Entrepreneurial Intentions in Higher Education from the Analysis of Psychological, Human and Social Capitals: A Systematic Literature Review

Nofrans Eka Saputra
Department of Psychology, University of Jambi, Indonesia,
nofransekasaputra@unja.ac.id

Johannes
Doctoral Program in Economics, University of Jambi, Indonesia
johannes@unja.ac.id

Syahmardi Yacob
Doctoral Program in Economics, University of Jambi, Indonesia
syahmardi_yacob@unja.ac.id

Tona Aurora Lubis
Doctoral Program in Economics, University of Jambi, Indonesia
tonalubis@unja.ac.id

Abstract

This systematic literature review provides a comprehensive exploration of the role of psychological, human, and social capital in shaping entrepreneurial intentions within the context of higher education. The study synthesizes findings from a wide range of empirical studies to assess how these capitals influence students' aspirations to engage in entrepreneurial activities. An online search was conducted on 125 reputable articles in the 2012-2021 period on entrepreneur intention and psychological, human, and social capital. Our review encompasses a detailed analysis of the psychological constructs that motivate entrepreneurial intentions, such as personal attitude, perceived behavioral control, and subjective norms. Furthermore, we examine human capital elements, including education, skills, and experience, alongside social capital aspects like social networks and family support systems. This review highlights the complex interplay between individual capabilities and contextual factors by integrating insights from multiple theoretical frameworks, including the Theory of Planned Behavior and Social Cognitive Career Theory. The findings suggest that while psychological capital is crucial in forming entrepreneurial intentions, human and social capital are equally significant in providing the necessary resources and networks to act on these intentions. This review contributes to academic discourse by clarifying the roles and relationships of different types of capital in entrepreneurial intention formation among higher education students, offering implications for educators and policymakers in fostering a conducive entrepreneurial ecosystem.

Keywords: entrepreneur intention; psychological capital; social capital; human capital; higher education

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Introduction

Entrepreneurial intentions represent the inclination of individuals to engage in entrepreneurial activities, forming a crucial element in the entrepreneurial process. Despite the growing interest in this area, the intricate dynamics of how psychological, human, and social capitals influence these intentions remain insufficiently explored. Understanding the motivations that lead to entrepreneurial actions is essential, as it can significantly impact economic development and innovation across various contexts.

Entrepreneurial intentions are not merely spontaneous desires but are shaped by a complex set of factors that include personal attitudes, perceived behavioral controls, and subjective norms, as suggested by Ajzen's Theory of Planned Behavior (1991). This theory has been robustly supported by empirical studies, such as those by Krueger et al. (2000) and Thompson (2009), who emphasize the deliberative nature of entrepreneurial decision-making. However, existing studies often overlook the nuanced interplay of psychological capital—which encompasses personal strengths and resilience—human capital, represented by skills and knowledge, and social capital, which includes network and family support.

Notably, Liñán & Fayolle (2015) and Neves & Brito (2020) highlighted the relevance of demographic factors and educational backgrounds but fell short in providing a comprehensive analysis of how these capitals interact to foster or hinder entrepreneurial intentions. There is a pressing need to delve deeper into these relationships, particularly in varied cultural and educational settings, to uncover underlying mechanisms that could inform targeted interventions.

This study aims to bridge this gap by conducting a systematic literature review that scrutinizes existing models and integrates findings into a cohesive framework. By focusing on psychological, human, and social capitals, this research seeks to provide a richer, more contextual understanding of entrepreneurial intentions in the higher education sector.

The literature on entrepreneurial intentions is vast but fragmented across various theoretical frameworks including the Entrepreneurial Event Model (EEM) and Social Cognitive Career Theory (SCCT), which consider broader career-related cognitive processes. Moreover, while studies like those by Lüthje & Franke (2003), and Hofstede (2017) offer valuable insights into cultural and organizational factors, they do not sufficiently connect these dimensions to the capitals that directly influence entrepreneurial intentions. This study acknowledges the comprehensive efforts by Zhao et al. (2020), Hou et al. (2019), and Mahfud et al. (2020) who have attempted to describe entrepreneurial intentions using diverse theoretical lenses. However, there remains a significant gap in integrating these theories to form a unified model that addresses the multifaceted nature of entrepreneurial intentions, especially within the higher education context where such intentions are prominently shaped.

To systematically address these gaps, the following research questions have been formulated:

1. What are the characteristics of respondents in higher education that relate to their entrepreneurial intentions?
2. Which theoretical models most effectively capture the complexities of entrepreneurial intentions?
3. What are the significant predictors and moderators, including psychological, human, and social capitals, that influence entrepreneurial intentions?
4. How can these forms of capital be quantitatively assessed within the framework of entrepreneurial intentions?

By answering these questions, this study will enhance the theoretical and practical understanding of entrepreneurial intentions, offering insights that could guide educational policies and entrepreneurial training programs.

Method

This study employed a systematic literature review (SLR) methodology to identify, evaluate, and synthesize relevant research to address specific research questions concerning entrepreneurial

intentions (Moher et al., 2010; Page et al., 2021). The literature search focused exclusively on journal articles published between 2012 and June 5-6, 2021. This period was chosen to incorporate the most current research while capturing a decade of scholarly contributions to the field.

For the search process, a comprehensive online query was conducted using specific keywords: 'entrepreneurial intention' (IE), 'psychological capital' (PsyCap), 'human capital' (HC), and 'social capital' (SC). These terms were selected because they represent the core concepts underpinning the study's focus, providing a focused yet thorough investigation into how these capitals influence entrepreneurial intentions.

