Uncovering dominant characteristics for entrepreneurial intention and success in the last decade: systematic literature review

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Abstract
This study presents a systematic literature review to identify dominant characteristics that predict entrepreneurial intention and entrepreneurial success in the twenty-first century. The aim was to provide insights to entrepreneurs, academicians, policy makers, counsellors and all those charged with the responsibility of entrepreneurship development. The study applied a systematic review of the literature contained in the two databases, namely Semantic Scholar and Google Scholar. The analysis of the literature identified self-efficacy, conscientiousness, locus of control, need for achievement and innovativeness as the indisputably and unarguably key top personal characteristics that predict both entrepreneurial intention and guarantee entrepreneurial success. The study also finds that characteristics that predict entrepreneurial intention also guarantee entrepreneurial success. The review of the existing literature shows that there are gaps in it. For example, there are not many countries where studies have been done in the area of interest, and the research methods used in those studies are not balanced because they are mostly quantitative. The major contribution of the study was the identification of key dominant personal characteristics that predict both entrepreneurial intention and lead to entrepreneurial success in today’s dynamic environment. The other key contribution is stages, methodology and the analysis that can be replicated and employed by other researchers (scholars and practitioners) to conduct other studies or better still, similar studies in the future.

Keywords Systematic literature review · Characteristics · Entrepreneurial success · Entrepreneurial intention · Research gap

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Introduction

Entrepreneurship is the major source of technological growth, economic growth, employment, competition, promotion of product and service quality, innovation and economic flexibility in today’s society (Hisrich et al., 2007; Kuratko, 2007). Apart from being a driving force for job creation and economic development, entrepreneurship contributes to personal development (Sarri & Trihopoulou, 2005). An entrepreneur is referred to as an individual who undertakes creative and innovative initiatives. “Why some individuals are more successful in business than others is among the influential questions in entrepreneurship research” (Isaga, 2012). Since the late 1980s, the pace of research on personality traits and entrepreneurial intension has slowed down (Sousa et al., 2018) because of inconsistency in theory and mixed empirical findings (Llewellyn & Wilson, 2003; Zhao & Seibert, 2006).

Studies have presented that successful entrepreneurs have similar characteristics to each other (see Timmons et al., 2004; Carland et al., 1984; Desai et al., 2009; Ehigie et al., 2003; Bulu et al., 2005; Hui et al., 2006; Djankov et al., 2007; Papzan et al., 2008; Abdullah et al., 2009; Di Zhang et al., 2011) with some studies arguing that some characteristics presented by other studies do not lead to entrepreneurial success or/and intention (see Ahmed et al., 2019, 2022; Awwad et al., 2021; Biswas & Verma, 2021a, 2021b; Sarwoko & Nurfarida, 2021; Mhlanga, 2019; Franco & Prata, 2019; Zhou et al., 2019; Setia, 2018; Djankov et al., 2007).

Purpose of study

The twenty-first century is a century that is unique from other centuries because its environment is dynamic, coupled with tense, fierce competition on a daily basis. Because not everyone can or will become an entrepreneur, it is critical to identify who will be entrepreneurs sooner rather than later (Majková & Kljunikov, 2017). Many researchers and authors are of the view that entrepreneurial success largely depends upon the traits of the entrepreneur but have a difference of opinion with respect to the degree of importance of various traits (Singh & Rahman, 2013a, 2013b).

There is an increasing curiosity in today’s twenty-first century as to why there are variations in the success rates of entrepreneurs and how to determine the relevant characteristics/traits required for entrepreneurial success. Moreover, little is known about the profiles of personal characteristics of individuals who express a high level of entrepreneurial intention (Şahin et al., 2019). It has become difficult for policy makers, counsellors, academicians and other relevant authorities who are charged with responsibilities of entrepreneurship development to determine the most relevant dominant characteristics required for an entrepreneur to succeed in the twenty-first century or better still, predict who would be an entrepreneur.
based on an individual’s characteristics. Amid researcher inconsistency and mixed and inconclusive literature results regarding characteristics for entrepreneurial success and intention, it became necessary to conduct a study that would determine the most dominant characteristics related to entrepreneurial success and intention in the twenty-first century using a systematic literature review of the previous decade literature.

This study focused on two areas. The first was to identify characteristics linked to entrepreneurial success and the second was to identify characteristic factors that are related to entrepreneurial intentions in the twenty-first century by systematic review of the literature from the last decade.

**Literature review**

This section presents studies carried out in the last decade (2012–2022) relating to studies that focused on the impact of individual characteristics on entrepreneurial success and intention.

**Entrepreneurial success**

Entrepreneurial success is measured in both non-financial and financial parameters. Nag and Das (2017) used measures of success in employment and growth in profit. It can also be referred to as growth in turnover sales, growth in profit after tax and return on net worth.

**Entrepreneurial intention**

Entrepreneurial intention is an indication that an individual intends to choose entrepreneurship as a career and s/he is ready to gather resources, take risks and establish their own business (Karabulut, 2016). Entrepreneurial intention plays a very decisive role in the process of becoming an entrepreneur, and it is not only the prerequisite for establishing a business, but it also influences an individual’s behaviour (Soni & Bakhru, 2021).

Table 1 summarises studies that present a positive association between some characteristics and entrepreneurial success and intentions from 2012 to 2022.

**Studies that delinked some characteristics from entrepreneurial success and intention**

Table 1 has the following literature, which is based on studies done from 2012 to 2022.

