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Working Paper 238

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ISSN 1864-6638 Bonn, December 2024

PARI

ZEF Working Paper Series, ISSN 1864-6638
Center for Development Research, University of Bonn

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Opportunity or necessity?

Youth agripreneurs in Benin, Ethiopia and Senegal

Zaneta Kubik, Tigabu Degu Getahun, Patrice Ygué Adegbola, Assane Beye and Ahmadou Aly Mbaye

Abstract

This report provides a descriptive analysis of youth entrepreneurs in agribusiness in Sub-Saharan Africa. Based on primary data collected in Benin, Ethiopia and Senegal, it offers insights into the socio-demographic background of the youth entrepreneurs as well as a detailed account of the business units they run. The analysis shows a diversity of business activities across the entire food value chain, but with a strong concentration in farming, followed by processing and retail. Pluri-activity, which typically escapes standard sectoral classifications, is very present across the sample and an important share of agripreneurs are involved in a mix of activities, combining farming with processing or retail, and parallel commercialization of food products with and without transformation.

The businesses are micro to small in size, with on average three paid employees, excluding the owner, but nevertheless offer a non-negligible employment creation potential at the aggregate level. In total, the 634 sampled agripreneurs create more than 2,500 jobs. Despite their small scale, these businesses report a robust turnover with, however, wide variation, especially at the higher end of the distribution. On the other hand, due to the cross-sectional nature of the data, it is impossible to assess the growth potential of these businesses. However, considering the (mainly financial) constraints that the owners report both at the start-up as well as for already existing businesses, it appears that youth entrepreneurs struggle to overcome initial challenges.

Roughly half of the agripreneurs are opportunity-driven, meaning that they voluntarily choose to start a business as a response to perceived business opportunities. This result suggests that, contrary to popular perceptions, agribusiness continues to play an important role in youth aspirations. The start-up motivations are likely to influence the performance of the businesses. Opportunity-driven agripreneurs score better on a number of indicators, including turnover, job creation, innovation adoption, and self-reported overall business performance. This may have important policy implications, in that opportunity-driven agripreneurs would require different policy support than necessity-driven agripreneurs.

Keywords: youth, agripreneur, agriculture, employment, aspirations, business, Africa

JEL codes: M20, O13, O15, O17, O31

Acknowledgments

We would like to thank Joachim von Braun and Heike Baumüller for their valuable comments on the draft version of this report.

This study was developed in the context of the Program of Accompanying Research for Agricultural Innovation (PARI), supported by the Federal German Ministry for Economic Cooperation and Development (BMZ).

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1 Introduction

The past two decades have seen an increased policy interest in youth employment in Sub-Saharan Africa (SSA) (ILO, 2020). Much of the attention has been dedicated to entrepreneurship as a way to empower youth and harness their potential. In SSA, where formal jobs remain scarce and mainly concentrated in urban areas, it has been argued that rather than queuing for wage jobs, youth may be better off by creating their jobs (Filmer & Fox, 2014; Fox and Thomas, 2016; AU & ILO, 2024). First, self-employment and entrepreneurship are seen as an attractive way to accommodate the rapidly growing working-age population (ILO, 2020). Second, beyond its potential to absorb labour, entrepreneurship is expected to be a driving force of structural transformation, innovation and technological externalities (Gries & Naudé, 2010; Hausmann & Rodrik, 2003).

So far, the literature on entrepreneurship in SSA has mostly focused on rural non-farm employment (RNFE), typically as a way of diversification out of agriculture. Instead, this report offers a comprehensive overview of youth entrepreneurship in the food and agriculture sector, including both on-farm and off-farm activities that are related to food production, processing, marketing, retail or logistics. The food and agriculture sector has increasingly been recognized as a catalyst for development and poverty reduction in SSA (Allen et al., 2016; Townsend et al., 2017; Kubik et al., 2022). Over the past decades, food and agriculture sector has been undergoing a profound transformation, moving away from subsistence-oriented activities to higher levels of processing, value addition and commercialization, with a growing role of the food midstream activities (Reardon et al., 2009; Reardon, 2015; Reardon, Liverpool-Tasie & Minten, 20121).

Because of its labour-intensive nature and extensive forward and backward linkages (IFAD, 2021; Kubik et al., 2022; Kapstein, Kim & Eggelink, 2012), investment and growth in the food and agriculture sector have important multiplier effects, generating demand for agricultural products and associated inputs and services and shaping employment patterns along the value chain. The employment creation potential of the food and agriculture sector may be especially critical – but not limited to – in rural areas of SSA, where the majority of jobs and livelihoods are linked to the food economy (Dolislager et al., 2021) and where many small-scale processing activities take place (IFAD, 2021). In particular, the food system transformation, a consequence of growing food demand and shift of production from staple foods to high-value fresh, processed and convenience foods (WB, 2013) is expected to open up a variety of opportunities for youth willing to venture into entrepreneurship.

Whether entrepreneurship is likely to generate employment in SSA and other low- and middle-income regions remains an open question. The literature (and policy alike) has provided contrasting perspectives on the role that entrepreneurs and self-employed play in the economy, especially in the context of informal activities that constitute a major part of the businesses and employment in most of Africa, Asia and Latin America. In SSA, eight out of ten workers are in informal employment, close to 95% of them as own-account workers (Kiaga & Leung, 2020). Only in urban areas, the share is lower, with between 56% to 65% of the workforce in the informal sector, and around half of them working as self-employed (Cunningham et al., 2024). Often, informality and own account work are associated with precariousness and high levels of poverty (Cho, Robalino & Watson, 2016; ILO, 2018).