The databases utilized for sourcing relevant articles included Sage Publications, Science Direct, ProQuest, Frontiers in Psychology, Springer Link, and Emerald Publishing. These platforms were chosen due to their extensive repositories of peer-reviewed academic journals that publish cutting-edge research in business, psychology, and social sciences, thereby ensuring a comprehensive retrieval of pertinent studies.

By methodically applying these search parameters and resources, the study aimed to compile a robust body of literature, providing a well-rounded understanding of the factors influencing entrepreneurial intentions across different contexts. This SLR not only highlights the prevailing theories and findings but also identifies gaps in the current research landscape, guiding future inquiries in entrepreneurial studies.

Data collection

The search across multiple academic databases yielded 125 journal articles relevant to our study's focus on entrepreneurial intentions. The distribution of these articles among the databases was as follows: Sage Publications contributed 22 articles (17.6%), Science Direct provided 13 articles (10.4%), ProQuest contributed 17 articles (13.6%), Frontiers in Psychology accounted for 8 articles (6.4%), Springer Link included 5 articles (4%), and Emerald Publishing was the most prolific source with 60 articles (48%).

In the subsequent screening process, articles that appeared in more than one database were identified and excluded to avoid duplication in the analysis. Similarly, non-empirical contributions such as book chapters, literature reviews, and conference proceedings were also excluded, as the focus was on empirical research articles. Additionally, articles that employed a systematic review methodology or focused on developing measurement instruments were excluded. This ensured that our review was based on original empirical research, providing fresh data and insights into the phenomena under study.

After this thorough screening process, 94 articles were excluded because they did not meet the inclusion criteria. The remaining 31 articles were deemed relevant and included in the final literature review. This selection process and the final set of included articles are visually summarized in Figure 1.

This systematic approach to data analysis ensured that our literature review was comprehensive and based on the most relevant and high-quality empirical studies, providing a robust foundation for understanding the influence of psychological, human, and social capital on entrepreneurial intentions.

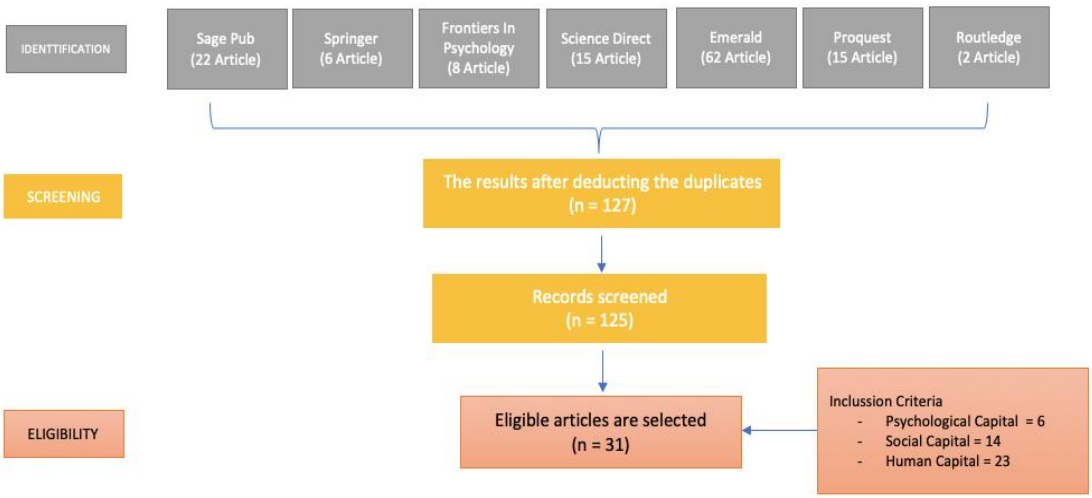


Figure 1. Literature Review Search Method

Data analysis

This study adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a structured and transparent data collection and analysis approach (Moher et al., 2010; Page et al., 2021). The selected articles were meticulously reviewed and summarized with key details, including the author's name, publication year, the number of respondents, and the theoretical frameworks and variables examined.

A team of four researchers conducted the analysis. Two independent reviewers initially screened each article to assess its relevance based on the title and abstract. Discrepancies were resolved through discussion or, if necessary, by consulting a third reviewer. After this preliminary screening, the full texts of potentially relevant articles were examined in detail according to the established criteria. The final selection of articles was then analyzed collaboratively, with findings synthesized and tabulated in Table 1.

The timeframe of 2012 to 2021 was selected to capture the most recent developments in entrepreneurial intention research while allowing for comparison over a significant period. This range ensures the inclusion of seminal works that have shaped current understanding and more recent studies that address emerging trends and methodologies in the field.

Inclusion criteria were specifically designed to focus on studies that examine entrepreneurial intentions with a clear emphasis on psychological, social, and human capital. This focus was chosen to ensure the review captures comprehensive insights into the capitals most relevant to entrepreneurial dynamics in educational settings.

Exclusion criteria were applied to literature reviews, meta-analyses, books, dissertations, theses, and conference proceedings to maintain a focus on peer-reviewed empirical studies that provide original data and insights. This choice is intended to enhance the reliability and applicability of the review findings by grounding them in empirical evidence rather than secondary analyses or unpublished academic texts.

