepted method for assessing personality levels. This model specifies personality can be categorized into 5 general groups: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (McCrae, 2010). In Jung's theory, introversion vs extroversion focuses on same nature of the behaviours, and that there is no one who could be totally introverted or totally extroverted. Each person expresses same amount of introversion and extroversion aspects at their essence if needed. Entrepreneurs, as Jungian theory indicates, do show a leaning to one side or the spectrum to be able to show opposite trait behaviour if the situation requires.

Eysenck's theory suggests that individuals who are extroverted may be more willing to seek out new and unusual experiences and take calculated risks, traits that are often associated with entrepreneurial behaviours. Extroverted entrepreneurs may be more inclined to find new opportunities, grow their networks, and engage in innovative entrepreneurial behaviours. The Big Five model also indicates that introverts are equally capable of successful entrepreneurial careers, although they have a divergent strategy to the work. While they may not seek out continual social interaction, introverts are more likely to engage in periods of reflective thought which can lead to more innovative ideas.

Methodology

For the current study, quantitative research design was employed. This design leverages the collection and

analysis of numerical data, allowing the researcher to gain insight by quantifying relationships and testing hypotheses. The study is an example of a field study, as it was conducted in a real-world setting, allowing the researcher to limit disruption to the natural behaviour of the participants. This type of study is a valuable opportunity to collect real experiences and behaviours of the entrepreneurs. Introversion and extraversion, which is a multidimensional scale measuring five important attributes of personality, is assessed with the Big Five Personality Inventory (BFI-44), created by John and Srivastava (1999). Introversion and extraversion were assessed as dependent variables using multidimensional validated scales from previous empirical studies, capturing reliability and construct validity. The current research is characterized as cross-sectional research and consists of the collection of data at one point at one time instead of longitudinally. This design is suitable for this current study as it facilitates the proper testing of multiple factors that determine innovative behavioural tendencies among e-commerce company entrepreneurs. The population to be used in this study is entrepreneurs engaging in the e-commerce sector within the Colombo District in Sri Lanka. To gather data for the study, primary data collection methods are employed. This will be accomplished through the administration of an online questionnaire survey, which will be presented in English. Although probability sampling is generally more acceptable for quantitative studies, the current study will use a convenience sampling approach. This is due to the pragmatic difficulty of securing a complete sampling frame for entrepreneurs. Many entrepreneurs operate in informal or at least diverse settings which make it difficult to randomly select from the total population of entrepreneurs. Convenience sampling

allows the researcher to obtain efficacious data from respondents that are available and willing to respond. Moreover, convenience sampling is considered acceptable in this study due to the study's design focused on relationships between variables rather than generalizability of the population (Etikan et al., 2016; Bryman, 2016). Following the data collection, the data will be analysed using the Statistical Package for Social Sciences (SPSS). This is a comprehensive statistical software application, recommended to be used in social science research for statistical analysis. The authors will analyse data using both correlation and regression statistical approaches to assess the relationships between entrepreneurs' personality traits and their innovative behaviour. The population for the current study is defined to be "All entrepreneurs engaging in e-commerce identified businesses, located in the Colombo District, Sri Lanka." Additionally, in this study, the sample consists of all entrepreneurs engaging in e-commerce identified businesses, located in the Colombo District. This study calculated sample size employing Cochran's sample size formula for an infinite population (Cochran, 1977), which assists in estimating the sample size when the population size is large or unknown. Using this formula, the study required a minimum of [insert number] respondents in order to calculate confidence level of 95%, and a margin of error of 5%. The data were collected using a convenience sampling method of non-probability sampling due to the impracticality of having a complete list of entrepreneurs living in the Colombo District.

Conceptualization

In addition to identifying the target population, the sample, and the sampling methods, it is necessary to develop a conceptual framework to support the research study. With introversion and

extraversion identified as important personality traits determining innovative behaviour, a conceptual framework

allowed for an organized investigation into the relationship of those characters to the entrepreneurial context.