Ahmed et al. (2022) conducted a study in Pakistan on the influence of the big five personality traits on entrepreneurial intentions. The study found that extroversion, neuroticism, openness to experience and agreeableness do not have a big effect on whether or not someone wants to start their own business.
Table 1  Summary of studies on characteristics for entrepreneurial success and intention from 2012 to 2022

| No | Area addressed                                                                 | Characteristics/Traits found                                                                 | Year | Country       | Method           | Study on …                 | Authors                          |
|----|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------|---------------|------------------|---------------------------|----------------------------------|
| 1  | Role of Entrepreneur’s Personality Traits on Start-ups motivation and growth of Start-ups and SMEs | Desire for Achievement and Desire for Independence                                            | 2022 | Tanzania      | Quantitative      | SMEs’ Owners              | Ismail (2022)                    |
| 2  | Personality Traits, Entrepreneurial Intention and Risk Aversion               | Risk Aversion, Neuroticism, Consciousness and Openness                                        | 2022 | Pakistan      | Quantitative      | University Students       | Ahmed et al. (2022)              |
| 3  | Women Entrepreneurial Innovativeness and Self-Efficacy                        | Emotional Intelligence, Entrepreneurial Alertness, Internal Locus of Control and Self-Efficacy| 2022 | Tunisia       | Qualitative       | SMEs’ Owners              | Jazir and Sakly (2022)           |
| 4  | Impact of Big Five Personality Traits on Entrepreneurial Intention and the Role of Entrepreneurial Alertness | Conscientiousness, Alertness and Openness                                                   | 2022 | Jordan        | Quantitative       | University Students         | Awwad and Al-Aseer (2021)        |
| 5  | Personality Traits and Entrepreneurial Intention                              | Entrepreneurial Education, Need for Achievement, Locus of Control, Conscientiousness and Innovativeness | 2021 | India         | Quantitative       | University Students        | Biswas and Verma (2021a, 2021b)  |
| 6  | Entrepreneurial Personality Traits and Performance                            | Conscientiousness, Extraversion and Openness to Experience                                   | 2021 | Indonesia     | Quantitative       | SMEs’ Owners/Managers      | Sarwoko and Nurfarida (2021)     |
| No | Area addressed | Characteristics/Traits found | Year | Country | Method | Study on … | Authors |
|----|----------------|-------------------------------|------|---------|--------|------------|---------|
| 7  | Alertness and Attitude a path way to Entrepreneurial Intentions | Need for Achievement, Self-Efficacy, Locus of Control, Perseverance, Risk-Taking, Innovativeness, Reactiveness, Alertness and Entrepreneurial Attitude | 2021 | India | Quantitative | University Students | Biswas and Verma (2021a, 2021b) |
| 8  | Traits, Entrepreneurial Attitude, Self-Efficacy and Entrepreneurial Intention | Attitude and self-efficacy | 2021 | India | Quantitative | Students | Anwar et al. (2021) |
| 9  | Entrepreneurial Intention and Entrepreneurial Status | Risk-Taking Propensity, Innovativeness, Proactiveness and Emotional Intelligence | 2021 | Germany, Russia and USA | Quantitative | University Students | Schlaegel et al. (2021) |
| 10 | Personality Traits and Sustainability-Oriented Entrepreneurial Intentions | Agreeableness, Extraversion, Neuroticism, Openness and Conscientiousness | 2021 | Pakistan | Quantitative | SMEs’ Owners | Khan et al. (2021) |
| 11 | Personality Traits and Entrepreneurial Intention | Passion, Creativity and Self-Efficacy | 2021 | India | Quantitative | University Students | Soni and Bakhru (2021) |
| No | Area addressed                                                                 | Characteristics/Traits found                                                                 | Year | Country | Method      | Study on …          | Authors                      |
|----|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------|---------|-------------|---------------------|-----------------------------|
| 12 | Entrepreneurs’ Personality Traits For Start-Ups                                | Narcissism, Internal Locus of Control, Extraversion, Neuroticism, Agreeableness, Innovation, Efficiency, Conscientiousness, Openness to experience and External Locus of Control | 2020 | Italy   | Quantitative | Tourism             | Presenza et al. (2020)      |
| 13 | Personality Traits and prediction of entrepreneurship intention, leadership, emergence and success | Openness, Extraversion, Conscientiousness, Agreeableness and Stability Emotional            | 2020 | Austria | Quantitative | University Students | Bergner et al. (2020)       |
| 14 | Entrepreneurial Personality and Competitiveness                                | Positive Thinking, Consciousness, Open-Minded, Leadership and Friendly                      | 2020 | Indonesia | Quantitative | Chocolate Agents     | Chaniago (2020)             |
| 15 | Best Traits of Entrepreneurs                                                   | Self-Confidence, Honesty, Innovativeness, Risk Taking, Ability for Marketing, Leadership, Sense of Responsibility, Creativity, Utilising the Opportunities and Determination | 2020 | Turkey  | Literature Review | SMEs’ Owners | Genç (2020) |
| No | Area addressed                          | Characteristics/Traits found                                                                 | Year | Country            | Method     | Study on …                          | Authors                          |
|----|---------------------------------------|-----------------------------------------------------------------------------------------------|------|--------------------|------------|-------------------------------------|----------------------------------|
| 16 | Factors of Entrepreneurial Intention  | Self-Efficacy, Entrepreneurial Attitude, Openness, Extraversion, Independent, Risk Taking, Conscientiousness, Agreeableness and Emotional Stability | 2020 | Portugal and Brazil | Quantitative | University Students                | Fragoso et al. (2020)            |
| 17 | Entrepreneurship Success Traits        | Openness to Experience, Self-Efficacy Neuroticism, Conscientiousness and Locus Of Control     | 2020 | China              | Quantitative | Online Business Ventures            | Shimoli et al. (2020)            |
| 18 | Big Five Personality Traits, Entrepreneurial Self-Efficacy and Entrepreneurial Intention | Self-Efficacy, Openness to Experience, Self-Efficacy Neuroticism, Conscientiousness and Locus of Control | 2019 | Turkey             | Qualitative | SMEs’ Owners                       | Şahin et al. (2019)              |
| 19 | Personality Traits and Entrepreneurial Performance | Extraversion, Conscientiousness and Openness                                                 | 2019 | South Africa       | Mixed Method | Tourism                            | Mhlanga (2019)                   |
| 20 | The Personality Traits of Steve Jobs’ | Self-Efficacy, Need for Achievement, Risk-Taking, Autonomy, Innovativeness and Internal Locus of Control | 2019 | South Africa       | Qualitative | Successful entrepreneur (Steve Jobs) | Ndoro and Van Niekerk (2019)     |
| 21 | Entrepreneurial Passion and Personality | Passion, Behaviours                                                                         | 2019 | Germany            | Quantitative | Scientists                         | Obschonka (2019)                 |
Table 1 (continued)