Table 1.
Prisma Analysis Based on Theory, Respondents, Data Collection Tools, Predictors, and Mediators

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondents	Finding
				N	Lk	Pr		
Psychological Capital								
Margaça et al. (2021)	Psychological Capital Resilience (R)	TPB	Psychological Resilience Scale (α = 0.89)	544	200	444	Students	R → IE PWB → R → IE PBC→ PWB→ R → IE ATE→ PWB → R → IE
Contreras et al., (2017),	Psychological Capital (Hope, Self Efficacy, Resiliency, Optimism)	Not explained	- General Self Efficacy Scale (GSE) (α = 0.79-0.93) - Hope Scale (α = 0.90) - Life Orientation Test-Revised (LOT-R) (α = 0.68) - Resilience Scale (RS) (α =0.93)	109	35	74	Students	PsyCap (Ho, SE, R, Op) → IE
Zhao et al. (2020)	Psychological Capital	POB	- PsyCap Questionnaire (PCQ) (α =0.88)	1914	Not specifically explained	Not specifically explained	Students	- PsyCap → FC→ IE - PsyCap → HC→ IE - PsyCap → SC→ IE - PsyCap → IE
Ephrem et al. (2019)	Psychological Capital (Hope, Self Efficacy, Resiliency,	TPB	- Psychological Capital Scale (α = 0.925)	192			Students	- PsyCap (Ho, SE, R, Op) → IE - PSN → PsyCap → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
	Optimism)							
Baluku et al. (2019)	Psychological Capital (Self Efficacy, Optimism)	TPB	- PsyCap Questionaire (self-efficacy (α =0.85), optimism (α =0.72)	1,272	784	488	Mixed	- PsyCap (SE, Op) → IE - Men → SE → IE - Men → Op → IE
Mahfud et al. (2020)	Psychological Capital	EEM & TPB	- Psychological Capital Questionnaire (PCQ) (α =0.925)	215	55	160	Students	- PsyCap → IE - EO → PsyCap → IE
Human Capital								
Zhao et al. (2020)	Human Capital	POB	Demographic Form	1,914	Not specifically explained	Not specifically explained	Students	HC → IE
Hock et al. (2015)	- Informal Education - Activity Entrepreneurship - Experience Entrepreneurship - Family Experience - Peer Experience	TPB	Demographic Form	2,300	727	1,572	Students	- IEd → IE - ActEn → IE - ExpEn → IE - FamExp → IE - PeerExp → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
Nusrat & Lopa (2017)	Entrepreneur Education	TPB	Educational Program Scale (α =0.88)	393	Not specifically explained	Not specifically explained	Students	- EEd → IE
Nguyen et al. (2019)	- Experience Entrepreneur - Entrepreneur Education	TPB	- Experience in Entrepreneurship Item Scale (α =0.649-0.870) - Entrepreneur Education Scale (α =0.541-0.733)	1600	856	744	Mixed	- ExpEn → IE - ExpEn→ ATE→ IE - EEd → IE - EEd→ PBC→ IE
Shirokova et al. (2016)	- Entrepreneur Education - Age	TPB	Demographic Form	70,164	Not specifically explained	Not specifically explained	Students	- EEd → IE - Ag → IE
Tognazzo et al. (2017)	- Learning Experience - Work Status	TPB	- Learning Experience Scale (α =0.89) - Worker status questions in the demographic form	1,500	840	660	Students	- LerExp → IE - WorkSta → IE
Ayalew (2020)	- Training Entrepreneurship - Experience Entrepreneurship	TPB	- Not explained	921	Not specifically explained	Not specifically explained	Students	- TraiEn → IE - ExpEn → IE
Fini & Toschi (2016)	Technical Skill	Not explained	Demographic Form	52	Not specifically	Not specifically	Mixed	- TechSkill → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
					explained	explained		
Paray & Kumar (2020)	- Entrepreneur Education - Educational Level - Degree Specialization - Gender	TPB	- Entrepreneurial Education Scale (α =0.901)	309	228	81	Students	- EEd → IE - EEd → A → IE - EEd → SN → IE - EEd → PCB→ IE - EL → IE - DegresSpe → IE - G → IE
Nunfam et al. (2020)	Entrepreneur Curriculum	TPB	- Not explained	324	208	116	Students	- EnCurr → IE
Hou et al. (2019)	Entrepreneur Education	TPB & SCT	- Entrepreneurial Education Scale (α =0.931)	727	226	501	Students	- EEd → IE - EEd → SE→ IE
Liu & Zhao (2020)	- Parent Age - Parent Occupation	TPB	Demographic Form	234	214	266	Students	- ParAge → IE - ParOcc → IE
Sesen (2013)	Entrepreneur Education	LFM	University Environment Scale (α = 0.77-0.84)	356	174	182	Students	- EEd → IE
Córcoles-Muñoz et al. (2019)	- Experience Work - Age - Gender	TPB	Using dummy variables	167	Not specifically explained	Not specifically explained	Students	- ExpWork → IE - Ag → IE - G → IE - BF → LP→ IE
Social Capital								
Zhao et al. (2020)	Social Capital	POB	Social Capital Scale (reliability is not	1914	Not specifically	Not specifically	Students	- SC → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
			explained)		explained	explained		
Lu et al., (2021)	University Support	TPB	University Support Scale (reliability is not explained)	13,954	7,116	6,838	Students	- UnSupp → EA → IE - UnSupp → SN → IE - UnSupp → SE → IE
Hou et al. (2019)	Role Model	TPB	Not explained	727	226	501	Students	- RM → IE - RM → SE→ IE
Sesen (2013)	- Financial Access - Entrepreneurial Knowledge - Social Networking	LFM	University Environment Scale (α = 0.77-0.84)	356	174	182	Students	- FinAcc → IE - EnKnow → IE - SNet → IE
Baluku et al. (2019)	Mentoring	TPB	Mentoring Scale (α = 0.96)	1,509	751	745	Students	- Men → IE - Men→ SE→ IE - Men→ Op→ IE
Zaman et al. (2020)	- Family Bussiness Exposure - Institutional Forces	TPB	- Institutional Forces Scale (coercive, normative, and mimetic forces) - Family business exposure Scale (α = 0.59-0.79)	367	Not specifically explained	Not specifically explained	Students	- FBEx → IE - IF → IE - FBEx → CP→ IE - FBEx→ NP→ IE - FBEx → MP→ IE
Ali et al. (2019)	- Government Support & Regulation - Social Factor	EEM	- GEM National Expert Survey (NES) Scale (α = 0.70-0.788)	310	-	310	Students	- GovReg → IE - GovSupp → IE - SocFac → IE - EdFac → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents		Respondent s	
	- Educational Factor						
Ayalew (2020)	- Business Counseling - Business Owned Family - Sharing of business ideas and experiences by guests	TPB	Not explained	921	Not specifically explained	Not specifically explained	Students	- BC → IE - BOF → IE - SBIE → IE
Shirokova et al. (2016)	- Family Entrepreneurial Background - University Environment	TPB	- Family Entrepreneurial Background Scale (α =0.960) - University Environment Scale (α =0.844)	70,164	Not explained	Not explained	Students	- FEB → IE - UnEnv → IE
Laguía González et al (2019)	- University Environment	TPB	- Questionnaire *GUESSS (Global University Entrepreneurial Spirit Students' Survey)*	9,753	Not explained	Not explained	Students	UnEnv → IE
Nusrat & Lopa (2017)	Family Entrepreneurial Background	TPB	Demographic Form	393	Not specifically explained	Not specifically explained	Students	FEB → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
Banerjee et al. (2020)	Family Entrepreneurial Background	Not explained	Demographic Form	345	Not specifically explained	Not specifically explained	Students	FEB → IE
Fini & Toschi (2016)	- Government Support	Not explained	Demographic Form	52	Not specifically explained	Not specifically explained	Mixed	- GovSupp → IE
Mahfud et al. (2020)	- Social Capital	TPB & EEM	Social Capital Scale (α =0.818)	215	55	160	Students	SC → PsyCap → IE
Baluku et al. (2019)	Mentoring	TPB	Mentoring Scale (α =0.97)	1,272	784	48	Students	Men → IE
Ayodele et al. (2020)	- University Influence - Faculty Influence - Parent Occupation - Parent Education - Mentoring	TPB	- Demographic Form (parents' educational background with answer choices (none, formal education (Elementary School, Junior High School, Senior High School, Diploma, Bachelor, Master), and others) - University influence, faculty influence, role	160	Not specifically explained	Not specifically explained	Students	- UnInf → IE - FacInf → IE - ParOcc → IE - ParEd → IE - Men → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
			model (α = > 0.70)					
Farooq et al. (2018)	Social Support	TPB	Social Support Scale Item (α = 0.843)	448	Not specifically explained	Not specifically explained	Students	- SocSupp → IE - SocSup→ ATE→ IE - SocSup→ SN→ IE - SocSup→ PBC → IE
Mahmood et al. (2017)	- Academic Support - Relational Support	TPB	Entrepreneur Intention Scale (α = 0.793-0.918)	364	Not specifically explained	Not specifically explained	Students	- AcSupp → IE - RelSupp → IE
Tognazzo et al. (2017)	University Climate	TPB	- University Climate Scale (α =0.90)	1,500	840	660	Students	- UnClimate → IE - PBC (SE) → UnClimate → IE
Bloemen-Bekx et al. (2019)	- Parent Preference - Parent Encouragement by Work - Parent Encouragement by Talk - Gender	SCT	- Social Persuasion Questionnaire - Reliability is not specifically explained	1,173	Not specifically explained	Not specifically explained	Students	- ParP → IE - ParEncWork → IE - ParEncTalk → IE - G → IE
Turulja et al. (2020)	Informal Support	TPB	- Informal Support Item Scale (α =0.602-0.927)	111	75	36	Students	InfSup → IE
Manik & Sidharta (2016)	- Facilitation Condition	Not explained	- Facilitating Condition Scale (α =0.606)	241	98	143	Students	- FasCon → IE - OppEco → IE

