



# The impact of entrepreneurial alertness on the performance of youth-owned enterprises



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## Dates:

Received: 13 May 2023  
 Accepted: 28 June 2024  
 Published: 05 Aug. 2024

## How to cite this article:

Mahamotse, M.E. & Msimango-Galawe, J., 2024, 'The impact of entrepreneurial alertness on the performance of youth-owned enterprises', *Southern African Journal of Entrepreneurship and Small Business Management* 16(1), a765. <https://doi.org/10.4102/sajesbm.v16i1.765>

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**Background:** A lack of profitability attributes to 23% of business failures, which in turn, stems from young entrepreneurs' inability to recognise and discover profitable business opportunities. Enhancing entrepreneurial alertness (EA) can play a crucial role in identifying and evaluating lucrative business prospects.

**Aim:** The aim of this paper is to examine how entrepreneurial alertness (EA) impacts the business performance of youth-owned enterprises in South Africa.

**Setting:** The paper focussed on registered and unregistered youth-owned businesses operating in various sectors in South Africa.

**Methods:** This study was conducted by distributing self-administered questionnaires to youth entrepreneurs who run registered and unregistered businesses. A quantitative research approach was adopted using simple random sampling to collect primary data. A sample size of 126 youth entrepreneurs was attained, and multiple regression was used to test the study hypotheses.

**Results:** Entrepreneurial alertness measured using evaluation and judgement dimensions were found to have a direct impact on enterprise profitability and subsequently lead to overall enterprise performance. The results further showed that scanning and search, and association and connection dimensions do not have an impact in any of the enterprise performance indicators.

**Conclusion:** South African youth entrepreneurs do not associate alertness to enterprise performance when alertness is measured by scanning and search, and association and connection.

**Contribution:** The study reveals that alertness measured by evaluation and judgment has an impact on enterprise performance and that alertness can be used to mitigate failures of youth-owned enterprises. The study recommends that business performance must be measured by innovativeness rather than profitability since alertness impacts innovativeness more.

**Keywords:** youth entrepreneurs; entrepreneurial alertness; opportunity recognition; enterprise performance; youth owned enterprises; profitability; innovativeness; business performance.

## Introduction

According to Street (2022), youth unemployment is a serious problem globally and it seems to be much worse in the developing countries. In South Africa, the unemployment rate among the youth between the ages of 15 years and 34 years is approximately 45.5% for the first quarter of 2024 (StatsSA, 2024). Entrepreneurship, therefore, is entrusted with solving the unemployment problem in South Africa (Nsahlai et al. 2020). There is a growing number of young people who are resorting to entrepreneurship as a solution to their social problems based on the high unemployment rate (Musengi-Ajulu 2010; Seabela & Fatoki 2014).

Despite the globally recognised view that there is an increasing number of young people who conceive ground-breaking inventions and turn them into profitable businesses (Majola 2017), and the increased youth participation in entrepreneurship (Monitor 2021), the business failure rate remains a concern. The investigations into the causes of small business failure are still neglected in both developed and developing countries with no exception of South Africa (Bushe 2019). The South African Global Entrepreneurship Monitor (GEM) Report (2021–2022) associates the majority of business failures to the coronavirus disease 2019 (COVID-19) pandemic and non-profitability. The GEM Report suggests that this non-profitability is associated with a lack of business skills, poor ideas that are not marketable (miscalculation of opportunities), the lack of access to markets, and a lack of affordable and efficient support structures and infrastructure (transport, electricity, etc.). Bushe (2019) also states that because many youth-owned small

businesses are established as a last resort (necessity), rather than a first choice (opportunity), owners lack the acumen, culture and skills (Fatoki & David 2010).

Opportunity identification and exploration represent one of the most distinctive and fundamental entrepreneurial cognitive skill behaviours that can contribute to enterprise performance (Fatoki & Oni 2015). Alertness involves a proactive stance based on several cognitive capabilities and processes such as prior knowledge and experience, pattern recognition, information processing skills, and social interactions (Ardichvili, Cardozo & Ray 2003; Baron 2006; Shane 2000). McMullen and Shepherd (2006) state that alertness is never entrepreneurial unless it involves judgement and a move in the direction of taking an action. 'To act on the possibility that one has identified an opportunity that is worth pursuing' is at the heart of being an entrepreneur (McMullen & Shepherd 2006). Entrepreneurial alertness (EA) is an important individual psychological property of decision-makers, which allows business owners to profit from spotted entrepreneurial opportunities (Roundy et al. 2018).

