

# The influence of economic motivation, desire for independence and self-efficacy on willingness to become an entrepreneur



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**Background:** Employees involved in dirty work lack a desired social identity because of stigma attached to their occupation. Pursuing entrepreneurship as a career choice could be one corrective measure they can take to achieve a high-standing position in society.

**Aim:** This study was undertaken with the goal of investigating the predictive capacity of desire for independence (DI), economic motivation (EcoM) and entrepreneurial self-efficacy (ESE) regarding willingness to become an entrepreneur (WEE) for employees involved in dirty work.

**Setting:** Although this study is grounded in well-developed theories, the study is of value given that it provides new insights with respect to the impact of EcoM, ESE and DI on WEE among employees involved in dirty work who are facing stigma.

**Methods:** This study adopted a positivist paradigm. Data were gathered through a self-administered questionnaire. To analyse the data, factor analysis and multiple linear regression were used.

**Results:** This study found that in the quest to achieve a high-standing position in society by employees involved in dirty work, EcoM and ESE play more crucial roles than DI as far as WEE is concerned.

**Conclusion:** This study concluded that in the quest to achieve a high-standing position in the society, EcoM and ESE play more crucial roles than DI on WEE for employees involved in dirty work.

**Keywords:** Dirty work; employees; stigma; entrepreneurship; willingness.

## Introduction

It is a widespread belief that in the presence of entrepreneurs, economies thrive as jobs are created, leading to poverty reduction and improved living standards. This is because entrepreneurs are individuals who are willing to take calculated risks. Above all, entrepreneurs are regarded as people who believe in their capabilities (self-efficacy), are economically motivated and desire independence. Scarborough (2012) concurred and mentioned that being driven by the profit motive (economic) and personal growth, and the belief in self, the entrepreneur is an individual who establishes an entrepreneurial entity in an environment characterised by risk and uncertainty.

Entrepreneurship is a practical activity where the person involved is actually doing something tangible with the hope of achieving economic benefits and personal recognition (Carsrud & Brännback 2011). As a result, entrepreneurial motivation is the key predictor to a person's subsequent demonstration of entrepreneurial behaviour. Shane, Locke and Collins (2003:258) argued that it is highly unlikely for a person to demonstrate entrepreneurial behaviour without the 'willingness to play the game'. In addition, they argued that entrepreneurial motivation plays a critical role in identifying who eventually becomes an entrepreneur. This study put this argument to test by investigating the predictive capacity of economic motivation (EcoM), desire for independence (DI) and self-efficacy, classified in this study as entrepreneurial motivation, regarding the willingness to become entrepreneurs for employees involved in dirty work, who are facing stigma and contemplating career change.

Carsrud and Brännback (2011) pointed out that research on entrepreneurship has, for a very long period, focused on actions associated with exploiting entrepreneurial opportunities. This

has resulted in the dearth of literature on factors that are actually responsible for initiating the process of exploiting opportunities, that is entrepreneurial motivation (Carsrud & Brännback 2011; Shane et al. 2003). This study contributes to the literature through a different dimension. Thus, the study investigated the influence of entrepreneurial motivation (EcoM, DI and self-efficacy) on the willingness to become entrepreneurs for employees involved in dirty work. Extant literature continues to present entrepreneurial motivation as an important topic in entrepreneurship research (Carsrud & Brännback 2011; Kim-Soon, Rahman & Nadia 2016). This study also makes a significant contribution to the literature as it investigates the 'what of' entrepreneurial motivation and its impact concerning willingness to become an entrepreneur (WEE) among employees involved in dirty work facing stigma, and working towards achieving a higher standing in society. Therefore, the study argues that employees who are involved in dirty work, classified to be physical (e.g. garbage collectors, cleaners, groundsmen, among others) and who possess a high entrepreneurial motivation score, are more likely to be willing to consider entrepreneurship as a career option (Miller et al. 2012). We hope that our findings would go a long way in clearing the mismatch between entrepreneurship-promoting efforts and outcomes as observed by Mahto and McDowell (2018).

## Literature review: Why dirty workers?

The concept of dirt in a work context, as defined by Douglass (1966), refers to physical dirt and any other form of dirt that the community shies away from, for example, crime, danger and immorality. This line of thinking influenced Ashforth and Kreiner's (1999) categorisation of dirty work into physically, socially and morally tainted tasks. In this study, researchers focused on people performing physically tainted tasks. The extant literature further classifies physical taint into two categories (Ashforth & Kreiner 1999, 2013; Deery, Kolar & Walsh 2019). The first category of physically tainted tasks is performed under dangerous conditions, for example, firefighters and soldiers. This category was not considered in this study owing to accessibility challenges. The other category under physically tainted is that of people who on a daily basis directly deal with dirt, for example, garbage collectors, groundsmen, office cleaners, street cleaners and sewer workers (Valtorta et al. 2019). Researchers in this study reached out to this group for primary data.

To answer the posed question, that is, 'Why dirty workers?', we adopted the model of entrepreneurial motivation, proposed by Mahto and McDowell (2018), that is grounded in the individual identity formation process (Ashforth & Schinoff 2016; Markus & Nurius 1986). Employees involved in dirty work face stigma attached to their occupation. Stigma is defined as 'an attribute that is deeply discrediting' (Goffman 1963 as cited in Weitzer 2017:1). The stigmatisation of dirty workers is a global phenomenon and in South Africa, those involved in dirty work, both

skilled and semi-skilled, are, to a certain degree, viewed as people who cannot express themselves intelligently, are semi-literate and are always physically dirty (Van Rooyen et al. 2010). As a result, they occupy a low-standing order in the society. Therefore, employees involved in dirty work lack a desired social identity.