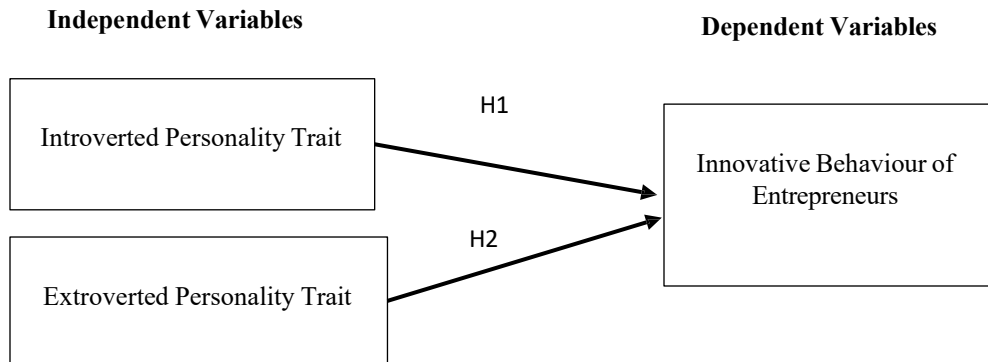


Figure 1: Conceptual Framework

Source: Author, 2025

The hypothesized relationships between the independent variables (introversion and extraversion) and the dependent variable (innovative behaviour of entrepreneurs) visually represented in a diagram, aiding in the comprehension of

Data Presentation and Analysis

The table of this research paper describes the details of the sample that was used in the study to help establish a complete picture of the sampled population by evaluating several demographic dimensions of age, gender, education level, years of industry experience, and the

the research's theoretical foundation. The conceptualization provided not only into the research questions and hypotheses but also serve as a guide for the data collection and data analysis work.

role they had in their business. The demographics of the sample is an important consideration to make as reporting on the demographic composition can help frame the findings and their relationship between personality traits and innovative behaviour of the e-commerce entrepreneur.

Table 1: Summary of Respondent Demographics (N = 381)

Category	Subcategory	Frequency	Percent (%)
Age	Below 25 years	77	20.2
	26 – 35 years	121	31.8
	36 – 45 years	39	10.2
	46 – 55 years	98	25.7
	56 and above	46	12.1
Gender	Male	184	48.3
	Female	197	51.7
Education	Ordinary Level	25	6.6
	Advanced Level	148	38.8
	Diploma	84	22.0
	Bachelor's Degree	85	22.3
	Master's Degree	38	10.0
	Other	1	0.3
Experience	Less than 1 year	48	12.6
	1 – 3 years	126	33.1
	4 – 6 years	153	40.2
	7 – 10 years	42	11.0
	More than 10 years	12	3.1

*Source: Author, 2025***Table 2: Reliability Statistics**

Case Processing Summary			
		N	%
Cases	Valid	381	100.0
	Excluded	0	.0
	Total	381	100.0

a. Listwise deletion based on all variables in the procedure.

Table 3: Reliability Statistics Introversion

Reliability Statistics	
Cronbach's Alpha	N of Items
.912	5

Table 4: Extroversion

Reliability Statistics	
Cronbach's Alpha	N of Items
.963	8

Source: Author, 2025

Table 5: Reliability Statistics Innovative Behaviour

Reliability Statistics	
Cronbach's Alpha	N of Items
.963	8

Source: Author, 2025

In this study, reliability analysis showed that Cronbach's Alpha values for all variables (independent and dependent) were greater than 0.9. This reliability result indicates that multiple item measures of the variables in the survey were both reliable measures and provided high internal consistency. Table 06 presents Cronbach's Alpha coefficients for the internal consistency levels of both the

independent variables which are personality traits of introversion and extroversion, as well as the dependent variable innovative behaviour for entrepreneurs. The values displayed confirm that all scales meet the threshold for reliability, thereby reinforcing the credibility of the data collected in this study.