There is growing interest in literature to investigate EA as a construct rather than as a variable under opportunity recognition literature. A study by Tang, Kacmar and Busenitz (2012) has managed to make a significant contribution on the EA literature by exploring the EA dimensions, namely, scanning and search; association and connection; and evaluation and judgement. The study conducted by Fatoki and Oni (2015) has tested the impact of the EA dimensions on the performance of immigrants' enterprises, but looked at innovation as the only determinant of enterprise performance. This study investigated the impact of EA dimensions on the performance of youth-owned enterprises using sales and financial performance as determinants of enterprise performance.

The independent variables that are used as the building blocks for the conceptual framework are scanning and search, association and connection, and evaluation and judgement as dimensions of EA. These variables have been found to have an impact on growth and financial performance (Roundy et al. 2018). Enterprise performance in this study is measured by growth and financial performance, hence the framework in the study only includes enterprise performance.

The conceptual framework of this study is based on the hypotheses that each EA dimension differs in terms of the degree it impacts enterprise performance. The framework is derived from cognitive theory and therefore, its objective is to illustrate the relationship each of the EA dimensions have towards enterprise performance.

## Aim and objectives

The aim of this paper was to investigate the impact of EA towards the performance of youth-owned enterprises in South Africa. To achieve the aim of the research, the following research objectives are set:

1. Investigate to what extent does scanning and search as a dimension of EA impact enterprise performance.
2. Investigate to what extent does association and connection as a dimension of EA impact enterprise performance.
3. Investigate to what extent does evaluation and judgement as a dimension of EA impact enterprise performance.

The high rate of failure of youth-owned enterprises is what motivated this study with an intention to contribute to the body of literature by investigating cognitive skills embedded into EA to impact enterprise performance.

## Research methods and design

### Study design

This is a quantitative study based on numerical data (Taylor & Medina 2011). In quantitative methods, the data are presented by numbers; hence, several statistical analyses can be applied which are quantitative in nature (Gunda 2014). Quantitative is ideal for this research because it is a statistically based study and the data were analysed in numerical form. This research measured youth-owned enterprise performance against EA measured by scanning and search, association and connection and lastly, evaluation and judgement.

A quantitative research methodology brings out the relationship of the variable and it is a multivariate study consisting of more than two variables (Eyisi 2016), in this case, four variables. The dependent variable is enterprise performance while the independent variables are scanning and search, association and connection, and evaluation and judgement. The independent variables are used as elements in EA as a cognitive competency a person must have.

Methodological and ontological assumptions in an empirical-analytical inquiry are characterised by the researcher's detached or objective review of the setting under study (Eisner 1981). The empirical results of this study contribute to the literature on the impact of cognitive skills, such as EA on enterprise performance.

This study used a cross-sectional design; when collecting primary data, the advantage was that data were collected using an online link distributed via social media platforms. The link was created using Qualtrics Software and collected data were coded to Statistical Package for the Social Sciences (IBM SPSS Statistics) software for analysis.

### Population and sampling

To collect primary data, a link providing access to the questionnaire was distributed to youth entrepreneurs using different social media platforms and was not limited to short message services (SMSs) and emails. Simple random sampling was used to identify the sample. This procedure was used to:

Select a sample of N objects strictly by chance, the selection of one member does not influence the selection of any other member, each member of the population is equally likely to

be chosen, and every possible sample of a given size  $N$ , has the same chance of selection. (Newbold, Carlson, & Thorne, 2013, p.3)

## Data collection

Most data were collected using social media platforms (WhatsApp, Facebook, Twitter [now known as X] and Instagram). Social media group accounts with large numbers of youth entrepreneurs such as AFASA Youth-National, Local Government Youth Development Forum, Independent Thinkers of South Africa, Youth Entrepreneurship Campaign, Sedibeng Youth Chamber of Commerce and Industry (SYCCI), and ICT SMME Chamber were used to distribute questionnaires. Social media group accounts with large numbers of youth entrepreneurs such as AFASA Youth-National, Local Government Youth Development Forum, Independent Thinkers of South Africa, Youth Entrepreneurship Campaign, Sedibeng Youth Chamber of Commerce and Industry (SYCCI), and ICT SMME Chamber were used to distribute questionnaires. This approach assisted in reaching respondents in all nine provinces in South Africa. In order to avoid exclusions of youth entrepreneurs who were not members of the mentioned Facebook and X accounts, the study also used the author's social media accounts.

