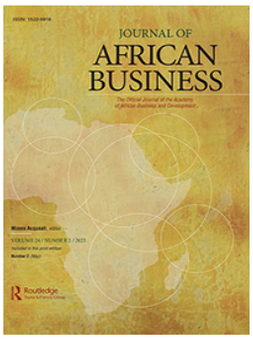

Routledge
Taylor & Francis Group

Journal of African Business

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/wjab20

Explaining the Positioning of Agricultural Entrepreneurs on the Necessity-Opportunity Continuum in Sub-Saharan Africa: Insights from Benin

Frejus S. Thoto, Djana B. Mignouna, Razack Adeoti, Rodrigue C. Gbedomon, Sylvain Kpenavoun Chogou, Augustin Aoudji & Barthelemy Honfoga

To cite this article: Frejus S. Thoto, Djana B. Mignouna, Razack Adeoti, Rodrigue C. Gbedomon, Sylvain Kpenavoun Chogou, Augustin Aoudji & Barthelemy Honfoga (2023): Explaining the Positioning of Agricultural Entrepreneurs on the Necessity-Opportunity Continuum in Sub-Saharan Africa: Insights from Benin, Journal of African Business, DOI: 10.1080/15228916.2023.2209496

To link to this article: https://doi.org/10.1080/15228916.2023.2209496

Published online: 22 May 2023.

JOURNAL OF AFRICAN BUSINESS
https://doi.org/10.1080/15228916.2023.2209496

Taylor & Francis
Taylor & Francis Group

Explaining the Positioning of Agricultural Entrepreneurs on the Necessity-Opportunity Continuum in Sub-Saharan Africa: Insights from Benin

Frejus S. Thoto[a,b], Djana B. Mignouna[c], Razack Adeoti[c], Rodrigue C. Gbedomon[b,d,e], Sylvain Kpenavoun Chogou[a], Augustin Aoudji[a] and Barthelemy Honfoga[a]

[a]Faculty of Agricultural Sciences/University of Abomey-Calavi, Abomey-Calavi, Benin; [b]Centre d'Actions pour l'Environnement et le Développement Durable (ACED), Abomey-Calavi, Benin; [c]International Institute of Tropical Agriculture (IITA), Abomey-Calavi, Benin; [d]Laboratory of Biomathematics and Forest Estimation/ University of Abomey-Calavi, Abomey-Calavi, Benin; [e]Institute of Environmental Sciences/University of Geneva, Geneva, Switzerland

ABSTRACT

Despite the potential of agriculture to reduce unemployment in sub-Saharan Africa, research on agricultural entrepreneurship is scarce, especially regarding the entrepreneurs' motivations. The aim of this research is to examine the intensity of necessity and opportunity motivations among agricultural entrepreneurs and the influence of socioeconomic characteristics, personality, and environmental factors. Hence, the study reports a survey of 819 agricultural entrepreneurs in Benin and uses multinomial logistic regressions. Most agricultural entrepreneurs are moderately necessity-driven (76%); the remainder includes highly necessity-driven entrepreneurs (4%), moderately opportunity-driven entrepreneurs (6%), and highly opportunity-driven entrepreneurs (14%). Those displaying higher intensity of necessity motivations can be at any education level, are former employees, are less proactive, less optimistic, and operate in the services sector. In contrast, highly opportunity-driven entrepreneurs are likely to have received a university education and agricultural professional training, operate in the services sector, and have better access to finance and technologies. This study advances the push-pull theory by revealing a richer set of entrepreneurial motivations beyond the simplistic dichotomic view. Hence, policymakers could devise entrepreneurship strategies and programs that consider the diverse motivations of entrepreneurs and the influencing factors to move them toward increased opportunity entrepreneurship.

KEYWORDS

Entrepreneurship; agriculture; motivation dichotomy; necessity; opportunity; Benin

Introduction

Scholars are increasingly called upon to contextualize entrepreneurship research as entrepreneurship is better understood when historical, temporal, spatial, institutional, and social contexts are considered (Welter, 2011). Context can be an asset and a liability, and thus likely to influence the available range of opportunities, activities,

CONTACT Frejus S. Thoto frejusthoto@outlook.fr Faculty of Agricultural Sciences/University of Abomey-Calavi, Abomey-Calavi, Benin

and outcomes of entrepreneurship (Welter, 2011). This paper will focus on agricultural entrepreneurship in the sub-Saharan African context, which has received so far very little attention from scholars, with only about 5% of published papers (Fitz-Koch et al., 2018).

Agriculture is the largest sector in sub-Saharan Africa, contributing over 54% of total employment and accounting for 15% of the continent's gross domestic product (World Bank, 2021). In Benin, agriculture's contribution to gross domestic product is about 20%. It decreased from 25.23% in 2006 to 22.64% in 2018, but in nominal terms, it increased from $US 1.44 to $US 2.18 billion during the same period (World Bank, 2021). The past decade witnessed an increasing shift from the traditional family farm model to entrepreneurial ventures. More agricultural economic activities are now undertaken out of the family context and include the recruitment of non-family labor, the formation of an enterprise (agribusiness), and an exclusive orientation toward the market (Yami et al., 2019).

In Benin, most of these agribusinesses are promoted by development programs and organizations as a solution to unemployment and underemployment. For instance, organizations such as Technoserve and the German Corporation for International Cooperation (GiZ), along with a partnership between the Benin Government, the United Nations Development Programme (UNDP), and the Songhai Center, have supported thousands of youths with training, incubation, and funding for agribusiness (Benin, 2020; PNUD, 2021). Universities, such as the University of Abomey-Calavi (UAC), offer entrepreneurship-focused programs and incubators like "UAC Startup Valley" to promote and support innovative business creation.

Despite the strong commitment and interest in agricultural entrepreneurship as a solution to provide decent employment opportunities to the growing number of youth, there is very limited research on the topic (Yami et al., 2019), and almost no evidence on how and in which conditions it can deliver the expected outcomes. For instance, it is still unclear how and why some individuals identify opportunities, evaluate them as viable, and then decide to exploit them, whereas others do not, and, in turn, how these opportunities result in wealth creation (Davidsson, 2015; Landström & Lohrke, 2010). This study aims at investigating this fundamental question and advancing the understanding of motivations of agricultural entrepreneurs in starting up a business.

In the literature, two major types of entrepreneurship based on entrepreneurs' motivation are considered: necessity-driven and opportunity-driven (Reynolds et al., 2002). Necessity-driven entrepreneurship (NDE) is related to an individual's decision to go into entrepreneurship as the best option available for employment but not necessarily the preferred one, while opportunity-driven entrepreneurship (ODE) represents the voluntary participation of the individual in entrepreneurial activity to pursue well-identified business opportunities (Z. J. Acs et al., 2008).

The debate on the motivations of entrepreneurs is not recent, and the apparent consensus on the necessity-opportunity (N/O) dichotomy to explain entrepreneurs' motivations is increasingly questioned. The major reasons advanced are that more diverse motives exist (Abdallah et al., 2020; Giacomin et al., 2011; Rosa et al., 2008); necessity and opportunity motivations can coexist (Simón-Moya et al., 2016) and change over time and place (Eijdenberg et al., 2021; Williams & Williams, 2012).