Ashforth and Mael (1989) pointed out that a person's social identity is synonymous with their standing or position in a community. It is our assumption that employees involved in dirty work are in constant search of viable means to achieve a higher standing in society. This thinking is supported by identity literature, for example, Trope (1986) and Swann (1984) who pointed out that the outcome of self-assessment (identity formation process) may lead individuals to reinforce their existing identity or seek readjustment of their identity.

Childhood is one vital stage of identity formation and a child is most likely to assume an entrepreneurial identity if raised by entrepreneurial parents. Empirical evidence exists in support of this notion based on studies conducted in different countries, all concurring that being raised by entrepreneurial parents contributes significantly to the development of entrepreneurial motivation (Chlosta et al. 2012; Lindquist, Sol & Van Praag 2015; Walter & Heinrichs 2015).

Conversely, other individuals are likely to develop an entrepreneurial motivation because of self-assessment or self-verification, which they perform on a regular basis (Ashforth & Schinoff 2016; Obodaru 2012). There are two possible outcomes linked to the mentioned process, that is, a person is either satisfied or unsatisfied with the ideal self. Once a person is satisfied with the ideal self, they are expected to continue with the current identity (Blustein, Devenis & Kidney 1989; Strube 1990).

However, if the person is not satisfied, chances are high that a corrective action will be pursued (Yost & Strube 1992). In the context of this study, employees involved in dirty work are assumed to be unsatisfied with the outcome of self-assessment as they lack the desired social identity owing to stigma attached to their occupation. The model of entrepreneurial motivation therefore points out that unsatisfied individuals constantly try to improve their current identity, making them more willing to consider entrepreneurship as a career choice (Nicholson & Anderson 2005).

Yost and Strube (1992) pointed out that because individual identity is linked to self-preservation instinct, any gap between the individual's image of self and another's image of them is sufficient to drive them into pursuing viable means of levelling the *status quo* (corrective measure). In the context of this study, the corrective action would be considering taking up entrepreneurship as a career option because of the rewards it offers, such as economic benefits, independence, prestige and confidence in self. This thinking

is further supported by empirical evidence, which points out that at some point, because people need to feel competent, the corrective measure involves the search of a self-enhancing opportunity where the probability of improving on their current identity, leading to a higher standing in the society, is considered high (see Alvesson & Willmott 2002; Fitz-Koch, Cooper & Discua Cruz 2019; Liñán, Ceresia & Bernal 2018; Ryan & Deci 2000).

People desire a higher standing in society because it is associated with multiple benefits, including prestige, authority, power and a high number of followers (Ashforth & Kreiner 1999). Baumeister (1998) echoed similar sentiments and pointed out that benefits associated with a higher standing in society enable the individual to lower uncertainty levels linked to the definition of the self. Ibarra and Barbulescu (2010) concurred and pointed out that a higher standing in society increases legitimacy for an individual's description of self.

Markus and Nurius (1986) and Ashforth and Schinoff (2016) also concurred by pointing out that an individual's identity affects their motivation and behaviour. In addition, it further affects their career choices (Larkin 1987). As stated earlier, pursuing entrepreneurship as a career could reward employees involved in dirty work, classified to be physical, with a better identity in the society. Down and Warren (2008) agreed with this and argued that entrepreneurship is a career choice for an individual and should be associated with the individual's identity.

Mahto and McDowell (2018:513) pointed out that little empirical evidence exists on how the motivation of a non-entrepreneur (in the context of this study employees involved in dirty work) 'has hindered our understanding of how non-entrepreneurs develop the motivation to pursue entrepreneurial career options and this has led to misinformed decisions by scholars and policy makers'. This study is unique in that it investigated the impact of EcoM, DI and self-efficacy on the WEE for people involved in dirty work. Thus, being guided by the entrepreneurial motivation model, we investigated factors making up entrepreneurial motivation and how they contribute towards WEE. The section to follow discusses at length entrepreneurial motivations (i.e. EcoM, DI and self-efficacy) and their relationship with WEE.

## Entrepreneurial motivation and willingness to become an entrepreneur

According to Santos, Caetano and Curral (2013:665), 'entrepreneurial motivations refer to the motives that drive individuals toward typical entrepreneurial activities'. Entrepreneurial success is highly dependent on human motivations. Thus, the human motivation dimension serves as a significant predictor of new venture success as individuals are mainly driven by their inner desire to demonstrate entrepreneurial activities. Motives further drive

an individual to put together resources necessary in the demonstration of entrepreneurial activities (Santos, Curral & Caetano 2010; Shane et al. 2003).