The advantage of using online questionnaires to collect data is that it was easy to share the link and code the collected data on the SPSS system. The survey; however, had the following limitations: firstly, there was no contact with the respondents to provide further clarity on the questionnaire; secondly, responding and finishing the survey was absolutely at the discretion of the respondents; and lastly, surveys sent through emails can easily be regarded as spam mail because of security settings on other emails.

## Data analysis

Data were collected using a Qualtrics-generated questionnaire and were exported to SPSS for data analyses using multiple regression. Once data were imported into SPSS and coded, the data were cleaned, and all errors were removed. The errors in the data could be caused by missing values. The survey was sent through social media (WhatsApp, Facebook, X and Instagram) and also emails. The survey managed to attract 147 respondents in total; 7 respondents never agreed to participate, and 11 contained much missing data and therefore were regarded as invalid. There were three outliers found in the data and removed. The results are thus analysed from 126 respondents.

The descriptive statistics provide the results of the main constructs, and the focus is on showing the means, confidence intervals (CIs), median, skewness and kurtosis. Internal validity is concerned with the results of the paper: whether the results are acceptable because of the sample selection, data recording, or data analysis. Internal validity is concerned with the results of the paper: whether the results are acceptable because of the sample selection, data recording, or

data analysis. External validity measures whether the outcomes of the study would be consistent in a different environment with a different subject. Reliability is the consistency of the research instrument and whether it can yield a certain result when the object being measured is the same (Leedy & Ormrod 2019). A factor affecting reliability is the lack of understanding of the research questions.

## Ethical considerations

Written consent was attached as the first question on an online questionnaire to provide participants with a choice to participate in the study or exit the participation. No personal information was asked for on the questionnaire to keep the responses strictly anonymous. Ethical approval to conduct this study was obtained from the University of the Witwatersrand Graduate School of Business Human Research Ethics Committee (No. WBS/ BA2010119/193).

## Results

The purpose of this section is to provide the results of the study. It begins with descriptive results, followed by reliability of the measuring scales, then explorative factor analysis (EFA), hierarchical multi-regression and lastly, the results on the hypothesis.

## Descriptive statistics

The descriptive statistics provide the results of the main constructs, and the focus is on showing the means, CI, median, skewness and kurtosis. The results of scanning and search, association and connection as well as evaluation and judgement, including the dependent variable (enterprise performance) are presented in Table 1.

The results in Table 1 show that there were six questions on scanning and search (SS) and most of the respondents (mean = 6.25) have responded positively to question number 6 (SS\_6). Association and connection (AC) had three questions and most of the respondents (mean = 6.00) have responded positively to question number 2 (AC\_2). Evaluation and judgement (JE) had four questions and most of the respondents (mean = 6.02) responded positively to question number 1 (JE\_1); and lastly, enterprise performance (EP) had nine questions and most of the respondents (mean = 3/73) responded positively to question number 1 (EP\_1). All questions had no missing value with total  $N = 126$ .

## Validity of factors: Independent variable

Entrepreneurial alertness dimensions, namely, scanning and search, association and connection, evaluation and judgement are independent variables in this study. The sufficiency of 13 items designed to measure alertness was examined using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of Sphericity. The results on KMO = 0.809, Bartlett's test of Sphericity = sig. 0.000, indicate that data were appropriate for the purpose of factor analysis.