| No | Area addressed                                                                 | Characteristics/Traits found                                      | Year | Country | Method    | Study on …         | Authors                                  |
|----|--------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------|-----------|-------------------|------------------------------------------|
| 22 | The influence of individual Personality Traits and Characteristics of founder on Performance of family SMEs | Conscientiousness, Extraversion and Openness to Experience       | 2019 | Portugal| Quantitative | Family SMEs        | Franco and Prata (2019)                  |
| 23 | Personality Fit and Entrepreneurial Success                                   | Conscientiousness                                                | 2019 | China   | Quantitative | City             | Zhou et al. (2019)                       |
| 24 | Personality and Entrepreneurial Intentions                                    | Innovativeness, Risk Propensity, Stress Tolerance               | 2019 | Pakistan| Quantitative | University Students | Ahmed et al. (2019)                      |
| 25 | The Main Traits Essential for Successful Performance of a Firm                | Self-Efficacy and Entrepreneurial Orientation                    | 2019 | Pakistan| Quantitative | Firms             | Imran et al. (2019)                      |
| 26 | The Personality Traits and Risk Attitudes of Entrepreneurs and Venture Team Members | Tolerance of Risk, Internal Locus of Control, Self-Efficacy and Need for Achievement | 2019 | USA     | Quantitative | Firms             | Kerr et al. (2019)                       |
| 27 | Personality Traits on Entrepreneurial Intention                               | Need for Achievement, Locus of Control, Innovativeness and Risk-Taking | 2019 | Pakistan| Quantitative | University Students | Yasir et al. (2019)                      |
| 28 | Psychological Resilience and Personality Traits                              | Openness, Self-Regulation                                       | 2019 | Indonesia| Quantitative | firms             | Farradinna et al. (2019)                |
| 29 | Keys to Entrepreneurial Success                                               | Curiosity, Creativity and Commitment                            | 2019 | USA     | Literature Review | SMEs’ Owners | Raine and Pandya (2019)                 |
| No | Area addressed                                                                 | Characteristics/Traits found                                                                 | Year | Country   | Method      | Study on …                                                                                           | Authors                                      |
|----|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------|-----------|------------|------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 30 | Effects of Self-efficacy and Entrepreneurial Tenacity across industries       | Self-Efficacy for Service Industry, While Tenacity For Manufacturing Industry                  | 2019 | USA       | Quantitative | Manufacturing, Retail and Service Industries                                                            | Van Scotter and Garg (2019)                  |
| 31 | Personal Traits on Performance of Agri Business                                | Understanding Market Environment, Punctuality, Healthy Client Relationship, Trustworthiness, Transparency and Commitment | 2019 | South Africa | Quantitative | Agri business                                                                                       | Iwara and Netshandama (2019)                |
| 32 | Personality Traits of Entrepreneurial and New Venture Performance              | Extraversion, Conscientiousness, Agreeableness and Openness                                    | 2019 | China     | Quantitative | SMEs’ Owners                                                                                       | Dai and Zhang (2019)                        |
| 33 | The Leverage of Entrepreneur Traits and Skills to Business Success            | Managerial, Resiliency and Strategic                                                            | 2018 | Pakistan  | Quantitative | Manufacturing                                                                                       | Hadi and Abdullah (2018)                   |
| 34 | Profile (Personality) of Successful Entrepreneurs                             | Conscientiousness                                                                             | 2018 | Indonesia | Quantitative | Educational Field                                                                                   | Setia (2018)                                |
| 35 | The Indirect and Direct Effect of Personality Traits on Commitment of Entrepreneurs | Conscientiousness, Extraversion and Agreeableness                                                | 2018 | Nigeria   | Quantitative | SMEs’ Owners                                                                                       | Ayoade et al. (2018)                       |
| No | Area addressed                                                                 | Characteristics/Traits / found          | Year | Country | Method      | Study on …                          | Authors                        |
|----|--------------------------------------------------------------------------------|----------------------------------------|------|---------|------------|-------------------------------------|-------------------------------|
| 36 | Self-Efficacy, Personality and Anticipatory Cognitions of Potential Entrepreneurs | Self-Efficacy                          | 2018 | USA     | Quantitative | University Students                | Fuller et al. (2018)          |
| 37 | The Biographical Analysis of Successful Entrepreneurs                           | The Parents' Behaviour and Experience  | 2018 | Germany | Qualitative | SMEs' Owners                       | Duchek (2018)                 |
|    |                                                                                 | and Entrepreneurial Learning, Experience, Work Attitudes and Behaviours |      |         |            |                                     |                               |
| 38 | Mediating role of Self Efficacy in developing Entrepreneurial Behaviour         | Self-efficacy                          | 2018 | Indonesia | Quantitative | University Students                | Darmanto and Yuliari (2018)   |
| 39 | Persistence and Entrepreneurial Success                                         | Persistence                            | 2018 | Canada  | Quantitative | SMEs' Owners                       | Erdle (2018)                  |
| 40 | The Grit influence on Entrepreneurial Intent Students                            | Grit (perseverance and passion)       | 2018 | USA     | Quantitative | University Students                | Butz et al. (2018)           |
| 41 | Performance, Entrepreneurial Leadership and Sustainability                        | Accountability, Responsibility and Emotional Intelligence | 2018 | Malaysia | Quantitative | SMEs                               | Al Mamun (2018)               |
| 42 | Entrepreneurial Personality in New Ventures                                      | Emotional Intelligence, Warmth, Hardiness and Self-Efficacy | 2018 | China   | Literature Review | SMEs’ Owners | Xie et al. (2018)          |
| 43 | The Entrepreneurial Intentions                                                   | Attitude, Perceived Behaviour Control and Extraversion | 2018 | Portugal | Quantitative | University Students                | Sousa et al. (2018)          |
| No | Area addressed                          | Characteristics/Traits found                    | Year | Country | Method      | Study on … | Authors                             |
|----|----------------------------------------|------------------------------------------------|------|---------|-------------|-------------|-------------------------------------|
| 44 | Entrepreneurial Intentions Among Students | Openness, Extraversion and Agreeableness       | 2018 | Italy   | Quantitative | University Students | Israr and Saleem (2018) |
| 45 | Influence of Self-Efficacy and Big Five Personality Traits and on Entrepreneurial Intention | Openness, Neuroticism, Conscientiousness, Agreeableness and Self-Efficacy | 2017 | India   | Quantitative | University Students | Murugesan and Jayavelu, (2017) |
| 46 | Personality Traits and Entrepreneurial Intention | Self-Efficacy, Perseverance, Ability to detect Opportunity and Social Skills | 2017 | Turkey  | Quantitative | Academician  | Demirtas et al. (2017) |
| 47 | Entrepreneurial Drivers and performance | Persistent, Cautious in taking Risks, Enthusiastic, Education and Experience | 2017 | USA     | Quantitative | SMEs’ Owners  | Sriram and Mersha (2017) |
| 48 | Personality, Demographic Factors and Entrepreneurial Inclination | Locus of Control, Self-Confidence, Tolerance for Ambiguity and Innovativeness | 2017 | India   | Quantitative | University Students | Chaudhary (2017) |