However, critics over the dichotomic classification have not proposed much about the possible alternatives for categorizing entrepreneurs based on their start-up motivations. Some notable proposals came from Giacomin et al. (2011), who introduced the hobby entrepreneurship; Stephan et al. (2015), who classified motivations along four dimensions, namely "autonomy & better work," "challenge & opportunity," "financial motives" and "family & legacy;" and Puente et al. (2019) who proposed a third category known as "transition." All these approaches of classification suggest two main motives with possible sub-profiles within each main motive. This study goes beyond the simplistic vision of motivation as a clear-cut dichotomy and develops a new analytical framework that places the entrepreneur on a continuum from highly necessity-driven to highly opportunity-driven. By doing so, it reconciles the concern of mixed start-up motivations and the importance to differentiate NDO and ODE because of its implication for policy and practice.

The aim of this research is to examine the intensity of necessity and opportunity motivations among agricultural entrepreneurs and the influence of socioeconomic characteristics, personality, and environmental factors. This study will enhance the knowledge base on agricultural entrepreneurship by exploring the intensity of start-up motivations in agricultural entrepreneurship as a complex process. It addresses two research questions:

- What is the different positioning of agricultural entrepreneurs on the N/O continuum? and
- How do socioeconomic characteristics, personality, and environmental factors influence the positioning of agricultural entrepreneurs on the N/O continuum?]

The research will contribute to entrepreneurship theory and practice in two important ways. First it advances the push-pull theory and the necessity-opportunity lens by unfolding richer and more diverse entrepreneurial motivations. By doing so, it improves understanding of why individuals decide to start a business (more specifically in the agricultural sector), which is one of the main research questions in the entrepreneurial field because of its implications on the business performance (Vivarelli, 2013) and its socioeconomic impact (Hessels et al., 2008; Wong et al., 2005; Z. Acs, 2006). Second, the research has provided practical orientations on how to better design and implement entrepreneurship support programs as it generates new knowledge on the socioeconomic factors, personality, and environmental factors that influence the start-up motivations of agricultural entrepreneurs.

Literature review

Motivations of entrepreneurs: a push-pull theory

The push-pull theory, which models individuals' motivations for entrepreneurial behavior, has been the basis for many scholarly studies. Shapero and Sokol (1982) were among the first to argue that significant life events, either positive (pull factors) like inheritance

Table 1. Necessity and Opportunity Motivations of Entrepreneurs.

Motivation	Type of motivation	Source
Escape unemployment	Necessity (push factors)	Vivarelli (2013);Rocha et al. (2015)
Have prestige/Self-achievement	Necessity (push factors)	Giacomin et al. (2011); Scheinberg and MacMillan (1988)
Satisfy the will of my parents or follow the family tradition	Necessity (push factors)	Bhola et al. (2006); Giacomin et al. (2011)
Unsatisfied with my job	Necessity (push factors)	Giacomin et al. (2011)
Pursue a business opportunity that I have identified	Opportunity (pull factors)	Bhola et al. (2006); (Fossen & Büttner, 2013; van der Zwan et al., 2016)
Earn money	Opportunity (pull factors)	Stephan et al. (2015)
Be independent	Opportunity (pull factors)	Carter et al. (2003)
Develop solutions to solve challenges in the agricultural sector	Opportunity (pull factors)	Mason (1989)
Make use of the resources I have (innovation)	Opportunity (pull factors)	Carter et al. (2003)

or business opportunities, or negative (push factors) like job loss, influence people to start businesses. Numerous push-pull factors have been identified to explain entrepreneurial motivations (Table 1).

Later, the push-pull theory was operationalized in the entrepreneurship research field by the concepts of opportunity and necessity, notably in the Global Entrepreneurship Monitor (Bosma et al., 2008). The concept of opportunity and necessity entrepreneurship has dominated subsequent research conducted to explain the motivation of entrepreneurs. As such, entrepreneurs who indicated they started their business because they had identified a business opportunity were classified as opportunity entrepreneurs and the others as necessity entrepreneurs (Fossen & Büttner, 2013; Stephan et al., 2015; van der Zwan et al., 2016).

Despite this line of thought adopted by many scholars, a small but growing stream of research has questioned the "simplistic" dichotomy of entrepreneurs' motivation. Their arguments have offered new avenues of analyzing entrepreneurs' motivations with a more complex and dynamic perspective. For example, Adom (2014) and Williams and Williams (2012), studying Ghanaians informal entrepreneurs and English deprived neighborhoods respectively have found that entrepreneurs are more often driven by both necessity and opportunity motivations. This is emphasized by Simón-Moya et al. (2016), who demonstrated that necessity and opportunity entrepreneurship could coexist, challenging the assumptions that the two groups are homogenous and distinct. Individuals considered "necessity" entrepreneurs were also found to have aspirations that influence their desire to stay in business (Afutu-Kotey et al., 2017) as is the case for opportunity entrepreneurs. Furthermore, scholars argued that there are more diverse motives that can be other than economic and, therefore, not limited to opportunity and necessity; i.e, hobby entrepreneurship (Giacomin et al., 2011) and motivation of a social nature (Anderson, 2015).

The push-pull theory enhances understanding of start-up motivations, moving beyond the necessity-opportunity dichotomy, and addressing the heterogeneity and complexity of motivations. Although various motives influence the decision to start a business, opportunity identification remains central. This connects entrepreneurship to its core meaning, encompassing opportunity identification, viability assessment, and risk-taking for wealth creation. In this research, we categorize agricultural entrepreneurs using the necessity-

opportunity lens, considering agribusiness opportunity identification as the primary motivation, and integrating additional motives. We propose the following hypothesis:

H1. There are at least four possible ways, of increasing intensity of necessity-opportunity motivations, in which one may start a business.

Factors influencing the motivations of entrepreneurs

In the literature, necessity and opportunity motivations are associated with the entrepreneur's socioeconomic characteristics, personality, and environmental factors.

Socioeconomics

Socioeconomic characteristics have garnered more scholarly attention compared to personality and environmental factors, but a consensus on all socioeconomic characteristics remains elusive. For example, van der Zwan et al. (2016) found that the probability of being an opportunity versus a necessity business owner is higher for males, while Stephan et al. (2015) and Muzata (2022) did not find a gender-driven difference between opportunity and necessity entrepreneurs. Similarly, Fossen and Büttner (2013) found that opportunity entrepreneurs are older than necessity entrepreneurs, while Bergmann and Sternberg (2007) found earlier that age does not seem to have an impact on the probability of necessity entrepreneurship. Regarding the education level, opportunity entrepreneurs seem to be more educated than necessity entrepreneurs (Fossen & Büttner, 2013; Stephan et al., 2015). Moreover, the income level of the entrepreneur also influences the type of entrepreneurship developed. For example, van der Zwan et al. (2016) found that income level positively influences opportunity entrepreneurs but has no influence on necessity entrepreneurs. The employment status is also a largely investigated socioeconomic factor as to how it relates to necessity-opportunity entrepreneurship. The finding is that unemployed individuals display more necessity than opportunity motivations (Rocha et al., 2015; Vivarelli, 2013).