**TABLE 1:** Descriptive statistics.

Code	Statistic					Skewness		Kurtosis	
	N	Minimum	Maximum	Mean	s.d.	Statistic	Std. error	Statistic	Std. error
SS_1	126	1	7	6.01	1.150	-2.080	0.216	5.760	0.428
SS_2	126	1	7	6.05	1.350	-2.650	0.216	7.440	0.428
SS_3	126	1	7	5.58	1.480	-1.500	0.216	2.070	0.428
SS_4	126	1	7	6.21	1.150	-2.140	0.216	5.450	0.428
SS_5	126	2	7	5.79	1.180	-1.160	0.216	1.090	0.428
SS_6	126	3	7	6.25	0.885	-1.660	0.216	3.430	0.428
AC_1	126	1	7	5.02	1.520	-0.972	0.216	0.294	0.428
AC_2	126	2	7	6.00	0.980	-1.200	0.216	2.070	0.428
AC_3	126	1	7	5.34	1.310	-1.040	0.216	0.816	0.428
JE_1	126	1	7	6.02	1.040	-2.270	0.216	8.060	0.428
JE_2	126	1	7	5.92	1.180	-1.850	0.216	4.130	0.428
JE_3	126	2	7	5.67	1.290	-1.400	0.216	1.760	0.428
JE_4	126	2	7	5.94	1.050	-1.400	0.216	2.680	0.428
EP_1	126	1	7	3.73	1.190	0.600	0.216	0.525	0.428
EP_2	126	1	7	3.68	1.370	0.692	0.216	0.287	0.428
EP_3	126	1	7	3.58	1.560	0.872	0.216	0.356	0.428
EP_4	126	1	7	3.55	1.540	0.730	0.216	0.108	0.428
EP_5	126	1	7	3.67	1.480	0.719	0.216	0.418	0.428
EP_6	126	1	7	3.62	1.420	0.787	0.216	0.606	0.428
EP_7	126	1	7	3.72	1.430	0.904	0.216	0.506	0.428
EP_8	126	1	7	3.60	1.450	0.754	0.216	0.376	0.428
EP_9	126	1	7	3.82	1.460	0.434	0.216	-0.133	0.428
Valid N (listwise)	126	-	-	-	-	-	-	-	-

s.d., standard deviation; SS, scanning and search; AC, association and connection; JE, evaluation and judgement; EP, enterprise performance.

After some items showed double (cross-loading) and others with no loading, three components of EA dimensions were reduced to only two components. The components had eigenvalues greater than 1.0, which is a common criterion for a factor to be useful (Leech, Barrett & Morgan 2013). To understand the nature of the two components extracted, the pattern matrix was scrutinised and loading was suppressed to two components with the principal axis factoring extraction method. Loading below 0.4 was suppressed and factors were rotated using Promax. The factors with multiple components were removed (SS\_1, SS\_2, AC\_1, AC\_2 and AC\_3). Table 2 illustrates the loading per factors of the alertness construct after some items were disregarded for further analysis. Association and connection had the weakest factor loading and was thus dropped because the item did not converge with other factors.

### Validity of factors: Dependent variable

Enterprise performance is the dependent variable, which is operationalised as youth-owned enterprise performance. The data on the nine items measuring business performance provide sufficient correlation to proceed to applying factor analysis. The result of the KMO was 0.950, which is greater than 0.60 and that of Bartlett's Test of Sphericity was sig. 0.000. There was no cross loading on the dependent variable and there was only one factor loaded. The factor had an eigenvalue of 7.510 that is above the required 1.00, with 83.4% of cumulative percentage that is significant above the recommended level of 60%. Table 3 provides the results on enterprise performance items loading.

**TABLE 2:** Pattern matrix.

Code	Factor	
	1	2
JE_4	0.755	-
JE_1	0.728	-
JE_3	0.702	-
JE_2	0.654	-
SS_5	-	0.845
SS_3	-	0.677
SS_6	-	0.552
SS_4	-	0.503

Note: Extraction method: Principal Axis Factoring. Rotation method: Promax with Kaiser Normalisation.<sup>a</sup>

<sup>a</sup>, Rotation converged in 3 iterations.

JE, evaluation and judgement; SS, scanning and search.

**TABLE 3:** Factor matrix.

Code	Factor 1
EP_5	0.937
EP_3	0.933
EP_8	0.926
EP_7	0.918
EP_6	0.912
EP_4	0.911
EP_2	0.901
EP_1	0.859
EP_9	0.818

Note: Extraction Method: Principal Axis Factoring.

<sup>a</sup>, 1 factors extracted. 3 iterations required.

EP, enterprise performance.

### Reliability of the measurement scale

The results on the construct, scanning and search, contained four items with Cronbach's Alpha of  $\alpha = 0.724$ , having good reliability level. If the items within the construct range above the required Cronbach Alpha of  $\alpha = 0.7$ , it means the items can be combined to form a summated scale. The scales were

accepted as reliable and consistent. All items inter-correlated above 0.3 and demonstrated a convergence validity.

The results on the construct, association and connection, were exclusive, meaning that this construct was completely excluded during EFA, and therefore cannot be included for reliability and further analysis.

The results on the construct, evaluation and judgement, contained four items with Cronbach's Alpha of  $\alpha = 0.806$  with no items being deleted to increase Alpha, and had good reliability level. The inter-item correlations are more than 0.30 and that is an indication that all items are correlating with their respective scales. The results for the construct, enterprise performance, contained nine items with the excellent Cronbach Alpha of  $\alpha = 0.975$  and the scale was accepted as reliable and consistent. Since the reliability was excellent, the items within each scale were combined to form a summated scale for the construct.