| 49 | The Entrepreneurial Traits and Success of Microenterprises | Self-efficacy, Need for Achievement and Locus of Control | 2017 | India   | Quantitative | SMEs         | Nag and Das (2017) |
| 50 | The Character Traits of Young Entrepreneurs | Creativity, Risk Taking, Confident | 2017 | Slovakia | Quantitative | SMEs         | Majková and Ključníkov (2017) |
| 51 | Personality Traits and Furniture Sector Performance | Need for Achievement, Locus of Control, Self-Efficacy, Persistence, Alertness, Style and Start-up Motive | 2017 | Tanzania | Quantitative | Furniture Sector, | Isaga (2017) |
| No | Area addressed | Characteristics/Traits found | Year | Country | Method | Study on … | Authors |
|----|----------------|-----------------------------|------|---------|--------|------------|---------|
| 52 | Entrepreneurial Intention | Self-Efficacy | 2017 | India | Quantitative | University Students | Roy et al. (2017) |
| 53 | Personality Traits and Entrepreneurial Intention | Risk Tolerance, Internal Locus of Control, Need for Achievement and Entrepreneurial Alertness | 2016 | Turkey | Quantitative | University Students | Karabulut (2016) |
| 54 | Entrepreneurial Characteristics and Successful Entrepreneurs in Islam | Trustworthy, Honesty, Truthfulness, Good Intentions, Respecting Religious Duty, Dealing With Halal Market/Products, Avoiding Corruption, Proficiency, Fair Dealing in Business with others, Respecting Workers and Fair Treatment, Being Patience, Emotional Stability, Optimism, Risks Taking Behaviour, Managing Abilities | 2016 | Malaysia | Literature Review | Baqutayan (2016) |
| 55 | Personality Traits and Entrepreneurial Intention | Openness to Experience and Extraversion | 2016 | India | Quantitative | Technical companies (Telecom, IT, Infrastructure, Power sectors) | Soumyaja and Alexander (2016) |
| No | Area addressed                                                                 | Characteristics/Traits found                                                                 | Year  | Country | Method     | Study on …                      | Authors                        |
|----|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------|---------|------------|---------------------------------|--------------------------------|
| 56 | Self-efficacy, Personality Traits and Entrepreneurial Intention                  | Self-Efficacy, Extraversion, Openness, Conscientiousness and Agreeableness                    | 2016  | China   | Quantitative | University Students             | Wang et al. (2016)             |
| 57 | Entrepreneurial Motivation and Performance of SMEs (clothing centre)            | Motivation                                                                                   | 2016  | Indonesia | Quantitative | SMEs (clothing centre)          | Machmud and Sidharta (2016)    |
| 58 | Personality Traits and Entrepreneurial Satisfaction                              | Locus of Control and Need for Achievement                                                    | 2015  | Pakistan | Quantitative | SMEs' Owners                   | Abbas et al. (2015)            |
| 59 | Creativity, Entrepreneurial Orientation, Self-Efficacy and Performance           | Entrepreneurial Orientation, Self-Efficacy                                                  | 2015  | France  | Quantitative | SMEs                           | Khedhaouria et al. (2015)      |
| 60 | Personality Traits and Enterprise Performance                                     | Agreeableness                                                                               | 2015  | China   | Quantitative | SMEs                           | Liang et al. (2015)            |
| 61 | The Association between Entrepreneurial personality and Big Five personality Traits | Extraversion and Agreeableness                                                                | 2014  | UK      | Quantitative | SMEs' Owners                   | Leutner et a.(2014)            |
| 62 | Affectively Committed and Entrepreneurial Performance                             | Affective Commitment                                                                        | 2014  | Malaysia | Qualitative | SMEs' Owners                   | Tasnim et al. (2014)           |
| 63 | Psychological Traits and Business success                                        | Vision and Foresight, Industriousness, Integrity, Perseverance, High Confidence and Ambition | 2014  | Malaysia | Qualitative | Real Estate                    | Jaafar et al. (2014)           |
| No | Area addressed                                      | Characteristics/Traits | Year | Country         | Method  | Study on … | Authors                      |
|----|------------------------------------------------------|------------------------|------|-----------------|---------|-------------|------------------------------|
| 64 | Predictions Of Entrepreneurial Intention and Performance | Proactiveness          | 2014 | South Africa    | Quantitative | SMEs       | Mould (2014)                 |
| 65 | Entrepreneurial Traits and Motivations               | Responsibility and Materialism, Open-Mindedness, Enthusiasm, low in Risk-taking and Trust | 2014 | Vietnam         | Quantitative | SMEs’ Owners | Nguyen and Phan (2014)       |
| 66 | Emotional intelligence, entrepreneurial intention and self-efficacy | Emotional Intelligence and Self-efficacy | 2014 | Portugal and Spain | Quantitative | University Students | Mortan et al. (2014) |
| 67 | Personality Traits and Success                       | Self-Efficacy, Internal Locus of Control, Risk Taking Ability, Goal Oriented, Ability to Make Decisions, Flexibility | 2013 | India           | Quantitative | Food Processing | Singh and Rahman (2013a, 2013b) |
| 68 | Entrepreneur’s Personality Traits and Enterprise Success | Extraversion, Conscientiousness | 2013 | Uganda          | Quantitative | Tourism      | Katongole et al. (2013)     |
| 69 | Personality Traits, Self-Efficacy and Entrepreneurial Intention | Parents Occupation, Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness and Self-Efficacy | 2013 | Nigeria         | Quantitative | University Students | Akanbi (2013) |
| No | Area addressed | Characteristics/Traits found | Year | Country | Method | Study on … | Authors |
|----|----------------|-------------------------------|------|---------|--------|------------|---------|
| 70 | Traits of Successful Entrepreneurs | Innovation, Futuristic Mindset, Risk Taking Ability, Adaptability and Commitment | 2013 | India | Quantitative | SMEs’ Owners | Singh and Rahman (2013a, 2013b) |
| 71 | Entrepreneurial Characteristics and Success | Avoid Taking Unnecessary Risks and Self-Believing | 2013 | Kenya | Quantitative | Second Hand Car dealers | Suter and Bwisa (2013) |
| 72 | Psychological Characteristics and Entrepreneurial Intentions | Self-Confidence and Need for Achievement | 2013 | Portugal | Quantitative | High School student | Dinis et al. (2013) |
| 73 | Identification of Entrepreneurs’ Traits | Innovative, Propensity to Take Risk, Internal Locus of Control, Energy Levels | 2012 | Saudi Arabian | Quantitative | University students | Al-Habib (2012) |
| 74 | Impact of Positive Reciprocity, Trust and Negative Reciprocity on Entrepreneurship | Trust | 2012 | Germany | Quantitative | SMEs’ Owners | Caliendo et al. (2012) |
| 75 | Entrepreneurial Orientation | Innovativeness, Risk-Taking and Reactiveness | 2012 | USA | Quantitative | University Students | Bolton and Lane (2012) |
| 76 | Family Tradition, Psychological Traits and Entrepreneurial Intention | Innovation | 2012 | UK | Quantitative | University Students | Altinay et al. (2012) |
| 77 | Emotional Intelligence on Successful and Unsuccessful Entrepreneurs | Emotional Intelligence | 2012 | Iran | Quantitative | SMEs’ Owners | Karimi et al. (2012) |
| 78 | Personality Matter and Business Success | Openness, Extraversion, Conscientiousness | 2012 | South Africa | Quantitative | SMEs | Farrington (2012) |
| No | Area addressed                        | Characteristics/Traits found                        | Year | Country     | Method     | Study on …       | Authors                                      |
|----|---------------------------------------|-----------------------------------------------------|------|-------------|------------|------------------|----------------------------------------------|
| 79 | Determinants of Entrepreneurial Intention | Need for Achievement and Taking Risk, Taking Risk, Seeking Entrepreneurship Success, Risk Taker | 2012 | Bangladesh  | Quantitative | University Students | Uddin and Bose (2012)                         |
| 80 | Differential Distribution of Entrepreneurial Traits | Seeking Entrepreneurship Success, Risk Taker       | 2012 | Iran        | Quantitative | University Students | Alipour et al. (2012)                         |
| 81 | Factors Influencing Entrepreneurial Success | Need to Achieve and Self-Reliant and Independence  | 2012 | Sri Lanka   | Quantitative | SMEs             | Ummah and Gunapalan. (2012)                  |