Tokman (2007) suggests that own account work is a survival strategy in the context where good jobs are scarce as a result of pressure from the labour surplus. By engaging in low-productivity and low-income activities, marginalized workers are biding time until wage-work opportunities arise. This is in line with Todaro's (1969) or Fields' (1975) models of the informal sector as a way-station for those queuing for better jobs. Merfeld (2019) shows that in the case of India, the public works program significantly decreases time spent in non-farm self-employment, with an implied labour elasticity that is three times higher than the economy-wide estimates, suggesting that rural non-farm self-employment is primarily a sector of last resort.

De Soto (1989), in contrast, supports the notion that own-account workers operate informally and at a small scale only because of the constraints they face which prohibit them from running larger formal

enterprises. Essentially, these are institutional deficiencies, including lack of property rights, that suppress productive entrepreneurship (Andersson & Waldenström, 2017). Bennett and Estrin (2007) model informal entrepreneurship as a stepping stone to formality. This is because operating informally enables entrepreneurs to learn about the profitability of their business without large sunk costs. In case of Latin America, Maloney (2004) shows that the informal sector is primarily an unregulated microentrepreneurial sector and not a disadvantaged residual of segmented labour markets.

The literature has accommodated both approaches to self-employment and the informal sector by acknowledging its heterogeneity (Teal, 2016; Fox & Sohnesen, 2012). Compared to the earlier literature which emphasized the informal sector's internal dualism and the two-tier distribution of jobs (Fields, 2009), recent literature has documented a more nuanced picture, with an important share of firms in the middle of the distribution, with high growth potential but too low capital assets to jump into the upper tier (Grimm, Knorringa & Lay, 2012). Falco et al. (2011) show that size of the enterprise matters for the economic outcomes, including earnings. Although very often, informal enterprises are operated at such small scale that they turn out inefficient and become a poverty trap (Banerjee & Duflo, 2007), larger enterprises, especially the ones with employees, offer earnings comparable or even higher than (some forms of) wage employment (Teal, 2016; Kerr & Teal, 2015).

The literature has also investigated the extent to which financial and capital constraints prohibit potential entrepreneurs from entry into the market, or existing micro-enterprises from moving up the ladder. Theoretical models of capital market imperfections and non-convex production technologies, such as Banerjee and Newman (1993), Aghion and Bolton (1997) or Lloyd-Ellis and Bernhardt (2000) show that because of indivisible start-up costs, entrepreneurs at the low levels of wealth are unable to finance profitable ventures. Theoretically, this has several implications, including insufficient entry of new firms, inefficient production as some of the talented entrepreneurs cannot enter the market, and low incentives for the poor to save as non-convexities result in low returns to low levels of invested capital (McKenzie and Woodruff, 2006).

The empirical evidence is inconclusive. Some studies find high rates of return to invested capital (Bigsten et al., 2000; Hernández et al., 2005). McKenzie and Woodruff (2006) suggest that entrepreneurs at the lowest wealth levels receive the highest returns, and that variation in earnings increases while the return to capital decreases with the level of invested capital. These results imply that the high returns do not necessarily reflect compensation for increased risk. On the other hand, De Mel, McKenzie and Woodruff (2008) show that up to three-quarters of self-employed workers in Sri Lanka have the characteristics of wage workers and are unlikely to become employers. Also, there seems to be evidence of a certain threshold level that must be overcome along the firm's growth path (McKenzie & Woodruff, 2006; Levy, 1993; Banerjee, 2003). For instance, McKenzie and Woodruff (2006) find trace of non-convexities in the US$1,000 – US$2,000 range of invested capital.

Studies focusing on employment growth are not conclusive either. Some find higher employment growth for small firms (Liedholm & Mead, 1999; Biggs & Srivastava, 1996), while others find the opposite effect (van Biesebrieck, 2005), again pointing to the possibility of a threshold effect.

Finally, a related strand of literature looks at entrepreneurship and business creation from the perspective of motivation, distinguishing between opportunity and necessity entrepreneurs. Opportunity entrepreneurs are defined as those who start a business to take advantage of a business opportunity while necessity entrepreneurs do so because of the lack of other options in the labor market (GEM, 2020). Alternatively, Fairlie and Fossen (2019) propose a definition based on the entrepreneur's prior work status, i.e. previous unemployment, and show that opportunity entrepreneurship is generally pro-cyclical and necessity entrepreneurship is strongly counter-cyclical. The existing evidence in this regard is available mostly for high-income countries (see, for instance, Bosma (2013) for an overview). The withdata available for the few SSA countries in the Global Entrepreneurship Monitor (GEM) points to a prevalence of necessity motives, even though the relative shares vary significantly by country (GEM, 2020). In the case of Mexico, Calderon, Iacovone and Juarez (2016) show that there are clear differences between the opportunity and necessity (female) micro-

entrepreneurs. The former group reports better performance, management practices as well as higher skills, however, unobservable factors are likely to be driving both the decision to become an entrepreneur and business performance.