Author	Construct	Theory	Measuring instrument	Characteristics of Respondents			Respondent s	
	- Opportunity Economic		- Opportunity Economic Scale (α =0.787)					
Amofah et al. (2020)	Environmental Support	TPB	- Environmental Support Scale (α =0.803)	156	Not specifically explained	Not specifically explained	Students	- EnvSupp → IE

Results

Participants

The study respondents comprised students and academics, and non-academics, as shown in Table 1. Most respondents were students (Ali et al., 2019; Amofah et al., 2020; Ayalew, 2020; Ayodele et al., 2020; Baluku et al., 2019; Baluku et al., 2019; Banerjee et al., 2020; Bloemen-Bekx et al., 2019; Contreras et al., 2017; Córcoles-Muñoz et al., 2019; Ephrem et al., 2019; Farooq et al., 2018; Hock et al., 2015; Hou et al., 2019; Laguía González et al., 2019; Liu & Zhao, 2020; Lu et al., 2021; Mahfud et al., 2020; Mahmood et al., 2017; Manik & Sidharta, 2016; Margaça et al., 2021; Nunfam et al., 2020; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Sesen, 2013; Shirokova et al., 2015; Tognazzo et al., 2017; Turulja et al., 2020; Zaman et al., 2020; Zhao et al., 2020). However, some articles used mixed respondents between academics and non-academics (Baluku et al., 2019; Fini & Toschi, 2016; Nguyen et al., 2019).