Personality

Regarding the personality of the entrepreneur, risk-taking propensity seems not to differentiate opportunity and necessity entrepreneurs (Fossen & Büttner, 2013). However, there is evidence that opportunity entrepreneurs are more proactive and optimistic than necessity entrepreneurs (van der Zwan et al., 2016). In terms of locus of control, opportunity entrepreneurs have an external locus of control (Fossen & Büttner, 2013). Moreover, there is evidence that opportunity-driven entrepreneurs have higher levels of self-efficacy (Tyszka et al., 2011)

Environment

Research that has examined necessity and opportunity entrepreneurship against environmental factors such as market, technologies, and finance is scarce, although these

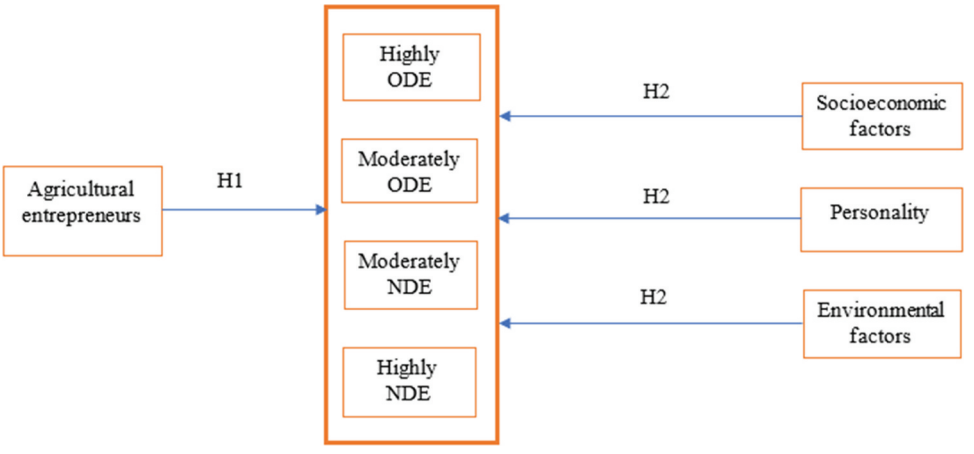

Figure 1. Theoretical Model.

factors may positively or negatively impact each step of the entrepreneurial process, including the creation phase (North, 1990; Tolbert et al., 2011). One exception is a study by van der Zwan et al. (2016) that has found that opportunity entrepreneurs have a more positive perception of financial start-up support than necessity entrepreneurs. This study considers additional environmental factors such as market access, access to technologies, and the agricultural sub-sector the entrepreneur is involved in.

In relation with the above literature, we formulate the following hypotheses:

H2a. Among NDE, it is expected that those with high necessity motivations are less educated, formerly employed, less proactive, less optimistic, with lower access to finance, market and technologies.

H2b. Among ODE, it is expected that those high opportunity motivations are likely of higher education, more proactive and optimistic, and with better access to finance, market and technologies. The theoretical model is summarized in Figure 1.

Data and methods

Study area and sampling approach

Benin is a lower-middle income country with a population of 12.5 million people and an annual *per capita* income estimated at US$ 1,487 in 2021 (World Bank, 2021). From 2017–2019, real GDP growth has been robust averaging 6.4%. Despite such economic performance, unemployment and underemployment are growing (ILO, 2020) and the combined public and private sectors are unable to offer lasting solutions. To face this challenge, entrepreneurship was used as a relevant vehicle to provide jobs to the unemployed and considerable efforts have been put in promoting that. For example, business creation was made easier

Table 2. Regional Distribution and Accessibility to Cotonou of Agricultural Entrepreneurs in Benin.

Departments of Southern Benin	Number of entrepreneurs	Percentage (%)	Accessibility to the Port of Cotonou	Headquarter city and distance to Cotonou (in km)
Littoral	243	11.98	Very high	Cotonou
Atlantique	665	32.77	High	Allada (50)
Oueme	480	23.66	High	Porto-Novo (42)
Plateau	122	6.01	Average	Pobè (104)
Mono	172	8.48	Average	Lokossa (113)
Zou	219	10.79	Low	Abomey (133)
Couffo	31	1.53	Very low	Aplahoué (144)
Collines	97	4.78	Very low	Dassa-Zoumè (203)
TOTAL	**2029**	**100**	–	–

and Benin became in 2020 the country with the fastest business creation process in the world (Richards, 2020). As a result, it creates an *a priori* conducive environment for entrepreneurship that generates many businesses, especially in the agricultural sector.

This research focused on agricultural entrepreneurs in Southern Benin, characterized by pronounced and diversified sub-sectors (primary production, processing, services). Services-based agribusinesses include advisory, digital, e-commerce, and transport services. In the context of this study, agricultural entrepreneurs are individuals engaged in market-oriented activities for individual income, not as part of an agricultural household effort. The agricultural entrepreneurs population for the study is 2029. About 83% of them would be considered as having average to very high accessibility to the Port of Cotonou, the biggest and main business city of Benin (Table 2). It is only 50 km to the border with Nigeria, the West African Giant. It serves landlocked countries such as Niger, Mali, and Burkina Faso. The Port of Cotonou accounts for 90% of Benin's total foreign trade (WFP, 2019).

To ensure representativeness of entrepreneurial realities and specificities along agricultural value chains, the target population was subdivided into three strata, including agricultural entrepreneurs active respectively in primary production ($N_1 = 923$, 45.49%), processing ($N_2 = 895$, 44.11%), and services ($N_3 = 211$, 10.40%). From each stratum, an independent sample of sizes $n1 = 366$, $n2 = 327$ and $n3 = 126$ was drawn. Therefore, the sample size for the study is 819. The study adopted a disproportionate stratified sampling where individuals are not given an equal chance to be included in the sample. Thus, the population composition (ni/Ni) was used as a weight in the estimation of parameters, including the econometric model.

Data collection

Data were collected between October and December 2019 through individual interviews with the sampled agricultural entrepreneurs. The latter were randomly selected within each stratum and were contacted by phone to set up a meeting. Data were collected using a questionnaire that consists of a series of questions on self-reported necessity and opportunity motivations at the start of the business (Table 1), socioeconomic characteristics, and personality of entrepreneurs as well as on their perception of environmental factors for entrepreneurship (Table 3).

Data analysis

Different types of motivations among agricultural entrepreneurs

In a first step, we computed the frequencies of various categorical variables for the socioeconomic characteristics of agricultural entrepreneurs across sub-sectors. The Pearson chi2 test of homogeneity assessed whether frequency counts were identically distributed across sub-sectors. This study critiqued the necessity-opportunity approach for its inability to capture multiple motivation dimensions. Nevertheless, analyzing motivations from this angle remains valuable. Our proposed framework efficiently collects agricultural entrepreneurs' motivations, linking them back to the push-pull theory that underpins the necessity-opportunity lens (Table 1).