Table 4 provides a summary of overall results from the scale reliability test for all the constructs, with several items measuring each construct. The summary table also provides the Cronbach Alpha after items were deleted to improve the scale and the first Alpha before deleting problematic items.

## Correlations results

Results provided in Table 5 show that scanning and search is the highest rated construct (mean = 5.98) followed by evaluation and judgement (mean = 5.88) and enterprise performance with the lowest rate (mean = 3.66). The Pearson's correlation coefficient values indicate a positive significant relationship between evaluation and judgement and enterprise performance ( $r = 0.305$ ,  $p < 0.01$ ); however, the Pearson's correlation coefficient value between scanning and

search and enterprise performance indicates an insignificant positive relationship ( $r = 0.152$ ,  $p > 0.01$ ). The correlation between independent variables is less than 0.8, which implies that there is no threat of multicollinearity. Based on the correlation results in Table 5, further analysis was conducted on the hypothesis.

## Hypothesis testing results

The coefficient results in Table 6 were used to answer the hypotheses. The constant in Table 6 refers to the value of EA when enterprise performance is 0. The relationship between scanning and search and enterprise performance is  $r = 0.152$ , 95% bias-corrected and accelerated BCa CI (-0.304, 0.325),  $p > 0.01$ ; however, it was not significant; also there is the relationship between evaluation and judgement and enterprise performance,  $r = 0.305$ , 95% BCa CI (0.154, 0.712),  $p < 0.10$ , and it was significant; as such, this data supported hypotheses 1 and 3.

The results in Table 6 show that scanning and search ( $B = 0.010$ ,  $\beta = 0.006$ ,  $p = 0.948$ ) was not significant but has a small positive impact on enterprise performance. The  $p$ -value has exceeded the required value of  $< 0.05$ , thus the hypothesis is rejected in favour of the null hypothesis.

H2 was withdrawn because items could not converge during the EFA test. There was multiple loading of items and with one item that did not load at all.

The result of H3, evaluation and judgement ( $B = 0.433$ ,  $\beta = 0.302$ ,  $p = 0.003$ ) was significant and has a positive impact on enterprise performance. This was because the coefficient for evaluation and judgement variable was positive. Thus, the null hypothesis was rejected in favour of H3.

**TABLE 4:** Summary of construct reliability results.

High-level factors	Constructs	Code	Latent factors	No. of items	$\alpha$ before adjustment	Items deleted	$\alpha$ after adjustment
Independent variable	Entrepreneurial alertness	SS	Scanning and search	4	0.724	None	0.724
		JE	Evaluation and judgement	4	0.806	None	0.806
Dependent variable	Business performance	EP	Enterprise performance	9	0.975	None	0.975

**TABLE 5:** Correlations.

Variables	Descriptive statistics		Pearson's correlations		
	Mean	Std. deviation	Enterprise performance	Scanning search	Judgement evaluation
Enterprise_performance	3.67	1.31000	1.000	-	-
Scanning_search	5.99	0.80642	0.152	1.000	-
Judgement_evaluation	5.89	0.90860	0.305**	0.483**	1.00

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

**TABLE 6:** Coefficients.

Model	Unstandardised coefficients		Standardised coefficients	$t$	Sig.	95% Confidence interval		Collinearity statistics	
	$B$	Std. error	Beta			Lower bound	Upper bound	Tolerance	VIF
(Constant)	1.050	0.917	-	1.150	0.255	-0.766	2.870	-	-
Scanning_search	0.010	0.159	0.006	0.065	0.948	-0.304	0.325	0.766	1.31
Judgement_evaluation	0.433	0.141	0.302	3.080	0.003	0.154	0.712	0.766	1.31

Note: Dependent variable: Enterprise\_performance.

VIF, variance inflation factor.

**TABLE 7:** Summary of hypotheses results.

Hypothesis	Outcomes
H1 Scanning and searching has a positive impact on enterprise performance	Supported but insignificant
H2 Association and connection have a positive impact on enterprise performance	Not tested
H3 Evaluation and judgement have a positive impact on enterprise performance	Supported and significant

Correlation analysis provided a strong and positive relationship between evaluation and judgement and enterprise performance, but a positive and weak relationship between scanning and search. Table 7 provides the summary of hypotheses testing outcomes.