Source: literature review
Awwad et al., (2021) investigated the impact of the big five personality traits on entrepreneurial intention in Jordan. The results indicated that neuroticism and agreeableness were not related to entrepreneurial intention. A study that investigated the engine of entrepreneurial intentions in India, conducted by Biswas and Verma (2021a, 2021b), revealed that neuroticism has a negative significant impact on entrepreneurial intentions. In Indonesia, the study carried out by Sarwoko and Nurfarida (2021) on personality traits and the performance of business revealed that agreeableness and neuroticism have no effect on business performance.

Mhlanga (2019) conducted a study in South Africa’s hospitality sector to identify personality traits that affect entrepreneurial performance. The results indicate that neuroticism has a significant negative impact on the performance of entrepreneurs. In Portugal, Franco and Prata (2019) conducted a study on the influence of individual characteristics and traits on the performance of family SMEs. The study revealed that neuroticism has a negative influence on performance. In China, Zhou et al. (2019) conducted a study on city personality fit and entrepreneurial success. The study found that neuroticism and agreeableness had a negative effect on entrepreneurial success. Ahmed et al. (2019) in Pakistan investigated the impact of personal traits on entrepreneurial intention on students. The results showed that the need for stress tolerance and the need for autonomy have no significant impact on entrepreneurial intention.

The study conducted by Setia (2018) found that out of all five big personality traits, four (extraversion, agreeableness, openness to experience and neuroticism) were not related to entrepreneurial success. The study conducted by Dinis et al. (2013) shows that risk propensity negatively influences entrepreneurial intentions, whereas Wang et al. (2016) and Jing and Sung (2012) found neuroticism to have a negative significant effect on entrepreneurship. Murugesan and Jayavelu (2017) found that extraversion did not have an influence on entrepreneurial intention.

**Research design and methodology**

A systematic review of published papers on entrepreneurial characteristics, entrepreneurial success and entrepreneurial intention was employed as the methodology in this research study. Systematic review is a tool used for enhancing debate and disseminating academic results from different researchers (Tranfield et al., 2003). Systematic review is usually used as an approach to identify, evaluate and analyse the contributions that have already been published while being guided by a specific research question (Manatos et al., 2017). This research study presents a systematic review of the association between individual characteristics and entrepreneurial success and entrepreneurial intention. This study did adopt the strategy and methodology of Tranfield et al. (2003), which include: review planning, carrying out review and reporting and dissemination of the results, based upon the fact that they are bias free, reliable and transparent (Papaioannou et al, 2010). To carry out this review, the following steps were used: first a review plan was carried out, followed by the actual review and finally reporting and dissemination of the results.
Review planning

The study used two databases to carry out the review, namely Google Scholar and Semantic Scholar. This review was restricted to only English peer reviewed publication materials from 2012 to 2022 to obtain a clear broad view.

Conducting the review

During this second stage the following strict criteria were applied:

- Only peer reviewed published materials were considered
- The paper was to be composed of: characteristics/traits and entrepreneurial success or/and intention or and business performance
- The paper was to be an empirical, theoretical or conceptual study

Upon obtaining published copies electronically, studies that met and passed initial screening criteria were verified and screened again for the second time to ascertain if they did meet criteria for inclusion. For inclusion, titles and abstracts were strictly verified and evaluated. Based on the related area of interest of this study, Google Scholar had 10,100 search results and Semantic Scholar had 1580 search results. However, after thorough strict evaluation criteria described above during the review process (conducting the review) and the reasons outlined below, the suitable identified studies were reduced to 81 studies as presented in Table 1 in the literature review section. Some papers found in the two search databases were removed for the following reasons:

- Being a duplicate (appearing in both databases)
- Wrong title and abstract
- No critical review on the area under focus
- Not focused on characteristics/traits and entrepreneurial success or/and intension or/and business performance in spite of having a correct title.