The study utilized a nominal categorical variable to classify agricultural entrepreneurs into four types of motivations based on the intensity of their necessity and opportunity motivations. The motivation "Pursue a business opportunity that I have identified" was used as an anchor due to its significance in the definition of entrepreneurship and its superior importance compared to other opportunity motivations (Bhola et al., 2006; Z. J. Acs et al., 2008). This selection plays a crucial role in distinguishing between necessity and opportunity entrepreneurship.

Entrepreneurs with the motivation "Pursue a business opportunity" and more opportunity than necessity motivations were Highly ODE; those with fewer opportunity than necessity motivations or equal numbers were Moderately ODE. Entrepreneurs without "Pursue a business opportunity" and more necessity than opportunity motivations were Highly NDE, and those with fewer necessity than opportunity motivations or equal numbers were Moderately NDE. Such operationalization of the motives of agricultural entrepreneurs is relevant for two reasons. First, it allows acknowledging the centrality of the identification of business opportunity in entrepreneurial activity (Z. J. Acs et al., 2008). Second, it is instrumental in accounting for additional motivations (Giacomin et al., 2011; Rosa et al., 2008) and the mix of both necessity and opportunity motivations (Simón-Moya et al., 2016).

Effects of socioeconomic characteristics, personality, and environmental factors on the positioning of agricultural entrepreneurs on the N/O continuum

We used multinomial logistic regression analysis to explore the effect of socioeconomic characteristics, personality, and environmental factors on the positioning of agricultural entrepreneurs on the N/O continuum. This was preferred to an ordinal logistic regression since the natural order among the four categories is not straightforward. Using a stepwise method with a probability of removal set at 0.02 (Wang et al., 2007), the following variables were removed from the model: gender, age, marital status, income, number of people in charge, experience in entrepreneurship, autonomy, internal locus of control, competition, and unavailability of market. Because we suspect multicollinearity might be a potential problem, we calculated the correlations of the independent variables in the model. The correlation between the independent variables and the level of statistical significance suggested that multicollinearity is negligible (Appendix A).

Table 3. Type of Data Collected.

	Description	Type	Modalities and codes
Socioeconomic variables			
Age	Age of the entrepreneur at the start of the business	Ordinal	1 = Young (≤35 years) 2 = Adult (35–60 years) 3 = Old (>60 years)
Gender	Gender	Dummy	1 = Male 0 = Female
Marital status	Marital status at the start of the business	Dummy	1 = Married 0 = Not married
Number of people in charge	Number of people in charge at the start of the business	Discrete	
Education	Level of education of the entrepreneur at the start of the business	Ordinal	0 = No formal education 1 = Primary 2 = Secondary 3 = University
Income	Level of income of the entrepreneur	Ordinal	1 = Less than 500,000 FCFA 2 = 500,000–1.000.000 FCFA 3 = 1.000.001–2.000.000 FCFA 4 = 2.000.001–3.000.000 FCFA 5 = 3.000.001–4.000.000 FCFA 6 = More than 4.000.000 FCFA
Employment	Employment status before starting the business	Dummy	1 = Employed 0 = Not employed
Prior experience in entrepreneurship	Experience in entrepreneurship before starting the business (if the entrepreneur had started a business before the current one)	Dummy	1 = Yes 0 = No
Personality variables			
Risk-taking	In general, I am willing to take risks	Likert-scale	1= Fully disagree (Very low) 2= Disagree (Low) 3= Neutral 4= Agree (High) 5= Fully agree (Very high)
Self-efficacy	Generally, when facing difficult tasks, I am certain that I will accomplish them	Likert-scale	
Internal locus of control	My life is determined by my own actions, not by others or by chance	Likert-scale	
Proactivity	I frequently take action to anticipate future changes or create results	Likert-scale	
Autonomy	The possibility of being rejected by others for standing up for my decisions would not stop me	Likert-scale	
Optimism	I am optimistic about my future	Likert-scale	
Competition	I like situations in which I compete with others	Likert-scale	
Business environment variables			

(*Continued*)

Table 3. (Continued).

	Description	Type	Modalities and codes
Ease of access to market	How difficult the entrepreneur perceive access to market	Likert-scale	1= Very difficult
Ease of access to finance	How difficult the entrepreneur perceive access to finance	Likert-scale	2= Difficult
Ease of access to technologies	How difficult the entrepreneur perceive access to technologies	Likert-scale	3= Neutral 4= Not difficult 5= Not at all difficult
Family entrepreneurship	If a parent or tutor of the respondent was an entrepreneur	Dummy	1 = Yes 0 = No
Sector	The agricultural sector in which the entrepreneur primarily develops its activities	Categorical	1 = Primary production 2 = Processing 3 = Services

Results

Socioeconomic characteristics of agricultural entrepreneurs

About half of the 819 entrepreneurs interviewed participated in primary production, with 15% in the services sub-sector. Agriculture in Benin is male-dominated, with three out of four entrepreneurs being men. Women were more involved in processing, while men were more involved in primary production (Table 4). Unmarried entrepreneurs were more represented in primary production, while married entrepreneurs were more prevalent in processing. Income level influenced sub-sector engagement, with low-income entrepreneurs more represented in primary production. Participation in services sub-sector increased with income level. Entrepreneurs with university degrees were less active in primary production and more engaged in services sub-sector. Processing businesses displayed the highest location dispersion, whereas services-based businesses were concentrated in fewer locations.

Beyond socioeconomic characteristics, the personality features were also analyzed. For all the categories of the N/O continuum, agricultural entrepreneurs showed high and very high scores (Figure 2). However, agricultural entrepreneurs with the greatest scores of personality were found in the Highly ODE category and, to a lesser extent in the Moderately NDE.

Positioning of agricultural entrepreneurs on the N/O continuum

The study found that 20% of agricultural entrepreneurs were "opportunity-driven entrepreneurs" who pursued a business opportunity, while the remaining 80% were "necessity-driven entrepreneurs" who did not report pursuing a business opportunity. Among opportunity-driven entrepreneurs, only 48% reported exclusively opportunity motivations, while the remaining reported both opportunity and necessity motivations. Among necessity-driven entrepreneurs, only around 4% reported exclusively necessity motivations, while 53% reported opportunity motivations, and nearly half indicated both necessity and opportunity motivations.

A mix of motivations and varying intensities led to categorizing entrepreneurs into four groups: "Highly NDE," "Moderately NDE," "Moderately ODE" and "Highly ODE." Most agricultural entrepreneurs (76%) were "Moderately NDE" at the start of their business (Figure 3), meaning they didn't start due to identified opportunities but displayed opportunity motivations such as income generation, independence, and addressing agricultural issues (Table 5). Only 6% were "Moderately ODE," starting ventures due to identified opportunities but also having necessity motivations. Consequently, four in five entrepreneurs were neither exclusively by necessity nor opportunity motivations; but rather display a mix of motivations that places them somewhere in-between the two extremes, with most being NDE rather than ODE. Only 4% of entrepreneurs were highly NDE and 14% as highly ODE.