## Discussion

The purpose of this study was to investigate the impact of EA on the performance of youth-owned enterprises in South Africa. Entrepreneurial alertness was operationalised based on its three dimensions (scanning and search, association and connection, evaluation and judgement). The key findings of this study are that scanning and search have a weak and insignificant impact on enterprise performance, while association and connection have been found to have no impact on enterprise performance and lastly, judgement and evaluation have been found to have a direct and significant impact on enterprise performance.

### Theoretical foundation

Research has long argued that alertness constitutes an individual's cognitive ability to process prior knowledge and experiences, recognise patterns in an environment, process information and engage in social interactions (Baron & Ensley 2006; Gaglio & Katz 2001). For example, Delač, Stanić and Koprivnjak (2018) argue that EA is the uniqueness of certain individuals with a distinctive set of perceptual and cognitive processing skills. There is a growing consensus in literature that alertness is a specific mental model that pushes entrepreneurial players to examine and process internal and external information to identify entrepreneurial opportunities (Li et al. 2022; Valliere 2013).

To understand this mental process better, a cognitive theory is used to provide a theoretical framework to EA. Cognitive theory is the theory of psychology that attempts to explain human behaviour by understanding the thinking process (Baron 2006; Boris 2012). Cognitive theory postulates that everything that individuals do depends on the mental process, meaning information is categorised and analysed within internal structures that individuals develop during their life experience (Baron & Ensley 2006; Mitchell et al. 2002; Palich & Bagby 1995).

The cognitive framework emphasises knowledge development and provides four reasons: firstly, the cognitive theory does not rely on inheritance principles, but is based on the principles that individuals use to develop their cognitive framework through significant experiences that they

transform into knowledge (Baron 2006). Secondly, the cognitive approach asks questions such as 'how do entrepreneurs think and perform certain activities' (Mitchell et al. 2002). Thirdly, according to the cognitive perspective, every entrepreneur possesses a mental framework that is developed throughout their life experience and is able to use this cognitive framework to make sense of the environment (Dutta & Crossan 2005). Lastly, the cognitive perspective is used in opportunity recognition and regards opportunity recognition as the most important competency that must be developed before other technical competencies (Kuratko 2003; Pittaway & Cope 2007).

### Youth entrepreneurs

Many entrepreneurship opportunities exist for youth in South Africa; however, youth are impeded by both endogenous and exogenous factors (Ouko et al. 2022). The process of establishing a successful business for youth entrepreneurs is difficult, especially to those lacking access to or ownership of resources, credit history and work experience (Henning, Jammer & Jordaan 2022). The work done by Fatoki (2011), Aviram (2010), Chipfupa and Tagwi (2021) and Dossou et al. (2021) analysed factors such as entrepreneurial orientations dimensions, entrepreneurial education, self-efficacy and financial literacy and performance, and their work found that the improvement of these factor positively enhances the performance of the enterprise and this is synonymous to EA.

Social cognitive theory further suggests that the decision and interference process can be improved with appropriate training and deductive techniques (Njeru, Bwisa & Kihoro 2015). Sharma (2018) also adds that formal education is also a key determining factor of EA. Most respondents (47.6%) had tertiary education and that provides evidence that both tacit knowledge (acquired through experience) and explicit knowledge (acquired through information harvesting) act as the key components of the alertness construct.

### Entrepreneurial alertness

Entrepreneurial alertness concept was introduced into literature by Kirzner (1983) who defined EA as 'the ability to notice without search opportunities that have hitherto been overlooked by others' (Kirzner 1983:48). Kirzner initially excluded active searching of information as one of the constructs of alertness suggesting that entrepreneurs cannot search for information and that its existence is unknown (Tang, Baron & Yu 2023). Kirzner also included a motivated propensity of man to formulate an image of the future as determinant for alertness. According to Kirzner's definition, EA is rooted in psychology and the cognitive science of attention. Kirzner's definition is indeed a launchpad for scholars who attempt to understand how entrepreneurs think and behave regarding opportunity recognition (Chavoushi et al. 2021; Hajizadeh & Zali 2016; Lanivich et al. 2022).

Gaglio and Katz (2001) are among the very first scholars to explore EA as a cognitive concept, declaring it as a basis for opportunity recognition. Their work claims that alertness is a cognitive capability possessed by certain individuals to spot opportunities. This notion is further supported by Awwad and Al-Aseer (2021) who posit that people with good EA can discover more opportunities and change their entrepreneurial behaviour based on the deposit of new information. According to the theory of entrepreneurial discovery, information is one of the central factors in opportunity identification and that information is not perfectly distributed among people (Kirzner 1997).