Existing literature reveals two specific entrepreneurial motivations: general and task-specific (Shane et al. 2003). It is further pointed out that both general and task-specific entrepreneurial motivations influence the entrepreneurial processes and the entity growth process differently (Baum et al. 2001). Economic and entrepreneurship literature further acknowledges two forms in which motivations to demonstrate entrepreneurial activities can be categorised: intrinsic and extrinsic motivations (Carsrud & Brännback 2011; Deci & Ryan 1985; Ryan & Deci 2000). On the one hand, intrinsic motivation refers to intangible personal factors that drive an individual into demonstrating entrepreneurial behaviour. Such factors include DI, interest and self-determination, among others (Antonioli et al. 2016). On the other hand, extrinsic motivation refers to external factors that drive an individual into demonstrating entrepreneurial behaviour. These factors include monetary rewards, recognition and external control (Antonioli et al. 2016).

Evidence suggests that intrinsic and extrinsic motivations influence individuals in an opposite manner towards the demonstration of certain behaviours (Bénabou & Tirole 2003). Conversely, the study by Bowles and Polania-Reyes (2012) provided evidence suggesting that there are situations at which both intrinsic and extrinsic motivations complement and reinforce each other towards an individual's demonstration of a given behaviour. Furthermore, research by Amabile (1997) argued that the demonstration of entrepreneurial activity could be highly stimulated by the synergy between intrinsic and extrinsic motivations.

The extant literature reveals three main drivers or dimensions that express entrepreneurial motivations: the DI, EcoM and entrepreneurial self-efficacy (ESE) (Santos et al. 2010; Shane et al. 2003). Santos et al. (2013) developed and validated the Entrepreneurial Potential Assessment Inventory (EPAI) using a sample from Portugal and labelled DI, EcoM and ESE as dimensions of entrepreneurial motivation. Spagnoli et al. (2016) further validated the EPAI in Italy and concurred with Santos et al.'s (2013) remarks.

## Desire for independence

The majority of entrepreneurs highlight their desire for making important decisions that have a significant impact on their entrepreneurial activities and entity success. With regard to independence, Shane et al. (2003) had this to say:

... independence entails taking the responsibility to use one's own judgement as opposed to blindly following the assertions of others. It also involves taking responsibility for one's life rather living off the efforts of others. (p. 268)

Earlier research also concluded that entrepreneurs scored fairly high in the need for independence scores compared to

the general population (Hornaday & Aboud 1971). Hisrich (1985) concurred and reported that the major reason for establishing new ventures was the strong DI.

### Economic motivation

The need to make money has also been singled out as the main driver leading to individuals pursuing entrepreneurial activities (Kuratko 2016). Entrepreneurial activities, when pursued strategically, have the capacity to generate high revenue leading to significant profit for the entrepreneur to enjoy, thus EcoM comes into the picture. Generally, entrepreneurs view their own work as more highly profitable than seeking formal employment (Brice & Nelson 2008). Conversely, the study by Åstebro (2017) provides evidence that in developed countries, entrepreneurs seem to be earning less than wage earners. The explanation for this phenomenon, according to Åstebro (2017), lies in truthful reporting by entrepreneurs in respect of their income. However, after adjusting for underreporting by entrepreneurs, their income rises above that of wage earners by a margin between 10% and 40%. Given the above discussion, the demonstration of entrepreneurial activities has the capacity to improve the economic situation of employees in work; this study therefore argues that EcoM influences the willingness of employees in dirty work to become entrepreneurs.

### Entrepreneurial self-efficacy

According to Bandura (1997), people's belief in their capabilities to pursue set goals with success is crucial. In the context of this study, self-efficacy is critical to the idea of demonstrating entrepreneurial activities. Baum and Locke (2004) concurred and pointed out that self-efficacy is critical to entrepreneurs as they are often faced with difficult circumstances, where confidence in their abilities to deliver regardless of the situation normally carries the day.

People who have high scores in self-efficacy are known to have patience; they persist even though faced with unfriendly situations (Zhao, Seibert & Hills 2005). Furthermore, they actively seek means of overcoming such challenges. Ironically, some have the habit of seeking challenging opportunities (Bandura 1997; Baron, Mueller & Wolfe 2016). It could be that they are also driven by the premise that the higher the risk, the higher the returns.

In light of the above, a person would not be surprised to learn that self-efficacy is related to business venture launch and business success. These are not easy circumstances, but materialise owing to self-efficacy, a characteristic found in entrepreneurs (Chen, Green & Crick 1998; Hmieleski & Baron 2008). As highlighted earlier, individuals who score high on ESE are known to pursue tasks that the general population is prepared to let go.

### Willingness to become an entrepreneur

Willingness is defined in this study as the outcome of a comparison of the opportunity to become an entrepreneur

and working as an employee (Van Praag & Van Ophem 1995). The interaction between willingness and opportunity is critical to the start-up decision and is negatively influenced by lack of financial, human capital or unfavourable environmental circumstances. According to Shane and Venkataraman (2000), the concept of opportunity recognition is critical as far entrepreneurship is concerned. They argued that in the absence of opportunity recognition, entrepreneurial activities will not materialise.

The debate on the subjectivity or objectivity of opportunities is still ongoing among scholars (Asante & Affum-Osei 2019). The sticking point is whether people create or discover opportunities (Davidsson 2017; González, Husted & Aigner 2017; Wood 2017). As pointed out earlier, WEE is most likely to exist when an individual perceives entrepreneurship as being more attractive than formal employment. This study contributes to this debate, and we argue that unwillingness to become an entrepreneur can only materialise when employees involved in dirty work perceive themselves as possessing a low entrepreneurial motivation score.