While the literature on entrepreneurship in low and middle-income countries has typically focused on non-farm activities, hence excluding farming and food businesses, in the case of SSA and especially, its youth population, it seems particularly relevant to discuss the role of entrepreneurship in the food and agriculture sector. Youth represent half of the agricultural workforce in many developing countries, and more than half of the workers are engaged in other activities in the agrifood sector (FAO, 2021). Contrary to popular perceptions (Bezu & Holden, 2014; Maiga et al., 2015; Kosec et al., 2017), an important share of rural youth, 25%, aspires to work in the food and agriculture sector (Kubik, 2022). These aspirations are, however, conditional on factors such as the availability of land and inputs, commercialization of agricultural activities or combination of agriculture with other income-generating activities (White, 2020). Essentially, LaRue et al. (2021) point out that youth job aspirations should be considered in the framework of pluri-activity and complex livelihoods rather than a dichotomic choice between farm and non-farm employment.

This report offers a comprehensive overview of youth agripreneurs and their businesses, based on the evidence from three countries, i.e., Benin, Ethiopia and Senegal. This report focuses on youth entrepreneurs in agribusiness, henceforth referred to as *agripreneurs*, based on the evidence from three countries, i.e., Benin, Ethiopia and Senegal. It provides an insight into who those entrepreneurs are, what kind of businesses they run, and what motivations they have. The report shows a diversity of cases, and particularly, a dichotomy between opportunity - vs. necessity-driven youth agripreneurs, with potential implications for the success of their business ventures. Intentionally, the definition of both entrepreneur and agribusiness adopted in this report is comprehensive and includes any individual running a business related to agriculture and food production, as long as the activities are commercially oriented. It covers urban and rural, formal and informal ventures.

The report proceeds as follows. Section 2 explains data and methods, section 3 presents socio-demographic characteristics of agripreneurs, and section 4 skills and education. The remaining sections focus on the economic activities of the youth (section 5), the characteristics of their principal agribusinesses (section 6), challenges and constraints (section 7) and relevant policy interventions (section 8). Finally, section 9 looks at perceptions and aspirations. The last section concludes.

2 Data and methods

The analysis draws on primary data collected in three countries, i.e., Benin, Ethiopia and Senegal, between January and April 2021. The data covers a sample of 634 youth agripreneurs. Youth is defined as individuals aged between 15 and 35; and agripreneurs as individuals fulfilling any of the following conditions: (i) working on their own plot, farm or food garden and growing farm produce for sale of looking after animals intended for sale; (ii) running any kind of business in food processing, marketing, logistic or distribution; (iii) catching fish, crabs, wild animals or other food for sale. Therefore, entrepreneurship in the food and agriculture sector, as defined in this paper, includes both on- and off-farm business activities, as long as these activities are commercially oriented. In the remainder of the paper, these activities are referred to as *agribusiness*.

The choice of keeping the definition of agripreneurship comprehensive is motivated by several factors. First, primary agriculture is a key component of the food systems in the three countries in terms of production and employment; hence, leaving it out would bias the insights about agripreneurs and their businesses. Second, agriculture is increasingly seen by the African youth as a business venture rather than a subsistence activity (Kubik, 2022). Third, there is an expectation that youth are often engaged in a diverse portfolio of activities within the food and agriculture sector which, to the extent that they are interlinked, would be difficult to analyze as separate entities.

Both formal and informal businesses were targeted. As a result, the principal challenge was to identify an adequate sampling frame that would include both types of enterprises – it is well known that informal firms are usually missing from official sources, while at the same time, they constitute a majority of firms in many countries (Aga et al., 2023). Existing sampling methodologies, i.e., household-based surveys, have important disadvantages in that they are not designed to measure informal businesses directly; while more comprehensive methods, i.e., mixed surveys (ADB, 2011; Grimm, Knorringa & Lay, 2012) were not feasible in the context of this research. Instead, a three-stage sampling method was implemented to select the sample of agripreneurs.

First, in each country, study regions were purposively selected based on the following criteria: population of youth and shares of employment in activities of interest. This information was obtained from the following sources: for Benin, the 2015 EmiCov modular integrated household living conditions survey of the National Institute of Statistics and Economic Analysis (INSAE); for Ethiopia, administrative data from the Women, Youth and Children Office as well as the Ministry of Agriculture and Natural Resources – this included the local level database of entrepreneurs in the agribusiness sector; for Senegal, the 2016 general business census (Recensement général des entreprises) of the National Agency of Statistics ad Demography (ANSD). In the second stage, lower-level administrative units were selected by means of proportional sampling. In the third stage, in each locality, entrepreneurs were randomly selected. In this way, our strategy has some similarities with the adaptive cluster sampling – albeit without the objective of providing estimates of the total number of informal firms in each administrative unit (Aga et al., 2023). Because of its cross-sectional character, the data does not provide any information related to firm entry and exit.

The questionnaire was designed to elicit information on a wide range of topics concerning the entrepreneurs and the business units they run. Regarding the former, apart from the standard demographic characteristics, data was collected on entrepreneurs' family background, broader social capital, education and skills, with a focus on skills relative to agribusiness, as well as a full range of economic activities. Regarding the latter, data was collected on the portfolio of activities, including (i) farming, (ii) fishery, (iii) forestry, (iv) food processing, (v) food marketing and export, (vi) cold storage and logistics, (vii) wholesale, (viii) retail, (ix) restauration, or the mix of thereof; as well as a set of other variables relative to the business performance, i.e., capital stock, costs, sales, employment, innovation; variables relative to managerial practices, i.e. business registration, bookkeeping practices, production plans, use of financial services, mechanization, ICT, etc. All the monetary values were originally measured in the local currency, and later converted into int. $ PPP. Capital stock includes land and land

development, buildings and other constructions, machinery and equipment, livestock, and others. Costs and sales were recorded separately for on- and off-farm businesses and included costs, wages and salaries, raw materials and other inputs, purchase cost of products sold without a transformation, operating expenses, taxes, insurance, interests, and other; for sales, any products (with and without transformation) and services listed by the respondents and adapted to the country context. Finally, the data contains a set of variables relative to perceptions and aspirations.