The scope and importance of EA are not limited to the boundaries of opportunity identification or exploitation alone. It also plays an important role in establishing, performing, growing, and surviving the new business as well as in agility (Sharma 2018; Xie & Lv 2016). It can further mediate a relationship between innovativeness and entrepreneurial intentions (Gözükara & Çolakoğlu 2016), between sources of knowledge and entrepreneur's innovativeness, and also between core social network knowledge and entrepreneur's innovativeness (Jiao et al. 2014).

The two approaches relating to cognitive aspects of EA are individual (person-centred) approach and firm and environmental (situation-centred) approach (Mitchell et al. 2002). The majority of scholars investigated EA from an individual-centred approach and agreed on antecedents such as personality traits, social networks and prior knowledge, intelligence and creativity, social cognition, competency and self-efficacy, technical and market knowledge, and lastly entrepreneurial passion (Ardichvili et al. 2003; Bandura 2006; Fatoki & Oni 2015; Kirzner 1983, 1985; Shane & Venkataraman 2000; Tang et al. 2008; Urban 2020). Research also provides proof that alertness can be predicted by varying individual characteristics such as knowledge acquisition, positive effect, critical thinking, future time perspective, optimism, and self-efficacy (Kirzner 2009; Tang et al. 2023; Tang, Zhang & Lin 2021).

There is a general agreement on the EA dimensions such as (1) scanning and search, (2) association and connection, (3) evaluation and judgement as developed by Tang et al. (2012). Tang et al. (2023) add that engaging in components of alertness requires costs, time, energy, and financial resources. Accessibility to this resource might explain why some individuals are more alert than others and, therefore, individuals have a task of considering the potential benefits and costs involved in searching and scanning of information, connecting potential information, and evaluating potential opportunities.

This study adopted an individual-centred approach that uses cognitive and psychological perspectives (Tang et al. 2021) to achieve its objective of investigating EA among young people.

## Scanning and search

The literature strongly posits that scanning and search is a strong dimension of EA and further states that this dimension involves prior knowledge, awareness, and sensitivity to new opportunities that provide competitive advantages that can boost business performance (Ericsson, Krampe & Tesch-Römer 1993; Lim & Xavier 2015; Urban 2019). Research further states that this dimension is relevant and significant to entrepreneurs to respond to disruptions detrimental to business performance (Roundy et al. 2018).

According to the findings of the study, scanning and search has a positive impact on enterprise performance, even though the impact is not significant. This result means that the hypothesis is rejected in favour of the null hypothesis that scanning and search have an impact on enterprise performance.

The studies by Tang et al. (2012), Saarikko, Jonsson and Burström (2014), Fatoki and Oni (2015) show that there is a positive and significant impact between scanning and search and enterprise performance. The results of this study are inconsistent with the current literature, and this might mean that South African youth business owners do not view how being in possession of proactive information can impact enterprise performance.

## Association and connection

This dimension focusses on the availability of new information, creativity, and making extensions in logic (Tang et al. 2012). Association and connection allow the entrepreneurs to gather information of different qualities and use that knowledge to build new business ideas (Baron 2006; Urban 2019). Some researchers posit that this dimension implies that some gathered information must be organised in a systematic way in order to identify opportunities (Tang et al. 2023).

According to the findings, it is evident that youth business owners in South Africa did not find a relationship between making a logic of information and enterprise performance. Association and connection is about connecting the dots (Tang et al. 2012), but those dots can not translate into enterprise performance.

## Evaluation and judgement

According to the literature, effective evaluation and judgement can distinguish between information capable of yielding new innovative solutions in the form of opportunities that are perceived as novel (Cox 2016; Valliere 2013). This dimension further enables individuals to distinguish between what is profitable and non-profitable, and high-value versus low-value opportunities (Tang et al. 2012). This dimension also means that if entrepreneurs are presented with multiple opportunities, another aspect of evaluation focusses on the assignment of choosing the best, that is, the opportunity that has the most financial benefits. To curb a high level of business discontinuation, this dimension is beneficial.