Table 4. General Characteristics of Agricultural Entrepreneurs.

		Primary production	Agricultural processing	Agricultural services	Total	Stat*	p
All		44.69	39.93	15.38	100		
Gender	Female	14.56	70.39	15.05	25.15	119.88***	0.000
	Male	54.81	29.69	15.50	74.85		
Age	Young (≤35 years)	46.52	37.33	16.16	43.83	3.90	0.420
	Adult (35-60 years)	44.20	40.74	15.06	49.45		
	Old (>60 years)	36.36	50.91	12.73	6.72		
Marital status	Not married	47.32	35.37	17.32	50.06	7.54**	0.023
	Married	42.05	44.50	13.45	49.94		
Education	No formal education	29.73	60.81	9.46	9.04	31.77***	0.000
	Primary	49.50	38.61	11.88	12.33		
	Secondary	54.04	33.82	12.13	33.21		
	University	39.52	40.59	19.89	45.42		
Number of people in charge	Min – Max	0–22	0–13	0–13			
	m ± se	2.26 ± 0.17	1.76 ± 0.13	1.94 ± 0.22		2.85*	0.0587
Employment status before starting the business	Not employed	44.94	40.61	14.45	76.07	1.83	0.400
	Employed	43.88	37.76	18.37	23.93		
Agricultural professional training	No	43.68	42.96	13.37	51.16	4.45	0.108
	Yes	45.75	36.75	17.50	48.84		
Experience in entrepreneurship	No	44.63	40.59	14.78	87.55	1.98	0.371
	Yes	45.10	35.29	19.61	12.45		
Income	Less than 500,000 FCFA	43.29	45.73	10.98	20.02	19.35**	0.036
	500,000–1,000,000 FCFA	49.32	38.36	12.33	26.74		
	1,000,001–2,000,000 FCFA	48.42	37.37	14.21	23.08		
	2,000,001–3,000,000 FCFA	40.57	41.51	17.92	13.06		
	3,000,001–4,000,000 FCFA	33.33	43.59	23.08	4.76		
	More than 4,000,000 FCFA	38.61	35.64	25.74	12.33		
Family entrepreneurship	No	43.44	39.96	16.60	59.58	1.58	0.455
	Yes	46.53	39.88	13.60	40.42		
Sample size		366	327	126	819		
Number of municipalities covered		29	35	17	40		

*** $p < 0.01$, ** $p < 0.05$ and * $p < 0.10$.

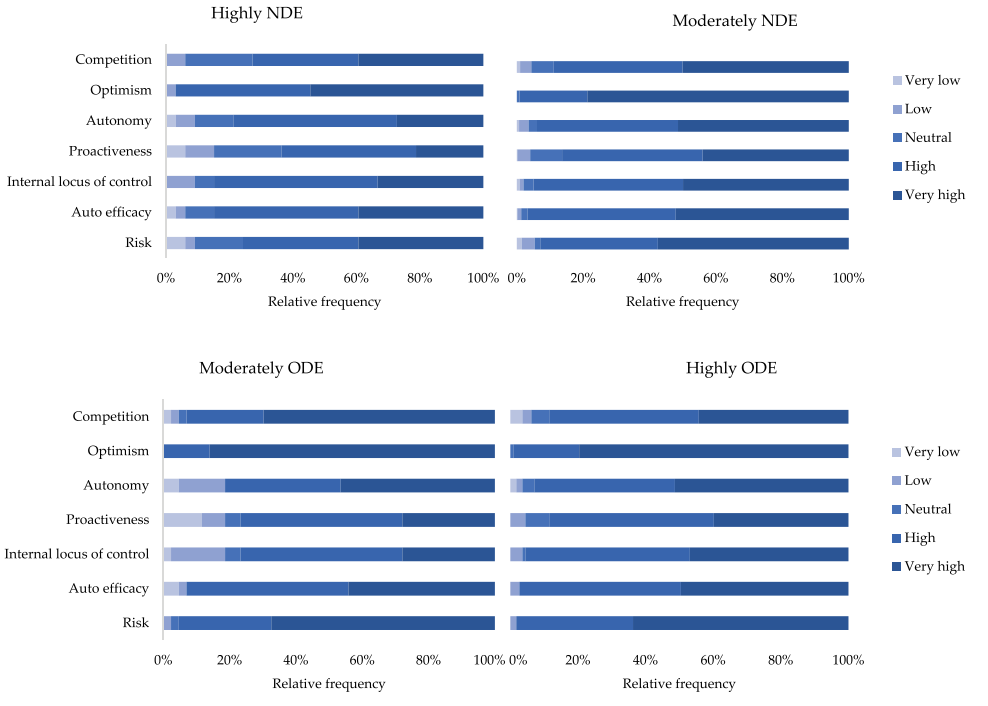

Figure 2. Personality of Agricultural Entrepreneurs by Intensity of Motivation.

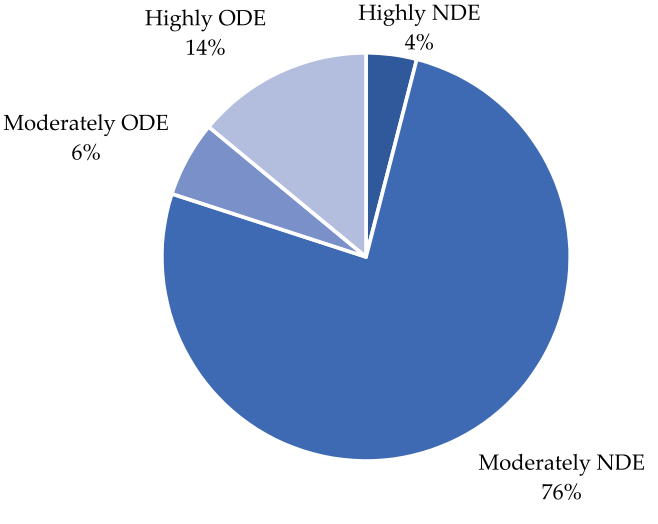

Figure 3. Position of Entrepreneurs on the N/O Continuum. *ODE is "Opportunity-driven entrepreneurship" and NDE is "Necessity-driven entrepreneurship"

Table 5. Relative Importance (% Frequency) of Business Motivations Among Agricultural Entrepreneurs.

Business motivations	ODE	NDE	All entrepreneurs
Earn money	72.39	79.87	75.46
Be independent	59.51	61.50	58.85
Develop solutions to solve challenges in the agricultural sector	36.20	27.48	28.21
Make use of the resources I have	28.83	20.77	21.61
Escape unemployment	34.36	18.53	21.00
Have prestige/Self-achievement	31.90	18.85	20.76
Satisfy the will of my parents or follow the family tradition	9.82	11.18	10.50
Unsatisfied by my job	3.68	5.27	4.76

*ODE is "Opportunity-driven entrepreneurship" and NDE is "Necessity-driven entrepreneurship."