### Hypothesis development

Several factors drive individuals and lead to them having that willingness to pursue entrepreneurship as a career. In line with the EPAI, the entrepreneurial motivation dimension comprises the DI, EcoM and ESE, all of which positively influence a person's WEE (Rwigema & Venter 2004).

### Desire for independence and willingness to become an entrepreneur

One of the most mentioned factors that positively influence the willingness to pursue entrepreneurship as a career option is the desire to be independent (Douglas & Fitzsimmons 2005; Kuratko, Morris & Covin 2011). Previous research by Lee and Wong (2004) echoed similar sentiments, pointing out that people who exhibit a high need for independence are bound to seek careers with more freedom, and boundaryless careers such as entrepreneurship are known to reward people with such highly sought independence.

Evidence suggests that people who are more willing to pursue entrepreneurship as a career option are driven by the need for independence, for example, studies by Wilson, Marlino and Kickul (2004) and Walter and Block (2016).

In the extant literature, the DI is also referred to as the need for autonomy (Venter et al. 2015). The need for autonomy and self-directing has been offered as an underlying motive as to why some individuals may be interested in working in smaller firms. In agreement, Al-Jubari, Hassan and Hashim (2017) further provided evidence on the importance of autonomy in respect of the idea of pursuing entrepreneurship as a career. Furthermore, the need for autonomy has been identified as a predictor of the successful fit of an individual



with an entrepreneurial position (Bhardwaj & Mittal 2017; Vecchio 2003).

Venter et al. (2015) noted that the argument as to why some individuals would prefer to work for smaller firms as opposed to large firms is based on the notion that in large firms, there is limited room for individuals to fully express their skills, personal freedom and potential entrepreneurial initiative. Thus, boundaryless careers such as entrepreneurship reward people with the desired independence (Hytti 2010; Sullivan 1999). Given this discussion, it is relatively correct to assume that if employees involved in dirty work desire independence, there is a high probability that they could be willing to pursue entrepreneurship as a career. This study examined this aspect, and the study thus contributes to the literature by indicating the relationship that exists between DI and the willingness to pursue entrepreneurship as a career.

### **Economic motivations and willingness to become an entrepreneur**

The extant literature argues that the majority of entrepreneurial ventures are established by their owners based on the belief that pursuing boundaryless careers such as entrepreneurship promises more expected utility than formal work at a given firm or unemployment (Douglas & Shepherd 2000; Van Praag & Cramer 2001). DeFillippi and Arthur (1996:116) pointed out that 'boundaryless careers are sequences of jobs opportunities that go beyond the boundaries of single employment settings'. Research concurs, pointing out that entrepreneurship provides individuals with the opportunity to take control of their careers and serves as a viable career alternative to precarious circumstances at work (Patrick, Stephens & Weinstein 2016; Weller et al. 2016).

Largely, entrepreneurship is caused by intrinsic and extrinsic motivations (Bénabou & Tirole 2003; Deci & Ryan 1985; Rajagopala 1989; Ryan & Deci 2000). Intrinsic and extrinsic motivations cause a goal-directed behaviour. The extant literature has pointed out that when an individual is driven by economic rewards towards the demonstration of an entrepreneurial behaviour, extrinsic motivation is assumed to be at play (Antonioli et al. 2016). A person's desire for need of fulfilment leads to the willingness to demonstrate entrepreneurial activities (Haivas, Hofmans & Pepermans 2014). This is because a need creates tension in the individual's mind. The tension only vanishes when the desired environment has satisfied the need. In the context of this study, the desired environment would be the achievement of significant economic returns, for example, profits that come in the form of rewards for demonstrating entrepreneurial activities (Kautonen, Kibler & Minniti 2017). Maslow's hierarchy of needs has identified various needs such as physiological, safety, social, esteem and self-actualisation. These needs are a trigger for a specific human behaviour.

Needs always exist in humans and largely act as a compelling force towards an individual's WEE, among other behaviours.

Thus, given that employees involved in dirty work are driven by economic rewards, this would positively influence their willingness to pursue entrepreneurship as a career option.

### **Entrepreneurial self-efficacy and willingness to become an entrepreneur**

People can have certain orientations towards work that reflect their personal motives, values and talents.

These orientations, known as career anchors, are the manifestation of a person's self-efficacy in their career choice (Bandura 1986). One of the career anchors is where the individual's primary concern is to create something new, involving the motivation to overcome obstacles, the willingness to run risks and the desire for personal prominence in whatever is accomplished (Bandura 1997). Self-efficacy is a crucial construct in terms of motivation, which influences individual choices, goals, emotional reactions, efforts, coping and persistence. Largely, individual self-efficacy beliefs influence the challenges a person is willing to face, including the duration of perseverance. The concept of self-efficacy has so far been extended to ESE (Venter et al. 2015).

Entrepreneurial self-efficacy describes people's beliefs that they are capable of carrying out the various tasks and roles of an entrepreneur. Individuals who are high in ESE are able to (1) assess the environment to be opportunistic rather than risky, (2) believe in their ability to achieve goals and (3) perceive a low probability of failure (McShane & Von Glinow 2003; Venter et al. 2015). The study by Antoncic, Antoncic and Aaltonen (2016) further argued that if the probability of new venture start-ups is to increase, ESE should be a focus area for practitioners.