3 Results

3.1 Agripreneurs: socio-demographic characteristics

The sample of agripreneurs contains 634 individuals, out of which 269 in Benin, 199 in Ethiopia, and 166 in Senegal (Table 1). Around one third of them are females; the share is higher in Ethiopia, close to 40%. Three-quarters are in rural areas, even though the distribution varies widely between the countries. By default, the age of individuals in the sample ranges from 15 to 35 but is heavily skewed toward older age categories. Between 60% and 80% are above 25, and almost half are above 30. This is particularly the case of Benin, while in Ethiopia and, to some extent, Senegal, the samples are more evenly distributed across age categories. 36% of agripreneurs have migrated from other locations, and in the case of Benin, this share is even greater at 43%. These numbers are relatively high relative to the averages observed in total population of respective countries (FAO, 2017). A large majority of them, 70%, migrated from a rural area –irrespective of whether the current location is rural or urban. In most cases, this was economic migration: either for work (42%), land and farming (16%) or education and training (11%). The relatively high share of migrants among agripreneurs points in the direction of the concept of migrant entrepreneur[1] (Naudé, Siegel & Marchand, 2017).

Table 1 Agripreneurs: socio-demographic characteristics

Variable		Total sample		Benin		Ethiopia		Senegal	
		Freq.	Share (Mean)	Freq.	Share (Mean)	Freq.	Share (Mean)	Freq.	Share (Mean)
Female		203	32.02	70	26.02	77	38.69	56	33.73
Male		431	67.98	199	73.98	122	61.31	110	66.27
Urban		155	24.45	59	21.93	16	8.04	80	48.19
Rural		479	75.55	210	78.07	183	91.96	86	51.81
Age	15-20	19	3.00	4	1.49	5	2.51	10	6.02
	21-25	123	19.40	24	8.92	62	31.16	37	22.29
	26-30	147	23.19	59	21.93	54	27.14	34	20.48
	31-35	295	46.53	160	59.48	62	31.16	73	43.98
Household head		303	47.79	150	55.76	108	54.27	45	27.11
Married		430	67.82	198	73.61	118	59.30	114	68.67
Migrant		231	36.44	117	43.49	57	28.64	57	34.34
Households size			7.20		6.41		4.39		11.85
Dependency ratio			2.17		2.04		1.89		2.7
Wealth	Poor	93	14.67	28	10.41	56	28.14	9	5.42
	Average	339	53.47	164	60.97	80	40.20	95	57.23
	Well-off	202	31.86	77	28.62	63	31.66	62	37.35
Father literate		241	38.01	101	37.55	83	41.71	57	34.34
Mother literate		110	17.35	60	22.30	33	16.58	17	10.24
No. of obs.		634		269		199		166	

Close to half of the agripreneurs are household heads, and around 60% - 70% are married. The household structure in the sample reflects that observed in census-based studies (Kramer, 2020), with seven members on average. In Senegal, households tend to be much bigger, but again, this is in line with census-based data (ibidem). On the other hand, the dependency ratio, with two dependents per

[1] Note that most of the literature on relationship between migration and entrepreneurship focuses on international migration.

economically active individual, is twice as high as the average observed in SSA (Garenne, 2023)[2]. Only in Senegal, the dependency ratio observed in the sample of agripreneurs corresponds to that observed in rural areas and urban areas excluding Dakar (2.6 and 2.5 respectively) in the latest Harmonized Survey of Household Living Conditions (EHCVM, 2021). This might suggest that demographic and financial pressure to support the needs of family members is a push factor for running the business, along with personal objectives. Close to 70% of individuals in the sample have at least one child, with an average of three. Based on self-reported measures, youth agripreneurs come from a relatively well-to-do background, relative to the village average, with more than a half coming from average, and around a third from richer families. Less than 15% of agripreneurs consider themselves poor; this share is much lower in Benin and Senegal, at 10% and 5%, but higher in Ethiopia, at 28%. This could indicate that for the sampled agripreneurs, running a business is less likely to be purely a survival strategy, as observed in the case of many (mainly informal) businesses in SSA (Grimm, Knorringa & Lay, 2012), but instead, a business venture motivated by existing opportunities (Amin, 2009).

3.2 Skills and education in agribusiness

Figure 1 and Table 2 below present a set of variables relative to education and skills among the sample of youth agripreneurs. Distinct differences between the three countries can be observed. Overall, 23% of the individuals have no formal education, but this share ranges from 5.5% in Ethiopia to a striking 50% in Senegal. It has to be pointed out that in the case of Senegal, Koranic schools, which were not included in the measure of formal schooling in this report, play an important role especially in rural areas (André & Demonsant, 2014; Goensch, 2015) and the evidence shows several success stories of entrepreneurs with a background in Koranic education (Oya, 2007). Agripreneurs in Benin and Ethiopia exhibit relatively high levels of educational attainment, with more than 60% having at least secondary education. In Ethiopia, 17% have a university degree (in most cases, undergraduate level), and 14% completed vocational training. This is in contrast with Senegal, where these numbers are much lower: only 26% of agripreneurs completed secondary or higher-level education, 6% hold a university degree, and barely 2% completed vocational training.