Of the 111,724, 77% were not identified between men and women. Male respondents accounted for 12%, while 11% were females.

Entrepreneurial Intention Theory

In general, 125 articles that explain psychological, human, and social capital use the theory of planned behavior (TPB) that dominates the discussion on entrepreneurial intentions. Specifically, 68.8% of the articles used TPB, 6.4% used Entrepreneurial Event Model (EEM), 3.2% used Social Cognitive Theory of Social Cognitive Career Theory (SCC/ SCCT), 2.4% used Lu thje and Franke's Model (LFM), while 8.8% did not explain a specific theory.

Of the 31 screening articles, 21 used the theory of planned behavior (TPB) (Amofah et al. 2020; Ayalew, 2020; Baluku et al. 2019; Baluku et al. 2019; Córcoles-Muñoz et al. 2019; Ephrem et al. 2019; Farooq et al. 2018; Hock et al. 2015; Laguía González et al. 2019; Liu & Zhao, 2020; Lu et al., 2021; Mahmood et al. 2017; Margaça et al. 2021; Nguyen et al. 2019; Nunfam et al. 2020; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Shirokova et al. 2015; Tognazzo et al. 2017; Zaman et al. 2020). The positive organizational behavior (POB) theory was used by (Zhao et al., 2020), Lu thje and

Franke's Model (LFM) theory was applied by (Sesen, 2013), while (Bloemen-Bekx et al., 2019) employed the social cognitive career theory (SCCT). Furthermore, (Hou et al., 2019) utilized a combination of TPB and social cognitive theory (SCT), while (Mahfud et al., 2020) exercised a combination of TPB and the entrepreneurial event model (EEM). However, five articles did not specifically explain the theory used. Table 2 describes the use of theory according to the study topic.

Table 2.
Entrepreneurial Intention Theory in Literature Review

Topic	Theory	Writer
Modal Psikologis	TPB	Margaça et al. (2021)
		Ephrem et al. (2019)
		M. Baluku et al. (019)
	POB	Zhao et al. (2020)
	TPB & EEM	Mahfud et al (2020)
Human Capital	TPB	Hock et al (2015)
		Nusrat & Lopa (2017)
		Shirokova et al (2016)
		Tognazzo et al (2017)
		Ayalew (2020)
		Paray & Kumar (2020)
		Nunfam et al (2020)
		Liu & Zhao (2020)
		Córcoles-Muñoz et al (2019)
	POB	Zhao et al. (2020)
	LFM	Sesen (2013)
	TPB & SCT	Hou et al., (2019)
Social Capital	TPB	Lu et al., (2021)
		Hou et al., (2019)
		M. M. Baluku et al (2019)
		Zaman et al (2020)
		Ayalew (2020)
		Shirokova et al (2016)
		Laguía González et al (2019)
		Nusrat & Lopa (2017)

Topic	Theory	Writer
		Baluku et al (2019)
		Ayodele et al (2020)
		Farooq et al (2018)
		Mahmood et al (2017)
		Tognazzo et al (2017)
		Turulja et al (2020)
		Amofah et al (2020)
	POB	Zhao et al. (2020)
	LFM	Sesen (2013)
	EEM	Ali et al., (2019)
	SCT	Bloemen-Bekx et al. (2019)
	TPB & EEM	Mahfud et al. (2020)

Entrepreneurial Intention Predictor Variable

Psychological Capital

Psychological capital predicts entrepreneurial intention of hope (Ho), self-efficacy (SE), resilience (R), optimism (Op) (Table 2). In this study, psychological capital was seen in (Contreras et al., 2017; Ephrem et al., 2019; Mahfud et al., 2020; Zhao et al., 2020). However, (Baluku et al., 2019) described psychological capital with self-efficacy and optimism, while (Margaça et al., 2021) focused on resilience.

Human Capital

Predictors of entrepreneurial intentions in human capital studies could be described through formal education (Hock et al., 2015; Paray & Kumar, 2020; Shirokova et al., 2018) and majors taken (Paray & Kumar, 2020). The predictors could also be described through perceptions of entrepreneurship education support (Hou et al. 2019; Nguyen et al. 2019; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Sesen, 2013) and business experience (Ayalew, 2020; Hock et al. 2015). Furthermore, other descriptions use business activity (Hock et al. 2015), age (Córcoles-Muñoz et al., 2019; Shirokova et al., 2015), and gender (Córcoles-Muñoz et al. 2019; Paray & Kumar, 2020). Entrepreneurial intentions are also described through family and peer experience (Hock et al., 2015), parental age

and occupation (Liu & Zhao, 2020), and entrepreneurship curriculum, learning experience, and employment status (Tognazzo et al., 2017). Additionally, other descriptions use entrepreneurship training (Ayalew, 2020), technical skills (Fini & Toschi, 2016), job experience (Córcoles-Muñoz et al., 2019), and human capital (Zhao et al., 2020).