Current research on ESE has focused on the role of context, that is, micro- and macro-environmental factors, in an individual's beliefs and confidence to start an entrepreneurial venture (Eesley & Wang 2017; Mauer, Neergaard & Linstad 2009; Schmutzler, Andonova & Diaz-Serrano 2019; Stam & Spiegel 2018; Wyrwich, Stuetzer & Sternberg 2016). The mentioned studies provide evidence suggesting that contextual variables play a critical role independently and collectively in shaping an individual's beliefs and confidence with regard to their willingness to become entrepreneurs. Given this discussion, the role of ESE, as far as entrepreneurial behaviour among individuals is concerned, cannot be underestimated. This study seeks to further contribute to this debate by providing evidence by investigating the predictive capacity of ESE on WEE making use of a unique sample of employees involved in dirty work, classified to be physical. Thus, we argue that if employees involved in dirty work perceive themselves to be high in ESE, the probability is also high that they could be willing to pursue entrepreneurship as a career choice. Given the above discussion, the study hypothesises that:

**H1:** Desire for independence, EcoM and ESE predict WEE for employees involved in dirty work.

## Methodology

The study adopted the positivist approach, which, according to Hacking (1981:1–2), ‘is a scientific investigation based on realism and an attempt to find out about the one real world’. Walliman (2016) highlighted that positivists argue that regardless of what people think and cumulative false starts that are common enough, there is always a best explanation of any aspect under investigation. In other words, science builds on what is already known. This study is quantitative by nature and descriptive by design. Primary data were gathered through a self-administered questionnaire. Six hundred self-administered questionnaires were issued in selected cities and towns of the Eastern Cape Province, South Africa, through the help of various municipalities and independent organisations. Three hundred and forty-eight employees involved in dirty work, classified to be physical, were able to return completed questionnaires with enough information to proceed to the analysis stage.

## Measures

The study relied on the EPAI tool to determine what constitutes entrepreneurial motivation. Being guided by the contents of the EPAI with regard to DI, EcoM and ESE, we identified different scale items from empirical literature that we adopted and modified for all three explanatory variables. Desire for independence was measured through a three-item scale, and an example of the scale items reads as follows: ‘Freedom from supervision’ (Brice & Nelson 2008). To measure EcoM, four items from Brice and Nelson (2008) were used; an example of the scale items reads, ‘Making money as a business owner to meet your needs’. To measure ESE, six of the scale items developed by De Noble, Jung and Ehrlich (1999) were adopted and modified for this study with an additional seven items being added to form a 13-item scale. An example of the scale item reads, ‘I am comfortable with uncertainty and risk’. To measure WEE, we adopted and revised Mitchell, Seawright and Morse’s (2000) 18-item willingness script. The script is originally made up of nine expert cues and nine non-expert cues. A person who is considered willing is expected to choose the expert script and ignore the non-expert cues. Following their approach, we revised their scale to a five-point Likert scale. Thus, both explanatory and dependent variable scale items were measured on a five-point Likert scale ranging from 1 = not at all true of myself to 5 = true of myself.

## Ethical consideration

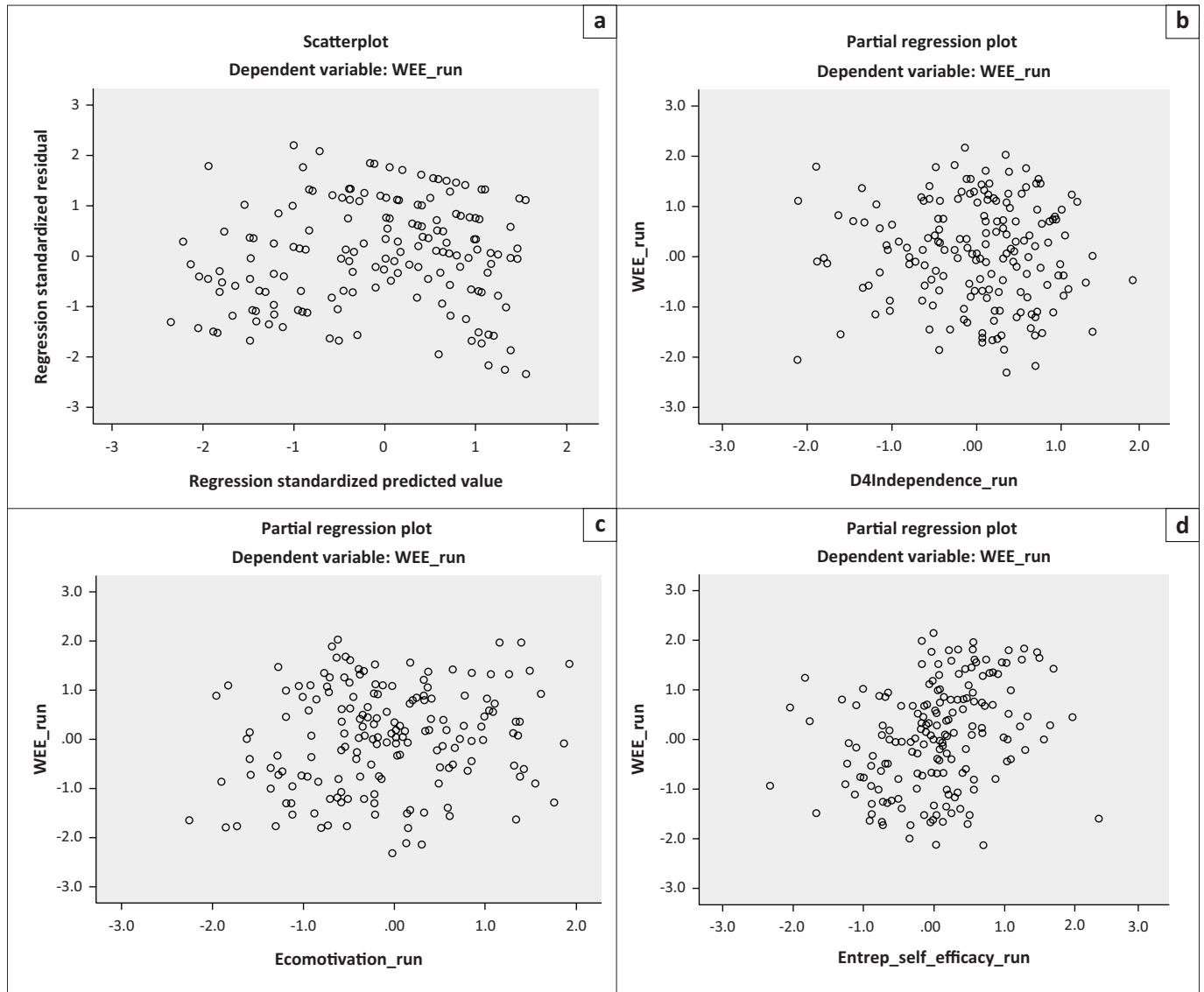
The study is being published from a PhD theses entitled “The influence of entrepreneurial competencies and intentions on the willingness of dirty workers to become entrepreneurs” and it was cleared by the University of Fort Hare Ethics Committee with certificate reference number: CHI211SSHA01.