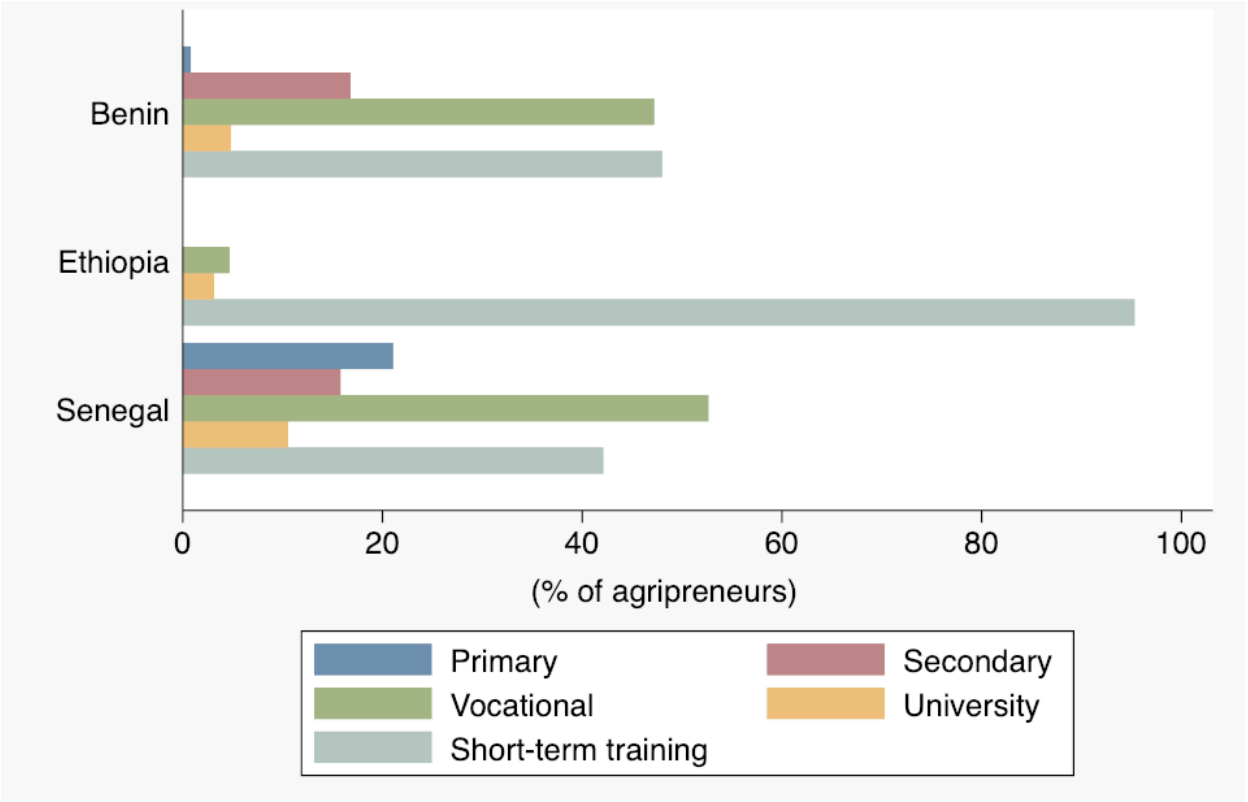
Table 2 Skills and education in agribusiness

Variable	Total sample		Benin		Ethiopia		Senegal	
	Freq.	Share	Freq.	Share	Freq.	Share	Freq.	Share
Schooling								
Never studied	145	22.87	51	18.96	11	5.53	83	50.00
Stopped/ completed education	459	72.40	208	77.32	176	88.44	75	45.18
Currently studying	30	4.73	10	3.72	12	6.03	8	4.82
Formal education								
No formal education	145	22.87	51	18.96	11	5.53	83	50.00
Primary (incomplete)	76	11.99	20	7.43	34	17.09	22	13.25
Primary (complete)	79	12.46	39	14.50	23	11.56	17	10.24
Secondary/ high school	220	34.70	120	44.61	70	35.18	30	18.07
Vocational	51	8.04	19	7.06	28	14.07	4	2.41
University	63	9.94	20	7.43	33	16.58	10	6.02
Formal education in agriculture or agribusiness								
No	426	67.19	144	53.53	135	67.84	147	88.55
Yes	208	32.81	125	46.47	64	32.16	19	11.45

[2] Note that in this analysis, the dependency ratio was measured by explicitly asking the number of income-earning individuals within the household, rather than defining economically productive individuals based on ae category only, as typically done in the literature.