The results of the study agree with the notion that when new market opportunities are properly evaluated and judged, they can lead to innovation and subsequently have a positive influence on enterprise performance (Valliere 2013). Profitability is one of the key dimensions of enterprise performance and therefore evaluation and judgement as dimensions of EA is about making decisions on the business opportunities and profit potential (Cox 2016; Fatoki & Oni 2015; Lim & Xavier 2015; Tang et al. 2012; Urban 2019; Valliere 2013).

### Entrepreneurial alertness and enterprise performance

According to Gavrea, Ilies and Stegorean (2011), organisational performance can be conceptualised as a set of financial and non-financial indicators that offer information on the scale of achievement of a company's objectives and results. Gavrea et al. (2011) further state that performance may be demonstrated by using a casual model that describes how current actions may affect future results. Majola (2017) is of the view that performance measurement should include five main dimensions such as finance, profit and return on investment (ROI), marketing and customers, processes, staff development, and standards for the future. However, according to Lim and Xavier (2015) and Galawe (2017), growth and profitability are often used as performance dimensions. Growth is measured by sales, employment, assets, market share, and office space, while financial performance is measured by revenue, profitability, gross margins, and cash flow. Wiklund (1999) states that both growth and financial performance dimensions can be used simultaneously to provide a richer description of business performance.

The purpose of this paper was to investigate the impact of EA on the performance of youth-owned enterprises, meaning whether EA can impact growth and/or financial performance. According to Brown and Kirchoff (1997), there is no evidence that suggests that alertness will lead to better business performance and that the response to market dynamics is based on luck that cannot be repeated or be consistent. This view of Brown and Kirchoff (1997) contradicts the views of other researchers that there is a direct relationship between EA and business performance (Gaglio & Katz 2001; Kirzner 1997; McMullen & Shepherd 2006). According to Kirzner (1999) and Tang et al. (2012), the impact of EA on business performance can be measured through opportunity identification and exploitation and innovativeness. Even though the relationship between EA and enterprise performance is found to be in existence, such a relationship is contingent upon the environmental variables of dynamism, hostility, heterogeneity, and munificence (Lumpkin & Dess 1996; Njeru et al. 2015; Wiklund 1999).

In an environment where opportunities frequently arise, remaining alert can become profitable especially when analysing alertness from a market perspective (Chavoushi et al. 2021).

According to Chavoushi et al. (2021), high EA can lead to faster price equilibration in the market and this will increase the level of product diversity in essence, and product diversity has an effect on sales. Alertness from a level perspective can also lead to more value creation (Chavoushi et al. 2021). In addition, the relationship between EA and performance is explained in terms of the existence of innovativeness (Urban 2019), suggesting that EA is an antecedent of innovation, which then contributes drastically to enterprise growth and financial performance (Ardichvili et al. 2003; Tang et al. 2012).

Youth in their early stages of business have not yet established non-financial factors contributing to business performance; hence, they could not link alertness to business permanence using all three EA dimensions. The implication of the study is that alertness cannot always be measured by scanning and search, association and connection, and evaluation and judgement. In this study, only evaluation and judgement tested alertness on enterprise performance. The study recommends that EA be tested on business success other than performance and the moderating effects of the environment.

### Conclusion

The purpose of this study was to investigate the impact of EA on the performance of youth-owned enterprises in South Africa. Alertness was measured using three dimensions, namely, scanning and search, association and connection, and evaluation and judgement, while enterprise performance was measured by growth and financial performance. The conclusion is that the two alertness dimensions, namely, scanning and search, and association and connection have no impact on enterprise performance whatsoever. Evaluation and judgement are a significant determinant of alertness and are directly linked to profitability.

### Acknowledgements

The authors would like to express their gratitude to the Training Officers of National Youth Development Agency (NYDA) who assisted in the distribution of questionnaires during data collection.

This article stems from a Masters Report titled 'The impact of entrepreneurial alertness on the performance of youth-owned enterprises in South Africa', submitted at the Faculty of Commerce, Law and Management of University of the Witwatersrand in partial fulfilment of the requirement for the degree of Master of Management in Entrepreneurship and New Venture Creation, supervised by Dr Jabulile Msimango-Galawe. It is available at: <https://wiredspace.wits.ac.za/server/api/core/bitstreams/3655380f-19fe-4cde-9f4d-23e9e8139b6f/content>.

### Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.



## Authors' contributions

M.E.M. and J.M-G. contributed equally to this research article.

## Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

## Data availability

The data supporting the results of this study are available from the corresponding author, M.E.M. upon reasonable request.

## Disclaimer

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