Table 6: Descriptive Statistics

Descriptive Statistics								
	Statistic	Mean	Std. Deviation	Skewness		Kurtosis		
		Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Extroversion		381	2.5489	1.02105	.472	125	1.389	249
Introversion		381	3.4511	1.02105	-.472	125	1.389	249
Innovative_Behaviour		381	3.7302	.75662	-1.057	125	484	249
Valid N (listwise)		381						

Source: Author, 2025

The descriptive statistics show that among the 381 valid responses, participants were more inclined towards introversion ($M = 3.45$) compared to extroversion ($M = 2.55$), with both sharing the same standard deviation ($SD = 1.02$). Innovative behaviour scored the highest means ($M = 3.73$, $SD = 0.76$), which demonstrates that participants are highly inclined towards innovation. The distributions for introversion and innovative behaviour are negatively skewed, indicating more high

scores, while extroversion is positively skewed.

Correlations

The Pearson correlation analysis indicated a statistically significant moderate negative correlation between extroversion and innovative behaviour, with a correlation coefficient (r) of -0.559 . This result is highly significant, as indicated by a p -value of less than 0.01. The negative

correlation found indicates as levels of extroversion increase within the participants, their innovative behaviour decreases. The analysis indicated a moderate positive correlation for introversion and innovative behaviour with a $(r) = 0.559$ and for the p -value < 0.01 . This finding indicates that highly introverted participants are engaged in innovative behaviour to a greater extent than those who were less introverted. These results suggest important implications. The observed negative correlation for extroverted personality traits and innovative behaviour indicates that extroverted individuals are more likely to engage in social interactions,

networking, and expressing outward action over the introspective and reflective processes that are typically involved in innovation. The Pearson correlation analysis shows a complex relationship between personality traits and innovative behaviour, which can suggest that while extroversion may be associated with lower levels of innovation, introversion is positively related to higher levels of innovative behaviour. This adds to the existing research of how personality may shape entrepreneurial behaviour and offers an opportunity to better understand innovative behaviour among individuals in e-commerce.

Table 7: Correlation _ Extroversion and Innovative Behaviour

Correlations			
		Extroversion	Innovative Behaviour
Extroversion	Pearson Correlation	1	-.559**
	Sig. (2-tailed)		.000
	N	381	381
Innovative Behaviour	Pearson Correlation	-.559**	1
	Sig. (2-tailed)	.000	
	N	381	381
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Author, 2025

Table 8: Correlation Introversion and Innovative Behaviour

Correlations			
		Introversion	Innovative Behaviour
Introversion	Pearson Correlation	1	.559**
	Sig. (2-tailed)		.000
	N	381	381
Innovative Behaviour	Pearson Correlation	.559**	1
	Sig. (2-tailed)	.000	
	N	381	381
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Author, 2025

Regression Analysis

To investigate the relationships established in the correlational analysis, a simple linear regression analysis was conducted. This approach was used to confirm our hypotheses around the effects

of personality on innovative behaviour within entrepreneurs. We present the results of the regression analysis in the tables that follow. • Hypothesis 1: there is a significant effect of the Introverted personality traits on innovative behaviour of entrepreneurs.

Table 9: Main Analysis H1

Model Summary						
Model		R	Square	Adjusted R Square	Std. Error of the Estimate	
1		.559 ^a	.312	.311	.62825	
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.952	1	67.952	172.163	.000 ^b
	Residual	149.591	379	.395		
	Total	217.543	380			
a. Dependent Variable: Innovative Behaviour						
b. Predictors: (Constant), Introversion						
a. Predictors: (Constant), Introversion						

Source: Author, 2025

Table 10: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	2.301		.114		20.257	.000
Introversion	.414		.032	.559	13.121	.000

Source: Author, 2025

The test identifies a moderate positive effect of introversion on entrepreneurial innovative behaviour. The Model Summary statistics show a correlation coefficient of 0.559 which indicates a strong relation between the two variables. The R-squared statistics were found to be 0.312 showing 31.2 % of the variation in innovative behaviour is explained by the participant's level of introversion. The results suggest introversion has a considerable effect on entrepreneurs' approach to innovation. In addition to the correlation and R-squared values, the ANOVA (Analysis of Variance) results reinforce the effectiveness of the regression model. The ANOVA table demonstrated the regression model statistically significant to good predict innovative behaviour, producing an F-value of 172.163 (p-value of 0.000).