Planning to undertake training in the future								
No	159	25.08	23	8.55	50	25.13	86	51.81
Yes	425	67.03	204	75.84	146	73.37	75	45.18
Don't know	50	7.89	42	15.61	3	1.51	5	3.01
Apprenticeships/ Internships								
Formal	80	12.62	62	23.05	2	1.01	16	9.64
Informal	130	20.50	75	27.88	-	-	55	33.13
Worked on a family farm/ in a family agribusiness before								
No	201	31.70	71	26.39	73	36.68	57	34.34
Yes	433	68.30	198	73.61	126	63.32	109	65.66
No. of obs.	634		269		199		166	

Figure 1 Level of formal education in agriculture or agribusiness



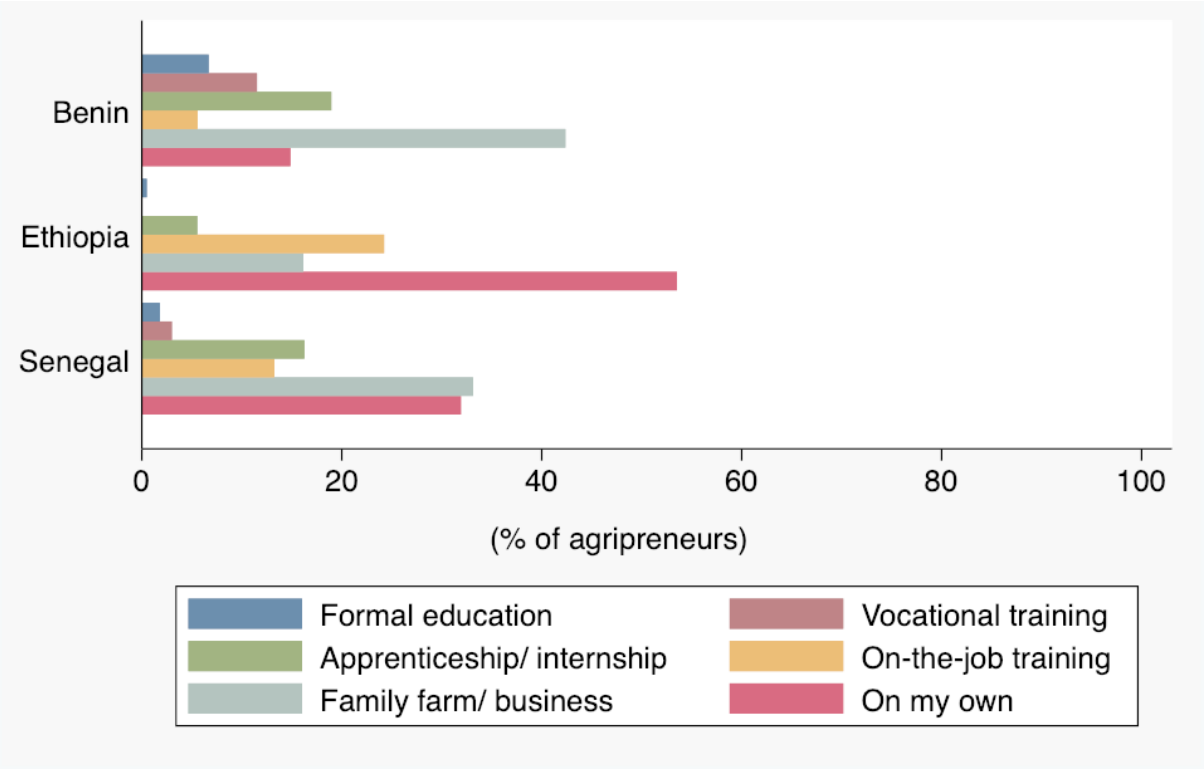
Note: Multiple answers possible.

Only around a third of agripreneurs completed any formal education in the field of agriculture or agribusiness; this share ranges from 46% in Benin to 11% in Senegal. Among those, most got their education in agriculture or agribusiness through short-term training (62%) or vocational training (35%), or a combination of thereof. In Ethiopia, short-term training stands out (95%), while in Benin and Senegal the role of vocational training and, to a lesser extent, secondary education, is equally important. Overall, however, the role of formal education in providing skills relevant to agribusiness appears to be relatively limited. When asked where they learnt the most important skills relative to agriculture and agribusiness, only 3.5% of agripreneurs indicated formal schooling (excluding vocational training) and 6% vocational training (Figure 2). This is in line with the review of vocational education in the agri-food value chains by Kirui and Kozicka (2018) who find that the training too often does not match the needs of the farmers and other agribusiness actors.

Instead, the majority of agripreneurs report to have learnt skills essential for agribusiness in more practical ways, such as (formal or informal) apprenticeships or internships, on-the-job training, or family farm or business. Experience at a family farm or a family business appears as the dominant way

of building skills. It is worth noting, however, that an equally important proportion of agripreneurs (one-third) report to have learnt these skills on their own. Hence, considering how much attention has been given to the importance of providing skills to youth on the policy agenda (Filmer & Fox, 2014), it appears that the measures offered to the youth may have not been well adapted to what the youth needs.