Social Capital

Predictors of entrepreneurial intentions in the social capital study are described through university support (Fini & Toschi, 2016; Lu et al., 2021), role models (Hou et al., 2019), and mentoring (Ayodele et al., 2020; Baluku et al., 2019; M. M. Baluku et al., 2019). Financial access, social networks (Sesen, 2013), and family entrepreneurial background (Banerjee et al., 2020; Nusrat & Lopa, 2017; Shirokova et al., 2015) are also useful in describing entrepreneurial intentions. Other social capital descriptions could use institutional strength, family business pressure (Zaman et al., 2020), government support, and policy social, educational factors (Ali et al., 2019). Moreover, entrepreneurial intentions in social capital could be described through business counseling, family-owned businesses, sharing experiences with business consultants (Ayalew, 2020), and university environment (Laguía González et al., 2019; Shirokova et al., 2015). University and faculty influence (Ayodele et al., 2020), social support (Farooq et al., 2018), and academic and relational support (Mahmood et al., 2017) also describe entrepreneurial intentions. Additionally, informal support (Turulja et al., 2020), environmental support (Amofah et al., 2020), university climate (Tognazzo et al., 2017), parental choice, strengthening parents by work and speaking (Bloemen-Bekx et al., 2019), condition of facilities, and economic opportunities (Manik & Sidharta, 2016) explain entrepreneurial intentions in social capital.

Entrepreneurial Intention Moderator Variable

Psychological Capital

The six articles discussing psychology show that psychological capital is a direct predictor of entrepreneurial intentions and a moderating variable. Psychological capital moderates well-being (PWB) (Margaça et al., 2021), perception of social norms (PSN) (Ephrem et al., 2019), mentoring (Baluku et al., 2019), and entrepreneurial orientation (EO) (Mahfud et al., 2020). Furthermore,

psychological capital could be moderated by human capital (HC) and social capital (SC) (Zhao et al., 2020).

Human Capital

Nguyen et al. (2019) stated that human capital as entrepreneurial experience (ExpEn) was moderated by attitudes towards entrepreneurship (ATE). Entrepreneurial education (EEd) was moderated by perceptions of controlling behavior (PBC). According to Paray & Kumar (2020), entrepreneurship education (EEd) is moderated by subjective norms (SN) and perceptions control behavior (PBC). Furthermore, entrepreneurship education (EEd) moderated self-confidence (SE) (Hou et al., 2019).

Social Capital

Lu et al. (2021) stated that university support (UnSupp) moderated entrepreneurial attitude (EA), subjective norm (SN), and self-confidence (SE), which moderated role models (Hou et al., 2019). Previous family business pressure (FBEx) was moderated by Normative Pressure (NP), Coercive Pressure (CP), and Mimic Pressure (MP) (Zaman et al., 2020). Furthermore, social capital is moderated by psychological capital (Mahfud et al., 2020), attitudes towards entrepreneurship (ATE), subjective norms (SN), and perceptions of controlling behavior (PBC) (Farooq et al., 2018). According to Tognazzo et al. (2017), the university climate moderates the perceptions of controlling behavior (PBC).

Data Collection Instruments

Psychological Capital

Three of the six articles that discuss psychological capital use the psychological capital questionnaire (PCQ) (α = 0.925) (Mahfud et al., 2020), (α =0.88) (Zhao et al., 2020), PCQ self-efficacy (α =0.85), and optimism (α =0.72) (Baluku et al., 2019). Two articles describe other measurement instruments, such as the Psychological Resilience Scale (α = 0.89) (Margaça et al., 2021) and Psychological Capital Scale (α = 0.925) (Ephrem et al., 2019).

Human Capital

Five articles used in this study collected data using a demographic form to identify parental age and occupation (Liu & Zhao, 2020) as well as informal education, entrepreneurial, family, and peer business experience (Hock et al., 2015). The articles also collected data on entrepreneurship education, age (Shirokova et al., 2015), and technical skills (Fini & Toschi, 2016). Furthermore, six articles describe the human capital data collection instrument using the Likert scale by utilizing the measurement of entrepreneurship education with the educational program scale. They include α = 0.88 (Nusrat & Lopa, 2017), α =0.901 (Paray & Kumar, 2020), and α =0.931 (Hou et al., 2019). Other articles used the entrepreneur education scale followed by α =0.541-0.733 (Nguyen et al., 2019) and the university environment scale with α = 0.77-0.84 (Sesen, 2013). The entrepreneurial experience was measured by the experience in entrepreneurship item scale resulted in α =0.649-0.870 (Nguyen et al., 2019), while the learning experience was measured using the learning experience scale with α =0.89 (Tognazzo et al., 2017).

Social Capital

Four social capital articles used demographic forms in data collection, focusing on the family entrepreneurial background (Banerjee et al., 2020; Nusrat & Lopa, 2017), government support (Fini & Toschi, 2016), and parent's educational background and occupation (Ayodele et al., 2020). Furthermore, 13 articles collected data using a social capital scale (α = 0.818), financial access, entrepreneurial knowledge. The social networking data were collected using the university environment scale (α = 0.77-0.84) (Sesen, 2013), and mentoring scale (α = 0.96) (Baluku et al., 2019), (α =0.97) (Baluku et al., 2019), (α = > 0.70) (Ayodele et al., 2020). Data on the family entrepreneurial background were collected using family business exposure scale (α = 0.59-0.79) (Zaman et al., 2020), family entrepreneurial scale (α =0.960) (Shirokova et al., 2018), and family influence strength using the Institutional Forces Scale (α = 0.59-0.79) (Zaman et al., 2020). Furthermore, the family support and social and educational factors were examined using the GEM National Expert Survey (NES) Scale (α = 0.70-0.788) (Ali et al. 2019), while the university