This demonstrates that the regression model is statistically significant and shows that it can accurately predict innovative behaviour. Furthermore, the low value for the p-value indicates that the likelihood of obtaining results this extreme from random chance is very low; thus, providing additional support its validity. The Coefficients table provides valuable information about the relationship between introversion and innovative behaviour. It demonstrates that

as introversion increases by a unit of measurement, innovative behaviour increases by 0.414 units. This finding demonstrates the practical implications of the relationship; as introverted entrepreneurs become more introverted, innovative behaviours will increase as well. The Beta value of 0.559 offers additional evidence of the strength of this relationship. The standardized Beta value allows you to compare different predictors in the model. Significance is established based on the corresponding p-value of 0.000 for the coefficient and beta value, such that introversion is a significant predictor of innovative behaviour and it was a strong predictor. Thus, this study confirms the positive relationship introversion has in contributing to innovative behaviours of entrepreneurs.

The results demonstrate that understanding personality traits, particularly introversion, may be beneficial in understanding the interplay of creativity and innovation, and the practice of entrepreneurship. The acknowledgment of the positive nature of introversion on innovative behaviour assists the actors in the e-commerce industry in better supporting and recognizing that the factor contributes to entrepreneurial action and innovation.

- **Hypothesis 2:** There is a significant impact of Extroverted personality traits in the innovative behaviour of entrepreneurs.

Table 11: Main Analysis H1

Model Summary						
Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	
1	.559 ^a	.312	.311		.62825	
a. Predictors: (Constant), Extroversion						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.952	1	67.952	172.163	.000 ^b
	Residual	149.591	379	.395		
	Total	217.543	380			
a. Dependent Variable: Innovative Behaviour						
b. Predictors: (Constant), Extroversion						

Source: Author, 2025

Table 12: Coefficients

Coefficients^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	4.786	.087		.000
	Extroversion	-.414	.032	-.559	.000
a. Dependent Variable: Innovative Behaviour					

Source: Author, 2025

The comprehensive analysis presented across the three tables provides substantial evidence that extroversion has a significant negative effect on innovative behaviour among entrepreneurs. The Model Summary is important, which clarifies that extroversion explains 31.2% of variance present in innovative behaviour. Further confirmed by the moderate correlation coefficient ($R = 0.559$), which implied there is a significant inverse relationship in extroversion and innovative behaviour. The ANOVA analysis further supports the model and indicates that it is significant. The F-value of 172.163 ($p = 0.000$) indicates that the statistical significance confirms the relationship in extroversion and innovative behaviour is not by coincidence. Overall, all the results indicate that extroversion is a positive

predictor of innovative behaviour in the context of this study. The Coefficients table presents a further value about the relationship between Extroversion and Innovative Behaviour. The coefficients table adds to our understanding of innovative behaviour. The-centric way of feeling connected to community, networks, and others leads to innovative behaviour, and highlights two important components of this study, the two subconstructs extroverts should be involved with in their process of identifying innovative action: networking and relationship.

The data indicates that for every one-unit increase in extroversion there is a reduction of 0.414 units in innovative behaviour. This negative relationship suggests the implications of high levels of

extroversion, as it seems reasonable to assume that higher extroversion levels contribute to a reduction in levels of innovative behaviour among entrepreneurs. The inverse relationship is further supported by significant t-value and p-value, which suggests that extroversion has a statistically significant impact as a predictor of innovative behaviour among entrepreneurs. This finding corresponds with Hypothesis 2, which suggests the presence of extroverted personality traits has a significant impact on the innovative behaviour of entrepreneurs. These findings therefore contribute to the larger theme of the interplay between personality and behaviour in entrepreneurs. Through this analysis of how extroversion negatively influences innovative behaviour, the relationship contributes valuable insights to the dynamics surrounding entrepreneurs. The importance of personality traits operationalizes consideration of such traits when deciding how to foster a conducive innovative environment and could be used by the entrepreneurs and stakeholders to develop strategies to enhance the innovative capacity of entrepreneurs while mitigating some level the negative influence on extroverted behaviour for behaviours.