Effect of socioeconomic characteristics, personality, and environmental factors on the positioning of agricultural entrepreneurs on the N/O continuum

The stepwise multinomial logistic regressions were performed to analyze the effect of the three abovementioned groups of factors (socioeconomic, personality, and environment) on the positioning of entrepreneurs on the N/O continuum, distinguished the four categories of entrepreneurs, and showed the factors for moving along the N/O continuum (Table 6). We only reported the effects on three pairs of outcomes, namely: Moderately NDE vs Highly NDE; Moderately ODE vs Moderately NDE; Highly ODE vs Moderately ODE. This was instrumental in assessing the shifts from a lower category to a higher one.

Table 6. Estimated Coefficients of Multinomial Logistic Regressions (Comparison Group Vs Reference Group).

	Moderately NDE vs Highly NDE		Moderately ODE vs Moderately NDE		Highly ODE vs Moderately ODE	
	Coef.	OR	Coef.	OR	Coef.	OR
Socioeconomics						
Education. Primary	−0.237	0.789	−1.021*	0.360	0.670	1.954
Education. Secondary	−1.053	0.349	−0.739	0.478	0.892	2.440
Education. University	−0.991	0.371	−1.383**	0.251	2.673***	14.483
Employment status before starting the business. Employed	−0.766*	0.465	1.369***	3.931	−1.067**	0.344
Agricultural professional training. Yes	0.125	1.133	−0.847***	0.429	0.949**	2.583
Personality						
Proactiveness	0.800***	2.226	−0.537**	0.584	0.244	1.276
Optimism	0.932***	2.540	0.529	1.697	−0.820	0.440
Risk-taking	0.269	1.309	0.847*	2.333	−0.376	0.687
Self-efficacy	−0.343	0.710	−0.500	0.607	0.423	1.527
Environment						
Ease of access to finance	−0.118	0.889	−0.845***	0.430	0.944***	2.570
Ease of access to technologies	0.274	1.315	−0.389**	0.678	0.469**	1.598
Sector. Agricultural processing	−0.091	0.913	0.189	1.208	−0.215	0.807
Sector. Services	−1.013*	0.363	−1.323	0.266	1.745*	5.726
Family entrepreneurship. Yes	0.031	1.031	0.687*	1.988	−0.740*	0.477
_cons	−3.671**	0.025	−3.247	0.039	1.662	5.270

*** $p < 0.01$, ** $p < 0.05$ and * $p < 0.10$.
Coef = Coefficient.
OR = Odds ratio.

The reference groups are "No formal education" for the variable "Education;" "Not employed" for "Employment status before starting the business;" "No" for "Agricultural professional training;" "No" for "Family entrepreneurship;" and "Primary production" for "Sector."

In terms of socioeconomic characteristics, being Highly NDE or Moderately NDE was not likely to be influenced by the level of education (Table 5). However, being Moderately NDE vs Moderately ODE categories, or being Moderately ODE vs Highly ODE categories were likely to be influenced by the level of education. In other words, ODE with a university education were more likely to exhibit a high opportunity motivation profile. Agricultural professional training showed a positive effect on opportunity entrepreneurship but not on necessity entrepreneurship. Entrepreneurs who were employed before starting their business tended to have lower levels of necessity and opportunity entrepreneurship than unemployed individuals.

Regarding the personality traits, there were significant differences among the NDE. In the multinomial regression analysis (Moderately NDE vs Highly NDE), the coefficients of "Proactiveness" and "Optimism" were 0.800 ($p < 0.01$) and 0.932 ($p < 0.01$), respectively. This suggests that the relative log odds of an entrepreneur being Moderately NDE vs. Highly NDE will increase by 0.800 if moving from the lowest level of proactiveness to the highest level and by 0.932 if moving from the lowest level of optimism to the highest level. None of the coefficients for ODE were significant, suggesting that the personality traits do not differentiate opportunity entrepreneurs; they were likely to have a similar personality.

On the environmental factors, ease of access to finance and technologies did not differentiate highly and moderately NDE, but it was likely to influence ODE. The probability of being highly opportunity-driven was larger for entrepreneurs who found it easy to access finance and technologies. Finally, the sector in which entrepreneurs start their business was found to have some bearing on the intensity of entrepreneurial motivations. Among NDE, those who were in the services sector were more likely to be highly necessity-driven. However, ODE in the services sector display higher intensity of opportunity motivations.

Discussions

The aim of this research was, on the one hand, to determine the intensity of start-up motivations in agricultural entrepreneurship along the N/O continuum; and analyze the influence of socioeconomic characteristics, personality, and environmental factors on the positioning of agricultural entrepreneurs on the N/O continuum, on the other.

High prevalence of necessity entrepreneurship

The findings reveal that 76% of agricultural entrepreneurs in Benin are moderately necessity-driven meaning that they did not start their agricultural venture because they had identified a business opportunity but, at the same time, showcased some opportunity-based motivations such as earning money and being independent. Only 6% are moderately opportunity-driven, having identified a business opportunity but also

Table 7. Profiles of Agricultural Entrepreneurs on the N/O Continuum.

Highly NDE	Moderately NDE	Moderately ODE	Highly ODE
Personal factors			
• Any level of education • Employed before starting the business • Low levels of proactiveness and optimism	• Any level of education • Unemployed before starting the business • High levels of proactiveness and optimism	• Below university education • Have an agricultural professional training before starting the business • Employed before starting the business	• University education • Have an agricultural professional training before starting the business • Unemployed before starting the business
Environmental factors			
• In the services sector • Found it difficult to access technologies	• In the primary or processing sector • Found it easy to access technologies	• In the primary or processing sector • Found it difficult to access finance and technologies	• In the services sector • Found it easy to access finance and technologies

exhibiting necessity-based motivations. On the two extremes, there are more highly opportunity-driven (14%) entrepreneurs than highly necessity-driven (4%). This mix of motivations corroborates the findings of Adom (2014) and Giacomin et al. (2011), who reported that entrepreneurs are more often driven by both necessity and opportunity motivations. This study's main theoretical contribution is advancing the push-pull theory, demonstrating the dichotomous approach for categorizing entrepreneurial motivation can be misleading. It shows agricultural entrepreneurs have varying intensities of necessity and opportunity motivations, forming a continuum. This can serve to reexamine the motivation variable in entrepreneurship studies, such as the GEM.

Influence of key socioeconomic factors, personality, and environmental factors and implications for policy and practice

The study also showed that the intensity of necessity and opportunity motivations in entrepreneurship is determined by socioeconomic factors, personality, and environmental factors. To synthesize the findings, Table 7 displays the most prevalent characteristics for each group.

Like Bergmann and Sternberg (2007), the level of education does impact the positioning of entrepreneurs on the N/O continuum but only for opportunity entrepreneurs with university education level. This suggests that individuals, including university graduates, can be driven by high necessity. For youth, education has no influence on either necessity or opportunity entrepreneurship intensity. Policymakers should be aware that promoting entrepreneurship among university graduates may also result in necessity entrepreneurship. In conclusion, policymakers should investigate motivations of highly educated agricultural entrepreneurs to provide tailored support, assisting their transition from necessity to opportunity entrepreneurship, as starting a business, even out of necessity, is preferable to unemployment.