Reporting and dissemination

Based on Table 2, Figs. 1 and 2 the most ten dominant characteristics that predict entrepreneurial success and entrepreneurial intention according to the recent literature in the last decade according to their ranking are self-efficacy, conscientiousness, open to experience, risk taking propensity, locus of control, extraversion, need for achievement, innovativeness, agreeableness and neuroticism.

Self-efficacy was revealed in 24 studies, out of which 11 of those studies were on entrepreneurial success and 13 were on entrepreneurial intention. Out of the 24 studies, 20 employed quantitative method, 3 employed qualitative and 1 was a literature review. Conscientiousness was found in 22 studies out of which 13 were studies on entrepreneurial success and 9 on entrepreneurial intention. Of
Table 2 Summary overview of the characteristics linked to entrepreneurial intention and success by research approach

| Characteristics/Traits | Method/Approach | Mixed method | Qualitative | Quantitative | Total | Success | Intention |
|------------------------|-----------------|--------------|-------------|--------------|-------|---------|-----------|
|                        | Literature review |              |             |              |       |         |           |
| 1 Self-Efficacy        | 1               | 3            | 20          | 24           | 11    | 13      |           |
| 2 Conscientiousness    | 1               | 1            | 20          | 22           | 13    | 9       |           |
| 3 Open to Experience   | 1               | 1            | 19          | 21           | 10    | 11      |           |
| 4 Risk-Taking Propensity| 2             | 1            | 14          | 17           | 8     | 9       |           |
| 5 Locus of Control     | 3               | 13           | 16          | 9            | 7     |         |           |
| 6 Extraversion         | 1               |              | 15          | 16           | 8     | 8       |           |
| 7 Need for Achievement | 1               |              | 12          | 13           | 7     | 6       |           |
| 8 Innovativeness       | 1               | 1            | 10          | 12           | 3     | 9       |           |
| 9 Agreeableness        |                |              | 12          | 12           | 6     | 6       |           |
| 10 Neuroticism         | 1               | 1            | 9           | 11           | 5     | 6       |           |
| 11 Emotional Intelligence| 1             | 1            | 3           | 5            | 4     | 1       |           |
| 12 Self-Confidence     | 1               |              | 3           | 5            | 3     | 2       |           |
| 13 Entrepreneurial Alertness | 1        |              | 3           | 4            | 1     | 3       |           |
| 14 Perseverance        | 1               | 1            | 3           | 4            | 1     | 3       |           |
| 15 Creativity          | 2               |              | 2           | 4            | 3     | 1       |           |
| 16 Commitment          | 1               | 1            | 2           | 4            | 4     |         |           |
| 17 Trust               | 1               |              | 3           | 4            | 4     |         |           |
| 18 Risk Aversion       | 3               |              | 3           | 3            | 2     | 1       |           |
| 19 Need for Independence| 3             |              | 3           | 3            | 1     | 2       |           |
| 20 Entrepreneurial Attitude | 1        |              | 2           | 3            | 1     | 2       |           |
| 21 Passion             | 3               | 3            | 3           | 3            |       |         |           |
| 22 Persistence         | 3               | 3            | 3           | 3            |       |         |           |
| 23 Reactiveness        | 2               | 2            | 3           | 3            | 2     |         |           |
| 24 Proactive           | 2               | 2            | 3           | 3            | 2     |         |           |
| 25 Leadership          | 1               | 1            | 2           | 2            |       |         |           |
| 26 Determination       | 1               | 1            | 2           | 2            |       |         |           |
| 27 Reactiveness        | 2               | 2            | 3           | 3            | 2     |         |           |
| 28 Enthusiastic        | 2               |              | 2           | 2            |       |         |           |
| 29 Behaviours          | 1               | 1            | 2           | 2            |       |         |           |
| 30 Transparency        | 2               |              | 2           | 2            |       |         |           |
| 31 Truthfulness        | 2               |              | 2           | 2            |       |         |           |
| Method/Approach                  | Mixed method | Qualitative | Quantitative | Total | Success Intention |
|---------------------------------|--------------|-------------|--------------|-------|-------------------|
| Characteristics/Traits          |              |             |              |       |                   |
| Source                          | Literature review |             |              |       |                   |
| 32 Self-Reliant                 |              | 1           | 1            | 1     |                   |
| 33 Autonomy                     | 1            |             |              | 1     |                   |
| 34 Narcissism                   |              | 1           | 1            | 1     |                   |
| 35 Ability for Marketing        | 1            |             |              | 1     |                   |
| 36 Sense of Responsibility      | 1            |             |              | 1     |                   |
| 37 Utilising the Opportunities  | 1            |             |              | 1     |                   |
| 38 Stress Tolerance             |              | 1           | 1            | 1     |                   |
| 39 Curiosity                    | 1            |             |              | 1     |                   |
| 40 Energy Levels                |              | 1           | 1            | 1     |                   |
| 41 Vision and Foresight         |              | 1           | 1            | 1     |                   |
| 42 Adaptability                 |              | 1           | 1            | 1     |                   |
| 43 Goal Oriented                | 1            |             |              | 1     |                   |
| 44 Flexibility                  | 1            |             |              | 1     |                   |
| 45 Ability to Make Decisions    |              | 1           | 1            | 1     |                   |
| 46 Ambition                     | 1            |             |              | 1     |                   |
| 47 Integrity                    | 1            |             |              | 1     |                   |
| 48 Industriousness              |              | 1           | 1            | 1     |                   |
| 49 Motivation                   |              | 1           | 1            | 1     |                   |
| 50 Good Intentions              | 1            |             |              | 1     |                   |
| 51 Respecting Religious Duty    |              | 1           | 1            | 1     |                   |
| 52 Avoiding Corruption          | 1            |             |              | 1     |                   |
| 53 Proficiency                  | 1            |             |              | 1     |                   |
| 54 Patience                     | 1            |             |              | 1     |                   |
| 55 Optimism                     | 1            |             |              | 1     |                   |
| 56 Start-up Motive              |              | 1           | 1            | 1     |                   |
| 57 Style                        | 1            |             |              | 1     |                   |
| 58 Resiliency                   | 1            |             |              | 1     |                   |
| 59 Punctuality                  | 1            |             |              | 1     |                   |