## Results

The Statistical Package for Social Sciences (SPSS) version 24 was used to analyse the data. The data analysis involved two stages. Stage 1, confirmatory factor analysis, was undertaken to identify the entrepreneurial motivation factors. Factor analysis is a tool designed to simplify the correlational relationships between a number of continuous variables. The Kaiser–Meyer–Olkin (KMO) of sampling adequacy score of 0.903 with a significance level of 0.000 was found. The observed KMO allowed the authors to proceed with factor analysis and the results indicated that four factors were to be extracted which explained a total variance of 64.22%. Factor 1 with six items had an eigenvalue of 12.293 explaining 42.389% of total variance and a reliability score of 0.85. The first factor was named ESE. The second factor with five items had an eigenvalue of 2.755 explaining 9.501% of total variance and a reliability score of 0.912 and it was termed EcoM. Six items clustered under factor 3 with a reliability of 0.924 and an eigenvalue of 2.178 explaining 7.509% of total variance was named DI. The last factor clustered under factor 4 with four items was termed WEE. Factor 4 had a reliability score of 0.721 and an eigenvalue of 1.398 explaining 4.821% of the total variance.

Multiple linear regression analysis was carried out to examine the predictive capacity of EcoM, DI and ESE regarding WEE for employees involved in dirty work. To proceed with the multiple linear regression analysis, the data were first investigated to determine if they met the assumption of independent errors and homoscedasticity, and the data were further investigated for collinearity. To assess if the data met the assumption of independent errors, the Durbin–Watson test statistic was observed and the score of 1.526 was found. The conservative rule with regard to the Durbin–Watson statistic outlines that values should not be less than 1 or above 3. However, values close to 2 are most preferred. In this study, we concluded that the value of 1.526 is sufficient to suggest that the assumption of independent errors was almost met. Data were further investigated for collinearity, and the variance inflation factor (VIF) and tolerance statistics were examined.

The VIF values were all within the accepted range, that is, below 10 with EcoM = 1.762, DI = 2.291 and ESE = 1.957. The tolerance statistics were all above 0.2, with EcoM = 0.568, DI = 0.436 and ESE = 0.511. Given that the VIF and the tolerance statistics were within the accepted thresholds, it can be concluded that there is collinearity in the data. Finally, the data were analysed to investigate if it satisfied the assumption of linearity and homoscedasticity. The plots of standardised residuals against the predicted values were analysed. The array of dots in the graphs were not funnelling out and no curve was observed. Generally, the points between the dots were evenly dispersed throughout the plots. The just described graph outlook, according to Field (2013), paints a picture of where the assumption of linearity and homoscedasticity are being met (see Figure 1).



**FIGURE 1:** Plots of standardised residuals: (a) Normal P-P plot of regression standardised residuals; (b) Partial regression plots on the relationship between desire for independence and willingness to become an entrepreneur; (c) Partial regression plot on the relationship between economic motivation and willingness to become an entrepreneur; (d) Partial regression plot on the relationship between entrepreneurial self-efficacy and willingness to become an entrepreneur.

## Multiple linear regression analysis of desire for independence, economic motivation and entrepreneurial self-efficacy

From the multiple linear regression results, the Pearson's correlation ( $r$ ) indicates that all predictors were positively and significantly related with WEE as observed by  $r$  for DI – WEE = 0.261,  $r$  for EcoM – WEE = 0.337 and  $r$  for ESE – WEE = 0.349. In other words, employees involved in dirty work with high entrepreneurial motivation as measured by DI, EcoM and ESE are more likely to be willing to become entrepreneurs. Table 1 is a summary of multiple linear regression analysis results, indicating beta weights, standard errors and their respective  $p$ -values.