environment was examined using the University Environment Scale (α =0.844) (Shirokova et al., 2018), (α =0.803) (Amofah et al., 2020), and university and faculty influence (α = > 0.70) (Ayodele et al., 2020). Social support was analyzed using social support scale item (α = 0.843) (Farooq et al., 2018), while academic and relational support was examined using an entrepreneur intention scale (α = 0.793-0.918) (Mahmood et al., 2017). Moreover, university climate was analyzed using the university climate scale (α = 0.90) (Tognazzo et al., 2017), while informal support was examined using the informal support item scale (α =0.602-0.927) (Turulja et al., 2020). Data on facility conditions were examined using facilitating condition scale (α = 0.606), while economic opportunities were analyzed using economic opportunity scale (α = 0.787) (α =0.787) (Manik & Sidharta, 2016).

Discussion

The results showed that most participants are students (Ali et al., 2019; Amofah et al., 2020; Ayalew, 2020; Ayodele et al., 2020; Baluku et al., 2019; Baluku et al., 2019; Banerjee et al., 2020; Bloemen-Bekx et al., 2019; Contreras et al., 2017; Córcoles-Muñoz et al., 2019; Ephrem et al., 2019; Farooq et al., 2018; Hock et al., 2015; Hou et al., 2019; Laguía González et al., 2019; Liu & Zhao, 2020; Lu et al., 2021; Mahfud et al., 2020; Mahmood et al., 2017; Manik & Sidharta, 2016; Margaça et al., 2021; Nunfam et al., 2020; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Sesen, 2013; Shirokova et al., 2015; Tognazzo et al., 2017; Turulja et al., 2020; Zaman et al., 2020; Zhao et al., 2020). Students are the largest population in higher education compared to educators and education staff. They illustrate whether the entrepreneurship education in the university receives the psychological strengthening and entrepreneurial skills expected by prospective graduates.

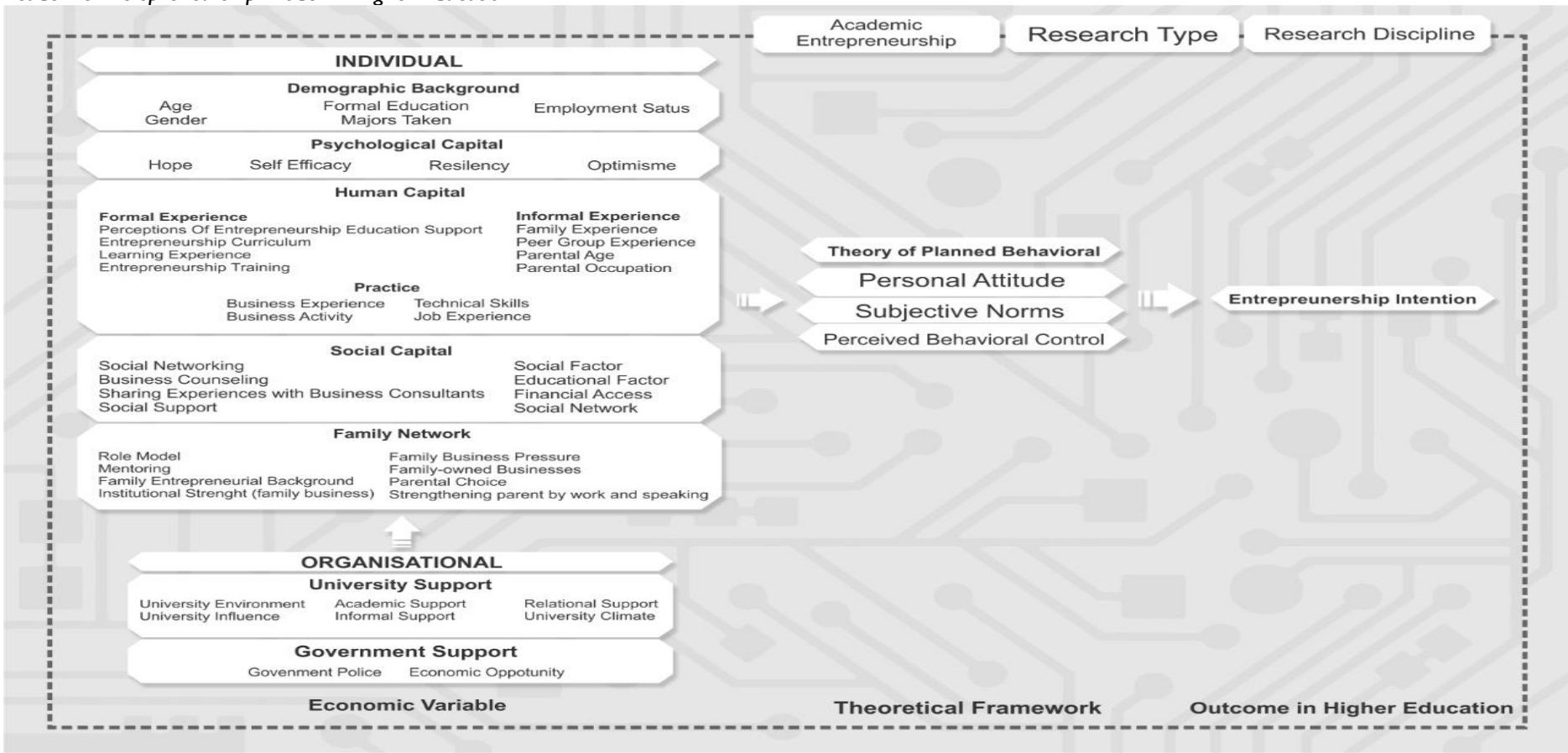
The theory of planned behavior (TPB) is often used in discussing entrepreneurial intentions (Amofah et al. 2020; Ayalew, 2020; Baluku et al. 2019; Baluku et al. 2019; Córcoles-Muñoz et al. 2019; Ephrem et al. 2019; Farooq et al. 2018; Hock et al. 2015; Laguía González et al. 2019; Liu & Zhao, 2020; Lu et al., 2021; Mahmood et al. 2017; Margaça et al. 2021; Nguyen et al. 2019; Nunfam