Source: literature review
the 22 studies, 1 employed mixed method, 1 qualitative method and 20 quantitative methods. Open to experience was recorded in 21 studies, out of which 10 are those studies on entrepreneurial success and 11 on entrepreneurial intention. Of the 21 studies, 1 employed mixed methods, 1 applied qualitative method, and 19 applied quantitative approach. Risk taking propensity was found in 17 studies, out of which 8 are studies on entrepreneurial success and 9 on entrepreneurial intention. Of the 17 studies, 2 employed literature review, 1 applied qualitative method and 14 applied quantitative method. Locus control was revealed in 16 studies, out of which 9 are studies on entrepreneurial success and 7 on entrepreneurial intention. Of the 16 studies, 2 employed qualitative method and 13 employed quantitative method. Extraversion was found in 16 studies, out of which 8 are studies on entrepreneurial success and another 8 on entrepreneurial intention. Of the 16 studies, 1 employed mixed method and 15 applied quantitative method. Need for Achievement was discovered in 13 studies, 7 of which investigated entrepreneurial success and 6 of which investigated entrepreneurial intention. Of the 13 studies, 1 employed qualitative method and 12 applied quantitative method. Innovativeness was revealed in 12 studies, out of which 3 are studies on entrepreneurial success and 9 on entrepreneurial intention. Of the 12 studies, 1 was a literature
review, 1 applied qualitative method and 10 applied quantitative method. Agreea-
bleness was found in 12 studies, out of which 6 are studies on entrepreneurial success and 6 on entrepreneurial intention. Of the 12 studies, all applied quantita-
tive method. Neuroticism was found in 11 studies out of which 5 are studies on entrepreneurial success and 6 on entrepreneurial intention. Of the 11 studies, 1 was a literature review, 1 employed a qualitative method and 9 employed a quanti-
tative method. On the other hand, from the very 81 studies reviewed, there are some characteristics that have been found not to predict entrepreneurial success and entrepreneurial intention. These characteristics have been presented in the literature review section and are presented in Figs. 3 and 4.

The characteristics that have been delinked from entrepreneurial success and intention despite being linked to success and intention in other studies include: neurototicism, agreeableness, extraversion, openness to experience, risk-taking propen-
sity, need for independency and stress tolerance. Neuroticism was found in 9 stud-
ies, out of which 4 are studies on entrepreneurial success and 5 on entrepreneurial
intention. Of the 9 studies, 1 applied a mixed method and 8 employed quantitative methods. Agreeableness was found in 5 studies, out of which 2 are studies on entrepreneurial success and 3 on entrepreneurial intention. Of the 5 studies, all applied quantitative methods. Extraversion was revealed in 3 studies, of which 1 was a study on entrepreneurial success and the other 2 were on entrepreneurial intention. Of the 3 studies, all applied quantitative methods. Open to experience was found in 2 studies, out of which 1 was a study on entrepreneurial success and the other was on entrepreneurial intention. Of the 2 studies, all applied quantitative methods. Risk-Taking Propensity was found in only 1 study on entrepreneurial success that applied a quantitative method. One study on entrepreneurial intention, which used a quantitative approach, discovered the need for independence and stress tolerance.

Table 3 and Figs. 5 and 6 show that the number of studies under review was increasing especially from 2015 to 2019. The drop in 2020 in number of research studies was attributed to the negative impact of COVID 19 pandemic that affected authorship (Kibbe, 2020; Raynaud et al., 2021). In fact, from 2020 to 2022 there was an increase in the number of studies with 2022 recording already 3 studies in the first quarter at the time this research was being conducted. Table 3 and Fig. 7 show the number of studies carried out by a particular country with the study research method used. Figure 7 and Table 3 show that, over the last decade, India recorded the most studies (11 out of 81), followed by the USA and Pakistan with 7 studies each, Indonesia and China with 6 studies each, South Africa with 5 studies, Turkey and Malaysia with 4 studies each, and Germany and Portugal with 3 studies each. Nigeria, Iran, Italy, UK and Tanzania recorded 2 studies each while, 15 other countries recorded 1 study each. Table 3 and Fig. 7 show that out of the 81 studies, the highest research method applied by those studies was quantitative approach which recorded 70 number of studies accounting for 86% of the total studies, followed by qualitative method with 6 accounting for 7.4% of total studies, then 4 literature review accounting 4.9% and then mixed method which recorded 1 study accounting for 1.23%.

Table 3 and Fig. 8 show that in the last decade, India, Pakistan, the USA, Indonesia, China, Turkey, Portugal, Germany, Nigeria, Iran, Italy and UK conducted studies relating individual characteristics to both entrepreneurial success and intention, whereas South Africa, Malaysia, Tanzania, Kenya, France, Sri Lanka, Vietnam, Canada, Uganda, Slovakia and Austria focused solely on studies relating entrepreneurial characteristics to success. Bangladesh, Saudi Arabia, Jordan, Spain, Brazil and Russia focused on characteristics linked to entrepreneurial intention only.