The combined effect of three predictor variables resulted in a multiple linear regression model with an  $R^2 = 0.154$ ,  $F(3, 337) = 20, 488$ ,  $p < 0.001$ . However, in the model, only EcoM and ESE have a unique contribution as observed significant and positive regression weights. Desire for independence results

indicate that it is negatively and insignificantly related to WEE for employees involved in dirty work as observed on negative regression beta weights that are associated with a  $p$ -value of 0.341, far above the cut-off limit of  $p = 0.05$ .

## Discussion

The main contribution of this study to the literature is that instead of adapting the scales items as proposed by Santos et al. (2013), we relied on other scales found in the extant literature and they also proved to be reliable in measuring entrepreneurial motivation of employees involved in dirty work. In other words, the study concurs with Santos et al. (2013) that to measure entrepreneurial motivation, DI, EcoM and ESE are critical factors. Our findings further indicate that EcoM plays a critical role in predicting WEE for employees involved in dirty work; for example, the results show that as EcoM increases by 1 unit, WEE for employees involved in dirty work increases by 0.213 units. This finding indicates that employees involved in dirty work accept the personal

**TABLE 1:** Linear model of predictors of willingness to become an entrepreneur.

Variables	<i>b</i>	Lower bound and upper bound	SE <i>B</i>	$\beta$	<i>p</i>
Constant	1.866	1.491 – 2.241	0.191	-	0.000
Desire for independence	-0.066	-0.203 – 0.07	0.069	-0.072	0.341
Economic motivation	0.213	0.095 – 0.332	0.06	0.235	0.000
Entrepreneurial self-efficacy	0.26	0.126 – 0.393	0.068	0.269	0.000

*b*, unstandardised beta; SE *B*, standard error for the unstandardised beta;  $\beta$ , standardised beta.

financial risks, that is, the probability of losing capital that is associated with owning an entrepreneurial venture. However, from these results, it can be concluded that employees involved in dirty work are more focused on economic benefits they are likely to gain from potential success of the entrepreneurial venture leading to their willingness to become entrepreneurs (Segal, Borgia & Schoenfeld 2005). Baumol (1990) also suggested that individuals are motivated by the reward structure in the economy leading to them considering entrepreneurship as a viable career. Praag and Cramer (2001) also found that individuals would consider entrepreneurship as a potential career when expected economic rewards exceed expected income from formal employment.

Similarly, the study provides evidence that ESE is critical concerning WEE for employees involved in dirty work. Thus, as ESE increases by 1 unit, WEE for employees involved in dirty work also increases by 0.26 units. Rauch and Frese (2007) summarised the findings of various studies and provided evidence concurring with our findings that ESE for starting a new entrepreneurial venture was a critical factor in increasing the probability of a new venture start-up. The study by Drnovšek, Wincent and Cardon (2010) also pointed out that a common finding among literature that investigated the influence of self-efficacy on formation of entrepreneurial intentions was that people with a high score in ESE are more likely to start entrepreneurial ventures. Given the study's findings, chances are high that employees involved in dirty work are more likely to venture into entrepreneurship, as they believe that they are able to carry out all necessary tasks associated with new venture creation with success.

However, we also found that DI is negatively related to WEE. The possible explanation could be that employees involved in dirty work do not find their current work demands or work situation stressing. In addition, it could be that they are able to cope with work demands regardless of the work environment. As a result, they do not place more value on the aspect of being independent. The most interesting aspect is that they place more emphasis on EcoM. This could be the result of what they observe in society or their continued interaction with their environment (Obodaru 2012). People who run successful entrepreneurial businesses are being rewarded through profits and prestige. Resultantly, they occupy a higher standing in society and employees involved in dirty work envy or emulate such individuals, leading to their willingness to consider entrepreneurship as a career choice. Similarly, employees involved in dirty work are aware that failure to believe in their capabilities will not

benefit them in the face of entrepreneurial challenges. It is our belief that employees involved in dirty work are well aware of what could be a major obstacle in their quest for a higher standing and that is entrepreneurial challenges. Their ability to manoeuvre around them surely should result in them gaining prestige and more recognition in the community. Down and Warren (2008) and Mahto and McDowell (2018) concurred with this and pointed out that entrepreneurship as a career choice for an individual should be associated with the individual's identity. It is widely known that running a business enterprise is more stressful than most formal jobs, especially if there are few people involved in daily business transactions. As a result, trust and belief in their own capabilities are critical to getting the business off the ground. Hence, to achieve a higher standing in the society, employees involved in dirty work see ESE as a crucial factor leading to their willingness to become entrepreneurs. In other words, our study gives policy-makers, educators and practitioners clear direction with regard to 'what of' entrepreneurial motivation they should emphasise and focus on to enhance willingness among non-entrepreneurs, especially those in dirty work, to kick-start new entrepreneurial ventures.