Our analysis shows that agricultural professional training doesn't impact the intensity of necessity entrepreneurship but does lead to higher opportunity entrepreneurship intensity. This suggests that enhancing entrepreneurs' knowledge in the agricultural

field can improve the outcomes of opportunity entrepreneurship. In other words, effective agricultural training can increase the likelihood of graduates engaging in opportunity entrepreneurship. This highlights the need for greater investment in agricultural training institutions to deliver highly qualified graduates capable of seizing opportunities within the sector.

The findings of the study have shown that regardless of the motivations, all entrepreneurs display high levels of all personality traits (Figure 2). This is an indication of the fundamental nature of entrepreneurs, who are people who have common traits such as risk-taking, optimism, and proactiveness, among others. In general, regarding the nature of their motivations, entrepreneurs with a great personality are more opportunity-driven (Block et al., 2015; van der Zwan et al., 2016). Our study specifically found that proactive and optimistic entrepreneurs are more likely to display lower intensity of necessity entrepreneurship.

On environmental factors, findings showed that individuals who found it difficult to access technologies are more likely to have either moderate necessity motivations or high opportunity motivations. Indeed technology can hold business opportunities (Corsino et al., 2019), and our study found that it can be a differentiating factor for entrepreneurs' motivation. The capacity to access finance influences opportunity entrepreneurship but not necessity entrepreneurship. Enhancing access to agricultural technologies and finance could encourage opportunity entrepreneurship. Policy options include start-up grants, low-cost credit with financial training, and supporting universities, laboratories, and innovation centers in developing and disseminating accessible technologies for agricultural entrepreneurs.

Moving from necessity to opportunity entrepreneurship

Policymakers should know that necessity motivations drive most agricultural entrepreneurs in Benin. Therefore, they should proactively devise strategies and programs that are relevant for this kind of entrepreneurship and ultimately move them toward opportunity entrepreneurship. In practice, the starting point would be for every program of agricultural entrepreneurship to seek to position entrepreneurs on the N/O continuum. This study has provided a practical framework to do so by analyzing the profiles of agricultural entrepreneurs. It also reveals the critical factors on which to intervene to move from highly necessity-driven entrepreneurship to highly opportunity-driven entrepreneurship. An essential element is to increase awareness of necessity entrepreneurs about the opportunities in agricultural value chains. By doing so, the ratio of opportunity entrepreneurs would increase.

Limitations of the study and avenues for future research

This study has some limitations, which present opportunities for future research. Firstly, focusing on a single country doesn't allow for cross-country heterogeneity. Future research could implement the methodology in a regional, cross-country setting, enabling the integration of independent environmental factor measures, such as agricultural innovation levels and financing for agricultural enterprises. Secondly, the self-reporting measure of motivations, although widely used, may not accurately capture entrepreneurs'

true motivations. Future research could explore alternative measurement methods or weigh different motivations to create a more nuanced understanding of the necessity-opportunity continuum. Lastly, future studies could investigate the transition from necessity to opportunity entrepreneurship among agricultural entrepreneurs. Given that most agricultural entrepreneurs are driven by necessity, understanding how they can transition to opportunity entrepreneurship could help enhance the socio-economic impact of their ventures.

Conclusion

This study aimed to investigate the intensity of necessity and opportunity motivations among agricultural entrepreneurs and their influencing factors. Consequently, the study reported a survey of 819 agricultural entrepreneurs and found that most of them are driven by necessity motivations hence developing necessity entrepreneurship that is known to have limited contribution to economic development. Different factors explain the positioning of entrepreneurs on the necessity-opportunity continuum. In sum, this study expands the push-pull theory and subsequent dichotomic view of entrepreneurship motivations by providing a richer and more dynamic perspective. If policymakers and practitioners could proactively recognize that agricultural entrepreneurs are on a continuum of motivations that could influence their future performance and contribution to the economy and society, and devise strategies, policies, and programs accordingly, this study would have achieved its broader objective.

Acknowledgment

This work was supported by the International Fund for Agricultural Development (IFAD) under the grant 2,000,001,374 for the International Institute of Tropical Agriculture (IITA) for the project "Enhancing Capacity to Apply Research Evidence (CARE) in Policy for Youth Engagement in Agribusiness and Rural Economic Activities in Africa;" and the International Foundation for Science (IFS) under the grant agreement NO. I-3-S-6473-1. We sincerely thank Dr Victor Manyong, Dr Tahirou Abdoulaye and Dr Bamba Zoumana for providing scientific guidance to this research.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the International Foundation for Science [I-3-S-6473-1]; International Fund for Agricultural Development [2000001374]

ORCID

Frejus S. Thoto http://orcid.org/0000-0001-7224-159X

References

Abdallah, G. K., Masurel, E., Naudé, W. A., & Eijdenberg, E. L. (2020). Unboxing entrepreneurial motivations in Tanzania: Business-related and personal-related factors. *Journal of African Business*, *23*(1), 1–19. https://doi.org/10.1080/15228916.2020.1785236

Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations: Technology, Governance, Globalization*, *1*(1), 97–107. https://doi.org/10.1162/itgg.2006.1.1.97

Acs, Z. J., Desai, S., & Hessels, J. (2008). Entrepreneurship, economic development and institutions. *Small Business Economics*, *31*(3), 219–234. https://doi.org/10.1007/s11187-008-9135-9

Adom, K. (2014). Beyond the marginalization thesis: An examination of the motivations of informal entrepreneurs in sub-Saharan Africa: Insights from Ghana. *The International Journal of Entrepreneurship and Innovation*, *15*(2), 113–125. https://doi.org/10.5367/ijei.2014.0144

Afutu-Kotey, R. L., Gough, K. V., & Owusu, G. (2017). Young entrepreneurs in the mobile telephony sector in Ghana: From necessities to aspirations. *Journal of African Business*, *18*(4), 476–491. https://doi.org/10.1080/15228916.2017.1339252

AIG-Benin. (2020). Mission conjointe de suivi des projets Benibiz et Prociva : La Coopération suisse et les institutions partenaires au contact des bénéficiaires. Retrieved September 18, 2021, from https://aigbenin.com/2020/10/07/mission-conjointe-de-suivi-des-projets-benibiz-et-prociva-la-cooperation-suisse-et-les-institutions-partenaires-au-contact-des-beneficiaires/

Anderson, A. R. (2015). *The economic reification of entrepreneurship: Re-engaging with the social Rethinking Entrepreneurship*. Routledge.

Bergmann, H., & Sternberg, R. (2007). The changing face of entrepreneurship in Germany. *Small Business Economics*, *28*(2–3), 205–221. https://doi.org/10.1007/s11187-006-9016-z

Bhola, R., Verheul, I., Thurik, R., & Grilo, I. (2006). Explaining engagement levels of opportunity and necessity entrepreneurs.

Block, J. H., Kohn, K., Miller, D., & Ullrich, K. (2015). Necessity entrepreneurship and competitive strategy. *Small Business Economics*, *44*(1), 37–54. https://doi.org/10.1007/s11187-014-9589-x

Bosma, N., Acs, Z. J., Autio, E., Coduras, A., & Levie, J. (2008). Global entrepreneurship monitor executive report. *Babson Park*.

Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, *18*(1), 13–39. https://doi.org/10.1016/S0883-9026(02)00078-2

Corsino, M., Giuri, P., & Torrisi, S. (2019). Technology spin-offs: Teamwork, autonomy, and the exploitation of business opportunities. *The Journal of Technology Transfer*, *44*(5), 1603–1637. https://doi.org/10.1007/s10961-018-9669-1

Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A re-conceptualization. *Journal of Business Venturing*, *30*(5), 674–695. https://doi.org/10.1016/j.jbusvent.2015.01.002

Eijdenberg, E. L., Isaga, N. M., Paas, L. J., & Masurel, E. (2021). Fluid entrepreneurial motivations in Tanzania. *Journal of African Business*, *22*(2), 171–189. https://doi.org/10.1080/15228916.2019.1695191

Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the agricultural sector: A literature review and future research opportunities. *Entrepreneurship Theory & Practice*, *42*(1), 129–166. https://doi.org/10.1177/1042258717732958

Fossen, F. M., & Büttner, T. J. (2013). The returns to education for opportunity entrepreneurs, necessity entrepreneurs, and paid employees. *Economics of Education Review*, *37*, 66–84. https://doi.org/10.1016/j.econedurev.2013.08.005

Giacomin, O., Janssen, F., Guyot, J. -L., & Lohest, O. (2011). Opportunity and/or necessity entrepreneurship? The impact of the socio-economic characteristics of entrepreneurs.

Hessels, J., Van Gelderen, M., & Thurik, R. (2008). Entrepreneurial aspirations, motivations, and their drivers. *Small Business Economics*, *31*(3), 323–339. https://doi.org/10.1007/s11187-008-9134-x

ILO. (2020). *ILOSTAT database*.
Landström, H., & Lohrke, F. (2010). *Historical foundations of entrepreneurial research*. Edward Elgar Publishing.
Mason, C. M. (1989). Explaining recent trends in new firm formation in the UK: Some evidence from South Hampshire. *Regional Studies*, *23*(4), 331–346. https://doi.org/10.1080/00343408912331345532
Muzata, S. (2022). Motivations for entrepreneurship: New evidence from tertiary-level educated sub-saharan African Women. *Journal of African Business*, 1–31. https://doi.org/10.1080/15228916.2022.2069434
North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge university press.
PNUD. (2021). Le Bénin forme les jeunes à l'entreprenariat agricole. Retrieved September 18, 2021, from https://www1.undp.org/content/undp/fr/home/ourwork/ourstories/le_benin_forme_lesjeunesalentreprenariatagricole.html
Puente, R., González Espitia, C. G., & Cervilla, M. A. (2019). Necessity entrepreneurship in Latin America: It´ s not that simple. *Entrepreneurship & Regional Development*, *31*(9–10), 953–983. https://doi.org/10.1080/08985626.2019.1650294
Reynolds, P. D., Bygrave, W. D., Autio, E., Cox, L. W., & Hay, M. (2002). Global entrepreneurship monitor executive report 2002. *Kauffman Center for Entrepreneurial Leadership at the Ewing Marion Kauffman Foundation*,
Richards, I. (2020). How the UN helped Benin become the world's fastest place to start a business on a mobile phone. from https://unctad.org/news/how-un-helped-benin-become-worlds-fastest-place-start-business-mobile-phone
Rocha, V., Carneiro, A., & Varum, C. A. (2015). Entry and exit dynamics of nascent business owners. *Small Business Economics*, *45*(1), 63–84. https://doi.org/10.1007/s11187-015-9641-5
Rosa, P., Kodithuwakku, S. S., & Balunywa, W. (2008). Entrepreneurial motivation in developing countries: what does' necessity'and'Opportunity'Entrepreneurship really mean? *Social Science Research Network Electronic Journal*. https://doi.org/10.2139/ssrn.1310913
Scheinberg, S., & MacMillan, I. C. (1988). *An 11 country study of motivations to start a business*. Babson College.
Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. *Encyclopedia of Entrepreneurship*, 72–90.
Simón-Moya, V., Revuelto-Taboada, L., & Ribeiro-Soriano, D. (2016). Influence of economic crisis on new SME survival: Reality or fiction? *Entrepreneurship & Regional Development*, *28*(1–2), 157–176. https://doi.org/10.1080/08985626.2015.1118560
Stephan, U., Hart, M., Mickiewicz, T., & Drews, C. -C. (2015). Understanding motivations for entrepreneurship, bis research paper, 212. *Pobrano z*:https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408432/bis-15-132-understanding-motivations-for-entrepreneurship.pdf19.12.2015 .
Tolbert, P. S., David, R. J., & Sine, W. D. (2011). Studying choice and change: The intersection of institutional theory and entrepreneurship research. *Organization Science*, *22*(5), 1332–1344. https://doi.org/10.1287/orsc.1100.0601
Tyszka, T., Cieślik, J., Domurat, A., & Macko, A. (2011). Motivation, self-efficacy, and risk attitudes among entrepreneurs during transition to a market economy. *The Journal of Socio-Economics*, *40*(2), 124–131. https://doi.org/10.1016/j.socec.2011.01.011
van der Zwan, P., Thurik, R., Verheul, I., & Hessels, J. (2016). Factors influencing the entrepreneurial engagement of opportunity and necessity entrepreneurs. *Eurasian Business Review*, *6*(3), 273–295. https://doi.org/10.1007/s40821-016-0065-1
Vivarelli, M. (2013). Is entrepreneurship necessarily good? Microeconomic evidence from developed and developing countries. *Industrial and Corporate Change*, *22*(6), 1453–1495. https://doi.org/10.1093/icc/dtt005
Wang, Q., Koval, J. J., Mills, C. A., & Lee, K. -I.D. (2007). Determination of the selection statistics and best significance level in backward stepwise logistic regression. *Communications in*

Statistics-Simulation and Computation, *37*(1), 62–72. https://doi.org/10.1080/03610910701723625

Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship Theory & Practice*, *35*(1), 165–184. https://doi.org/10.1111/j.1540-6520.2010.00427.x

WFP. (2019). Logistics Capacity Assessments (LCAs). Retrieved July 7, 2020, from https://dlca.logcluster.org/display/public/DLCA/LCA+Homepage

Williams, N., & Williams, C. C. (2012). Evaluating the socio-spatial contingency of entrepreneurial motivations: A case study of English deprived urban neighbourhoods. *Entrepreneurship & Regional Development*, *24*(7–8), 661–684. https://doi.org/10.1080/08985626.2012.710259

Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*, *24*(3), 335–350. https://doi.org/10.1007/s11187-005-2000-1

World Bank. (2021). *World development indicators.*

Yami, M., Feleke, S., Abdoulaye, T., Alene, A. D., Bamba, Z., & Manyong, V. (2019). African rural youth engagement in agribusiness: Achievements, limitations, and lessons. *Sustainability*, *11*(1), 185. https://doi.org/10.3390/su11010185