Findings and Discussion

The research focused on investigating the impact introverted and extroverted personality traits have on the innovative behaviour of entrepreneurs operating within the e-commerce sector of Colombo. The research established that introverted personality traits accentuated innovation, given that the introverted entrepreneur exhibits deep thinking, reflection, and problem-solving ultimately leading the entrepreneur to generate original ideas and strategic planning. Nonetheless, extroverted personality traits inhibited innovation as the extravert entrepreneur's affinity to external stimuli

and social interactions inhibited their capacity to engage deeply in creative thought. The results of this study contest the fictional position that associate innovation with extroverted personality traits that embody action, risk and decisions. The study could also infer that introverted personalities could be beneficial in work that requires sustained attention and planning, and that extroverted personalities may need training in reflective, more sophisticated thinking while partnering with introverts to temper the action and interact with major strengths. While establishing new ground, the study sample relies heavily on self-reported data from the e-commerce sector of Colombo, therefore making the generalizations potentially limited and potentially problematic. Suggested future direction and scope could consider studies in different regions and industries, producing a more diversified sample to better highlight the research ideas and examine the interaction between intrinsic personality traits, self and other psychological elements in deeper understanding of the meaningful role of personality in entrepreneurial innovation.

Conclusion

This study investigated the impact of introverted and extroverted personality traits on the innovative behaviour of entrepreneurs within the e-commerce sector of the Colombo District. The results provide valuable insights into how different personality traits influence innovation, challenging conventional views and offering guidance for fostering entrepreneurial success in this rapidly evolving industry. The findings revealed that introverted personality traits have a positive and significant impact on innovative behaviour. Entrepreneurs characterized as introverts were more willing to engage in deep thinking, reflecting, and problem-solving, which are all ways to demonstrate innovation. This supports earlier studies on the ability

of introverts to engage in tasks that required focus and inward-looking reflection (Rauch & Frese, 2007). These reviewed studies have implications in e-commerce when being innovative is necessary to have a competitive advantage. E-commerce businesses generally exploit planning for resourcing new product launches, identifying potential ways to enhance the digital customer experience, and modifying processes in the logistics or supply chain. Introverted entrepreneurs, with their preference for working alone or in smaller teams, may have more mental bandwidth for creative brainstorming and strategic thinking. These findings contrast with some earlier studies that have primarily associated leadership and entrepreneurial success with extroverted traits, which are often seen as more suited to dynamic business environments (Costa & McCrae, 1992). In contrast, the study found that extroverted personality traits have a negative impact on innovative behaviour. Extroverted entrepreneurs are typically characterized by high levels of sociability, assertiveness, and a tendency toward action and interaction. The findings challenge the widely held belief that extroversion is universally beneficial in entrepreneurial settings. While extroverts may be effective in roles that demand networking and fast-paced decision-making, this research highlights the fact that innovation may require a different skill set, one that is more aligned with the introspective and reflective nature of introverted individuals. This paper adds to the literature investigating the relationship between personality characteristics and entrepreneurial outcomes, which have largely focused on the benefits of extrovert traits in social networking and leadership scenarios. In the case of this study, individuals with more introverted traits were apparent in innovative behaviour and thinking. This paper's findings indicate meaningful implications for e-commerce entrepreneurs and

companies. First, introverted traits by entrepreneurs can mean they need time to reflect, consider evidence, defend a position, and create an innovative idea.