## Limitations and future research

Future research should address the limitations of this study, that is, relying on one category of employees in dirty work. Dirty work is a broad concept and this study relied on employees involved in physically tainted jobs, but ignored those involved in morally and socially tainted jobs. In other words, the results of the study may not be generalised to the entire population of employees involved in dirty work. In addition, the results should be interpreted with caution even if they are being generalised to those involved in physically tainted jobs, given that the definition of physically tainted jobs is broad and what applies to one community may not be applicable to another. In future, mixed-method research, where results can be triangulated with other sources of data, could be undertaken and prove to be more robust concerning policy and education.

## Conclusion, theoretical and managerial implications

This study was undertaken with the goal of identifying the predictive capacity of DI, EcoM and ESE regarding willingness to become entrepreneurs for employees involved in dirty work, classified to be physical. The study adopted the entrepreneurial motivation model to explain and motivate why employees involved in dirty work could consider becoming entrepreneurs. The entrepreneurial motivation model suggested that this revolves around improving a person's identity or seeking to establish a new and more salient identity. Owing to stigma, employees involved in dirty work lack a desired social identity and therefore entrepreneurship as a career is one corrective measure they can pursue to achieve a high-standing position in society. The study found that in the quest to achieve a high-standing position in the society, EcoM and ESE play



more crucial roles than DI in WEE for employees involved in dirty work. Based on the study's findings, many implications for the public, managers, policy-makers, education and training institutions can be found. Thus, the mentioned stakeholders should present EcoM and ESE as key drivers towards the demonstration of entrepreneurial activities to employees involved in dirty work who are stigmatised. By doing so, employees involved in dirty work who are contemplating career change will be able to evaluate their willingness to become entrepreneurs based on these factors. In addition, policy-makers should motivate employees involved in dirty work and inspire them towards economic rewards associated with entrepreneurial activities, which, in turn, will serve as their high road towards attaining a new social standing in the society.

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

## Author's contributions

H.S. conceptualised the study, did the write-up of the study, and collected and analysed the data. W.T.C. guided the entire writing of the study and supported H.S. during the course of the study.

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## Data availability statement

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Disclaimer

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Appendix start on the next page →

## Appendix 1

### Summary of multiple linear regression analysis output

TABLE 1-A1: Model summary.

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Standard error of the estimate	<i>R</i> <sup>2</sup> change	Change statistics				
						<i>F</i> -change	<i>df</i> 1	<i>df</i> 2	Sig. <i>F</i> -change	Durbin-Watson
1	0.393†	0.154	0.147	0.97910	0.154	20.488	3	337	0.000	1.526

*F*-change, the *F*-test which test the *R*-square change; *df*, degrees of freedom; Sig., significance.

†, Predictors: (Constant); Entrepreneurial self-efficacy; Desire for independence; Economic motivation; ‡, Dependence variable: Willingness to become an entrepreneur.

TABLE 2-A1: ANOVA†.

Model	Variable	Sum of squares	<i>df</i>	Mean square	<i>F</i>	Sig.
1	Regression	58.922	3	19.641	20.488	0.000‡
	Residual	323.064	337	0.959	-	-
	Total	381.985	340	-	-	-

*F*, *F*-test; *df*, degrees of freedom; Sig., significance; D4Independence\_run, Desire for independence; EcoMotivation\_run, Economic motivation; Entrp\_Self\_Efficacy\_run, Entrepreneurial self-efficacy; WEE\_run, Willingness to become an entrepreneur.

†, Dependence variable: WEE\_run; ‡, Predictors: (Constant); Entrp\_Self\_Efficacy\_run, EcoMotivation\_run, D4Independence\_run.

TABLE 3-A1: Coefficients†.

Model	Variable	Unstandardised coefficients		Standardised coefficients: Beta	<i>t</i>	Sig.	95% confidence interval for <i>b</i>		Correlations			Collinearity statistics	
		<i>b</i>	Standard error				Lower bound	Upper bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.866	0.191	-	9.789	0.000	1.491	2.241	-	-0.052	-0.048	0.436	2.291
	D4Independence_run	-0.066	0.069	-0.072	-0.954	0.341	-0.203	0.070	0.261	0.189	0.177	0.568	1.762
	EcoMotivation_run	0.213	0.060	0.235	3.538	0.000	0.095	0.332	0.337	0.204	0.192	0.511	1.957
	Entrp_Self_efficacy_run	0.260	0.068	0.269	3.832	0.000	0.126	0.393	0.349	-	-	-	-

*b*, the unstandardised beta; VIF, variance inflation factor; Sig., significance; D4Independence\_run, Desire for Independence; EcoMotivation\_run, Economic motivation; Entrp\_Self\_Efficacy\_run, Entrepreneurial self-efficacy; WEE\_run, Willingness to become an entrepreneur.

†, Dependence variable: WEE\_run.

TABLE 4-A1: Collinery diagnostics†.

Model	Dimension	Eigenvalue	Condition index	(Constant)	D4Independence_run	EcoMotivation_run	Entrp_Self_Efficacy_run
1	1	3.860	1.000	0.00	0.00	0.00	0.00
	2	0.065	7.704	0.76	0.16	0.00	0.13
	3	0.043	9.497	0.12	0.04	0.61	0.52
	4	0.032	11.003	0.12	0.80	0.39	0.34

D4Independence\_run, Desire for Independence; EcoMotivation\_run, Economic motivation; Entrp\_Self\_Efficacy\_run, Entrepreneurial self-efficacy; WEE\_run, Willingness to become an entrepreneurs.

†, Dependence variable: WEE\_run.