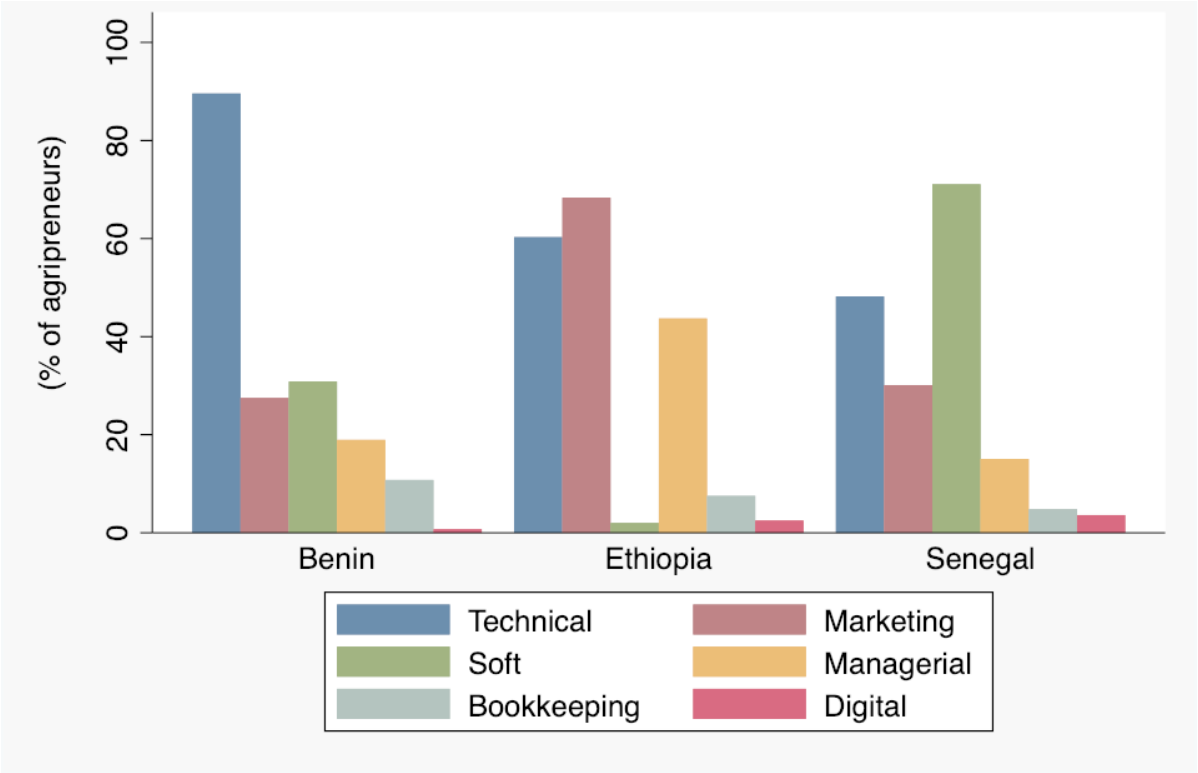
Figure 2 Sources of skills essential for agribusiness



Question: Where have you learnt the most important skills related to agriculture or agribusiness?

Nevertheless, despite the limited success of training so far, in terms of first, reaching the youth who need it, and second, providing them with adequate quality skills, there seems to be a demand for more (and better adapted) training in the future. A large majority of agripreneurs consider training, and practice-oriented training in particular, as the best way to learn new skills and around two-thirds are planning to undertake training in the future (Table 2). Regarding the types of skills found to be crucial by agripreneurs for running their business, technical, marketing and soft skills stand out, albeit in different proportions in the three countries (Figure 3). The strikingly low level of interest in digital skills is surprising, especially in the context of increasingly digitalized food value chains (Baumüller et al., 2022).

Figure 3 Skills essential for agribusiness



Question: Which skills do you consider the most important for running your farm/ business? (two most important)

3.3 Portfolio of economic activities

Table 3 below presents the portfolio of economic activities in which sampled individuals are engaged – both in agribusiness and beyond**.** The respondents were asked to list all of their regular activities, among the following: farming, food and non-food businesses, food and non-food wage employment, fishery or forestry, and unpaid family help. The figures in Table 3 reflect the complexity of the livelihoods of young people in SSA. Close to 60% of agripreneurs are involved in multiple activities (whether food-related or not), with two different activities on average. The extent of multiple-job holding varies between countries, however, and is the highest in Benin, with 83% of agripreneurs engaged in multiple activities and 3 activities on average; and the lowest in Ethiopia, with 21% of agripreneurs engaged in multiple activities and only one activity on average. 48% of agripreneurs involved in multiple-job holding want to make more money and make savings, and an additional 4% want to diversify risk. On the other hand, 20% report that none of the activities keeps them busy full-time, for 14%, income earned from each of the activities is not enough to cover basic expenses, and for 11%, some of the activities are only seasonal – this in line with the literature on time-related underemployment in agriculture in SSA (Allen, Heinrigs, & Heo, 2018). 56% of agripreneurs involved in multiple activities would prefer to have only one job with sufficient income.

By default, because of how the sample was defined in this analysis, agribusiness is the dominant economic activity of agripreneurs. 57% of youth work on the farm and 68% run a food-related business. The shares of the two activities vary between the three countries, however. In particular, contrary to Benin and Senegal, in Ethiopia, farming dominates over food businesses. Farming and food businesses are the primary occupation for the majority of agripreneurs and account for the largest share of total income. On top of that, 26% of agripreneurs also work in food-related wage employment. The overall share of employment in food systems is substantial in the three countries.

On the side, youth agripreneurs work in the non-food sector: 32% in their businesses, and 21% in wage employment, but the role that these activities play in the livelihoods is limited compared to food-sector activities. Non-food business is the primary occupation for less than 3% of sampled individuals, and non-food wage employment for less than 0.5%. Nevertheless, these activities contribute a non-negligible share of the total income, 18% and 14% respectively. Such non-food sector income may likely constitute an additional source of finance for food businesses (Grimm, Knorringa & Lay, 2012). Overall, these observations are in line with LaRue et al. (2021) in that youth employment should be considered from the perspective of pluri-activity and complex livelihoods.