Discussion

Based upon the 81 articles included in the review under this research study, it is worth noting that there has been an increase in the number of articles in the area under focus from 2012 to 2022, with a slow pace of authorship recorded in 2020 due to other factors such as the COVID 19 pandemic. The review has shown that the ten most dominant characteristics that predict entrepreneurial success and entrepreneurial intention include self-efficacy, conscientiousness, openness to experience,
risk taking propensity, locus of control, extraversion, need for achievement, innovativeness, agreeableness and neuroticism. However, some studies within the reviewed articles have shown that some characteristics, such as neuroticism, agreeableness and extraversion, open to experience, fail to both predict entrepreneurial success
and entrepreneurial intension. Risk taking propensity fails to predict entrepreneurial intention, whereas a need for independence and stress tolerance fails to predict entrepreneurial success. This implies that of the ten most dominant characteristics identified, self-efficacy, conscientiousness, locus of control, need for achievement and innovativeness are the undisputed and unarguable key personal characteristics that predict both entrepreneurial intention and guarantee entrepreneurial success. The locus of control, however, needs to be subjected to further research that would apply other research approaches apart from the quantitative approach, the only approach on which research was carried out in the last decade. On the other hand, the characteristics that have been positively and negatively associated with entrepreneurial success and intention also need to be subjected to further research that would employ other research approaches apart from quantitative methods. This is because, apart from neuroticism, all characteristics that presented negative results
were conducted in studies that applied a quantitative research approach only. This study review has also shown that the characteristics that have an impact on entrepreneurial intention have the same impact on entrepreneurial success. This is based on the fact that the same characteristics identified to predict entrepreneurial intention also guarantee entrepreneurial success. This implies that, in most cases, the same characteristics that predict entrepreneurial intention also guarantee entrepreneurial success and vice versa. The importance of entrepreneurship in any country
cannot be over emphasised. This is because it is a major source of technological
growth, employment, economic growth, competition, innovation, product and ser-
vice quality, and economic flexibility in society today. It is, however, unfortunately
that worldwide, only 30 countries conducted studies under focus in the last decade.
In Africa, for instance, only 5 countries (South Africa, Nigeria, Uganda, Kenya and
Tunisia) out of 54 countries had conducted studies in the area under focus in the last
decade. This is a gap that needs to be addressed by researchers in different coun-
tries since entrepreneurs play a critical role in the economies of nations. The gap in
research methodological approach is also alarming. Out of the 81 studies, only 1 in
South Africa applied mixed methods, 4 were literature reviews, 6 applied qualitative
methods, and the rest 70 studies employed quantitative approach. India the country
that recorded the highest studies in the area under focus had all 11 being quantita-
tive studies. Out of the 30 countries, 23 countries had studies that only employed
quantitative approach representing 76.67%. This shows that there is an imbalance
in research. There is a need to have well-balanced research in this area of focus. It
is clear that studies that focused on entrepreneurial success had their studies con-
ducted on various SMEs dealing with different businesses. However, studies that
focused on entrepreneurial intentions had their primary targets as academic institu-
tions. The focus on only academic institutions shows how biased these studies are,
because people with business intentions are not only found in academic institutions.
There are a lot of successful businessmen today who have never been enrolled in
high school or university. This is also a gap that needs to be addressed by future
researchers. Communities, religious organisations and youth community groups,
among others, may be other places that can be a source of primary targets for studies
focusing on entrepreneurial intention. There is need to address the gaps identified.
First, having further research studies carried out through replication in other coun-
tries would legitimise the method to determine the validity, reliability and generalis-
ability of studies in the area under focus. Scientists rely too much on trust instead
of verification, thereby harming science and humanity (Economist, 2013). Replica-
tion of research studies is the core key activity in scientific endeavours (Plucker &
Makel, 2021), and it is one of the approaches researchers use to build confidence in
the validity of research results. Second, despite the fact that qualitative and quanti-
tative research approaches each have weaknesses and strengths; they can be effec-
tive when they are combined. In future studies, a mixed research approach would
allow researchers to gain both breadth and depth on characteristics associated with
entrepreneurial success and intention through triangulation, thereby strengthening
the study findings. A study carried out in Tunisia demonstrates that an applied quali-
tative research approach only cannot gain the benefits that come with the quantita-
tive research method of replicating and generalising the study findings to either a
larger population or other countries. According to Bernstein (1974), the subjective
method applied by qualitative method scholars may be wrong, inaccurate and mis-
leading. On the other hand, research conducted in 23 countries that applied a quan-
titative research approach only may also not gain from the benefits that come with a
qualitative research method. According to Berg and Howard (2012), the sample data
obtained based on experiences in quantitative research approach may not be that of
the respondent’s opinion and mind (p. 61). The qualitative research method does
allow an investigator to further explore in great detail the experiences and concepts that cannot be easily set into numbers to understand the human experience. In fact, the association that exists between the respondents and participants in a qualitative research approach makes it easy for respondents (participants) to contribute directly to shaping the study (Eyisi, 2016).

**Conclusion**

This study finds that self-efficacy, conscientiousness, locus of control, need for achievement and innovativeness are indisputably and unarguably key personal characteristics that predict both entrepreneurial intention and guarantee entrepreneurial success. The study also finds that characteristics that predict entrepreneurial intention also guarantee entrepreneurial success. There is an increase in the number of studies conducted in the last decade relating to the area under focus, though the studies have been conducted in very few countries with unbalanced research approaches skewed towards quantitative methods. More research using a variety of methods is required to gain a better understanding of entrepreneurship success. The study has provided a guide to the identified gaps that need urgent attention in the area under focus. This study greatly contributes to the existing body of knowledge on entrepreneurship success and intention and will definitely help in developing entrepreneurship in all sectors. The study will also help those who are involved in the development of entrepreneurship by channelling the needed curricula to the prospective entrepreneurs in today's twenty-first century. The major contribution of this study is the identification of key dominant personal characteristics that predict both entrepreneurial intention and lead to entrepreneurial success in today's dynamic environment. The other key contribution is stages, methodology and the analysis that can be replicated and employed by other researchers (scholars and practitioners) to carry out other studies or, better still, similar studies in the future. Since studies have proved that personality traits and characteristics are learnable and can be developed (Katongole et al., 2013; Remeikiene et al., 2013) during a process of studying or mentoring, this study will also help those who are involved in the development of entrepreneurship by channelling the needed right curricula to the prospective entrepreneurs in today's twenty-first century. In Africa, for instance, there is no proper career guidance both at primary and secondary school level. This is evident by the fact that many students and pupils study courses/subjects contrary to what they will become in the future. Other students/pupils manage to pursue careers related to what they have been studying up until they graduate from university and later realise they are in the wrong field.

**Limitation of study**

It is acknowledged that the research study has two limitations. First, the literature review utilised in this study was from two databases, namely Semantic Scholar and Google Scholar. Therefore, it is hoped that this research will spark further debate
and yield more evidence, which will undoubtedly shed more insights on the area under study and provide a more comprehensive understanding of entrepreneurial success in today’s dynamic environment. Second, the review applied in this study was limited only to publications in the English language. It is suggested that more papers that have been published in languages other than English be used in future research studies.

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