et al. 2020; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Shirokova et al. 2015; Tognazzo et al. 2017; Zaman et al. 2020). This indicates that TPB consistently explains entrepreneurial intentions.

Several variables affect entrepreneurial intentions as a dependent variable. Referring to Neves & Brito (2020), this study presents independent variables based on the individual and organizational categories shown in Table 3. Individuals are described based on demographic background and psychological, social, and human capital. The demographic background is described based on age (Córcoles-Muñoz et al., 2019; Shirokova et al., 2015), gender (Bloemen-Bekx et al., 2019; Córcoles-Muñoz et al., 2019), formal education (Hock et al., 2015; Paray & Kumar, 2020; Shirokova et al., 2018), major (Paray & Kumar, 2020), and employment status (Tognazzo et al., 2017).

Table 3.

Academic Entrepreneurship Model in Higher Education



Psychological capital using four components, such as hope (Ho), self-efficacy (SE), resilience (R), and optimism (Op), is consistent in Contreras et al. (2017), Ephrem et al. (2019), Mahfud et al. (2020), and Zhao et al. (2020). Human capital includes formal, informal, and practical experiences. Moreover, the formal category includes perceptions of support for entrepreneurship education (Hou et al., 2019; Nguyen et al., 2019; Nusrat & Lopa, 2017; Paray & Kumar, 2020; Sesen, 2013), entrepreneurship curriculum and training, and learning experiences (Ayalew, 2020). The informal category includes family and peer experiences (Hock et al., 2015), as well as parental age and occupation (Liu & Zhao, 2020). The practice category comprises business experience (Ayalew, 2020; Hock et al., 2015), business activities (Hock et al., 2015), technical skills (Fini & Toschi, 2016), and work experience (Córcoles-Muñoz et al., 2019).

Social capital includes family and social networks described in business counseling, sharing experiences with business consultants (Ayalew, 2020), and social support (Farooq et al., 2018). The networks are also described in social and educational factors. (Ali et al., 2019), financial access, and social networks (Sesen, 2013). Family networks include role models (Hou et al., 2019), mentoring (Ayodele et al. 2020; Baluku et al., 2019; Baluku et al., 2019), and family entrepreneurial background (Banerjee et al., 2020; Nusrat & Lopa, 2017; Shirokova et al., 2015). Other networks are institutional strength, business pressure (Zaman et al., 2020), family business (Ayalew, 2020), parental choice, and strengthening parents through work and speech (Bloemen-Bekx et al., 2019).

The organizational category includes university support (Fini & Toschi, 2016; Lu et al., 2021), government support and policy, and university environment (Laguía González et al., 2019; Shirokova et al., 2015). Other factors are university and faculty influence (Ayodele et al., 2020), academic and relational support (Mahmood et al., 2017), informal support (Turulja et al., 2020), and environmental support (Amofah et al., 2020). Furthermore, the organizational category comprises university climate (Tognazzo et al., 2017), facility condition, and economic opportunities (Manik & Sidharta, 2016). Psychological capital is an independent and a moderating variable for others to influence entrepreneurial intentions (Baluku et al., 2019; Ephrem et al., 2019; Mahfud et al., 2020; Margaça et al., 2021; Zhao et al., 2020). Most studies on human and social capital found that psychological capital was moderated by other variables. However, Tognazzo et al. (2017) stated

that the university climate moderates perceptions of controlling behavior (PBC). Other studies found that almost every data collection instrument has a fairly satisfactory reliability (α = > 0.70) and uses a demographic form in collecting respondents' background data (Ayodele et al., 2020; Banerjee et al., 2020; Fini & Toschi, 2016; Hock et al., 2015; Liu & Zhao, 2020; Nusrat & Lopa, 2017; Shirokova et al., 2015).

Conclusion

This study conducted a systematic literature review of entrepreneurial intentions specifically focusing on psychological, human, and social capital. The analysis revealed distinct characteristics of respondents, commonly utilized theoretical frameworks, key predictor variables, mediators of entrepreneurial intentions, and the instruments employed for data collection.

Most respondents in the reviewed studies were students, highlighting the relevance of the Theory of Planned Behavior (TPB) in elucidating intentions across various investigations. It was consistently found that psychological capital predicts and mediates entrepreneurial intentions. In contrast, human and social capital predominantly function as predictors. The instruments used to gather data on psychological and social capital demonstrated satisfactory reliability, with demographic surveys being the most commonly employed method.

This review was confined to journal articles published between 2012 and 2021. This time frame and source limitation may restrict the breadth of variables related to entrepreneurial intentions that could be considered. Future research should, therefore, broaden the scope to include a more extensive period and diverse sources, such as conference proceedings and books, to achieve a more comprehensive understanding of the topic. The findings from this review are intended to serve as a foundational resource for subsequent studies examining entrepreneurial intentions within higher education.

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