The results further indicated an emphasis on organizational strategies that promote both types of personality characteristics. As demonstrated by Smith et al. (2018), mindfulness in the workplace can increase performance via enhanced psychological health, thus organizations may need to develop their leadership and innovative practices for the divergent personality traits that exist in the workforce. This study initiated an examination of the influence of introverted and extroverted personality traits on entrepreneurs' innovative behaviour in e-commerce in the Colombo District. While the findings offered an ambiguous view of how personality traits may impact entrepreneurs' innovation, the nuances were evident. Upon examination of the data analysis, it could be concluded that introverted personality traits have a positive impact on entrepreneurial innovation, while extroverted traits have a negative influence on innovation. It was positively correlated that introverted personality traits were associated with innovation, suggesting that individuals with introverted personality traits may possess the characteristics necessary to innovate. However, the negative influence extroverted personality traits had on innovation provided an interesting, and unexpected discussion point.

Though extroverts are characteristically more socially engaged, action-oriented, and life-oriented, they may have difficulty with the extended attention and independent perceptions and reflections needed for innovative-involving tasks. Because they may be attuned to making decisions rapidly, taking interactions socially, and orientating all tasks to perform in groups, they may not be disposed to engage in strategic and long-term thinking, which is necessary for

developing new and creative solutions to complex business problems.

The role of personality traits on innovation is definitely positive; therefore, organizations and business ecosystems should seek to establish an environment that caters to and/or encourages an introverted entrepreneur. Areas should exist for quiet or focused work that invites deeper thinking and emphasizes reduction of distractions. Extroverted entrepreneurs can also have the potential to innovate, though, their strengths may not exist as naturally as solitary and reflective work as a component of innovation often requires. As well, it is suggested that extroverts become trained to enhance their reflective and thinking creatively. E-commerce and business entrepreneurs in the Colombo District and other marketplaces would also benefit from an approach to fostering innovation that included personality mitigated to engage both personality types. By acknowledging that introverted and extroverted characteristics of personality influence innovative outcomes differently, organizations will enhance the opportunities to design better talent management systems. Furthermore, businesses will benefit from aligning leadership and innovation tasks for the broader and varied skills set of introverts and extroverts. Another critical suggestion is the development of collaborative innovation models that utilize the advantages of both personality types. In these models, introverts could assume a leading role in the ideation and development stages (where deep thinking and other forms of concentrated research are readily available). For the execution stage (which relies heavily on communication and team coordination), the extroverts would assume a leadership role.

Implications of the Study

The implications of this research have various important implications for the fields of entrepreneurship, business management, and organizational development in the rapidly shifting e-commerce marketplace. The research challenges previous assumptions that extroverts are naturally more qualified for entrepreneurial work due to their outgoing, assertive, and gregarious qualities. Rather, it emphasizes that personality traits associated with introversion are more likely to have a positive contribution towards innovation—an important aspect of entrepreneurial success. When trying to find individuals for entrepreneurial or leadership positions, many organizations will value the extroverted traits of charisma, ability to communicate, and the ability to lead groups. For entrepreneurs engaged in some kind of practice, the implications for successful business practice are clear: knowing oneself and one's personality will provide an important adjacent advantage. Introverted entrepreneurs should leverage their natural abilities towards innovation—creativity, focus, and independent work, to facilitate innovative working solutions. Additionally, entrepreneurial training programs could consider personality traits as another issue to consider when providing strategies on business opinion. Companies that adopt an innovative approach inclusive of personality are more likely to sustain themselves. Furthermore, leadership development programs can be adapted to specific teams, so that managers understand personality traits when leading innovative teams. Leaders who can identify and nurture the innovative potential of introverts and leverage the social and execution capabilities of extroverts will be in a better position to drive innovative culture.

Limitations and Suggestions for Future Research

While the current study adds value, it should also recognize limitations, as well as considerations for future research to build upon these findings. This research focused on entrepreneurs in the Colombo District e-commerce industry only, and it affected the generalizability of the findings. Innovative personality and relationships may be affected by different industries and other geographic areas or

countries where business culture and environment can be different. Future research can determine a broader geography and sample size to examine if the same patterns can be seen in the case of other traditional businesses or entrepreneurial environments. This research exclusively handled introvert and extrovert facets of human personality only.

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