Table 3 Portfolio of economic activities

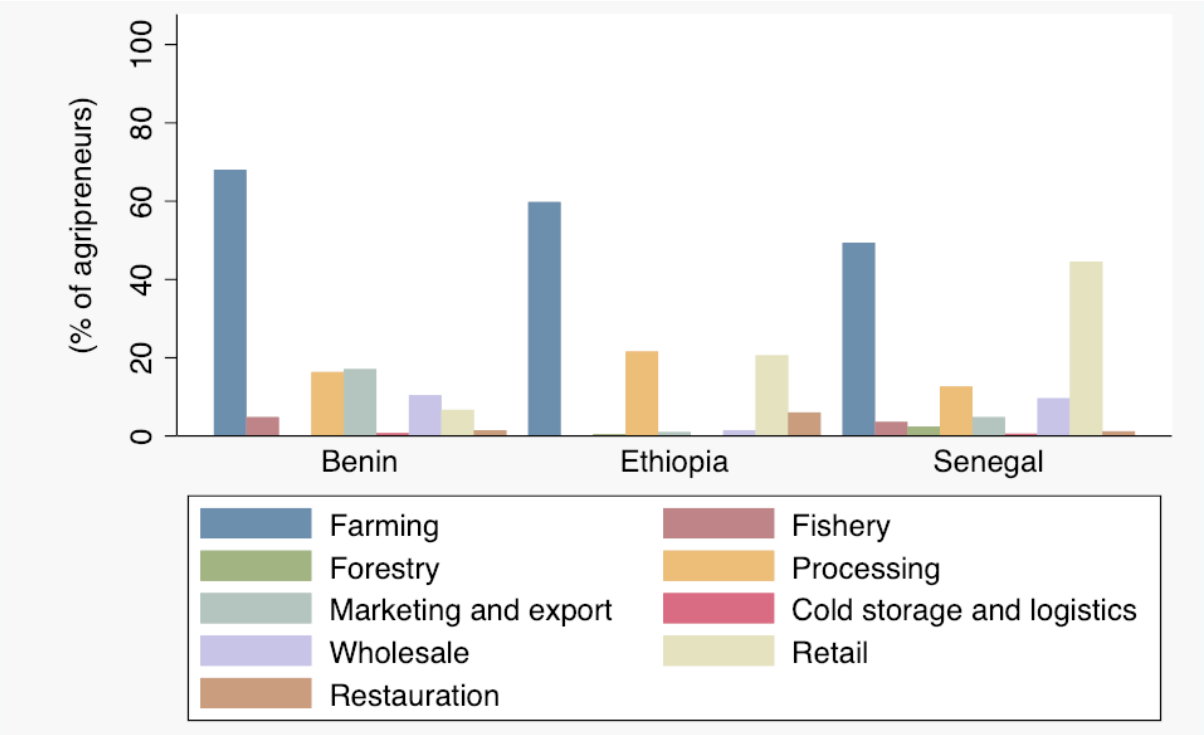
Variable	Total sample		Benin		Ethiopia		Senegal	
	Freq.	Share (Mean)	Freq.	Share (Mean)	Freq.	Share (Mean)	Freq.	Share (Mean)
Multiple activities	371	58.52	223	82.90	43	21.61	105	63.25
Number of activities		2.35		3.05		1.24		2.54
Farming	363	57.26	172	63.94	118	59.30	73	43.98
Primary occupation	232	36.59	89	33.09	111	55.78	32	19.28
Share of total income (if>0)		62.18		48.60		91.99		45.96
Food business	430	67.82	190	70.63	84	42.21	156	93.98
Primary occupation	331	52.21	130	48.33	80	40.20	121	72.89
Share of total income (if>0)		66.31		51.56		94.46		69.11
Non-food business	201	31.70	131	48.70	15	7.54	55	33.13
Primary occupation	16	2.52	10	3.72	1	0.50	5	3.01
Share of total income (if>0)		17.65		19.64		30.33		9.45
Food wage	165	26.03	112	41.64	7	3.52	46	27.71
Primary occupation	13	2.05	12	4.46	-	-	1	0.60
Share of total income (if>0)		18.10		20.50		29.29		10.53
Non-food wage	131	20.66	83	30.86	10	5.03	38	22.89
Primary occupation	2	0.32	2	0.74	-	-	-	-
Share of total income (if>0)		14.39		14.38		25.50		11.45
Fishery/ forestry	37	5.84	18	6.69	1	0.50	18	10.84
Primary occupation	14	2.21	7	2.60	1	0.50	6	3.61
Share of total income (if>0)		48.76		50.56		100		44
Unpaid family help	162	25.55	115	42.75	11	5.53	36	21.69
Primary occupation	6	0.95	4	1.49	2	1.01	-	-
Share of total income (if>0)		-		-		-		-
No. of obs.	634		269		199		166	

3.4 Agribusinesses

This section zooms in on the agribusiness activities of the youth run by the youth in Benin, Ethiopia and Senegal. Figure 4 below presents how the youth businesses are spread among the various categories of agribusiness. The respondents were asked to focus on their agribusiness activities and choose any of the categories that best describe their business. Multiple categories were allowed. Hence, because of the flexible approach to this classification, small discrepancies are observed in comparison to the figures in Table 3. Close to 20% of agripreneurs described their businesses by a mix of various categories, and the most common combinations were farming and processing; farming and marketing; farming and retail; and processing and retail. Even though the numbers are still rather limited, these examples point in the direction of more diversified activities along the food value chain. Nevertheless, farming stands out as the main category in agribusiness, with 61% of businesses, followed by retail (21%) and processing (17%). In the case of farming, 70% of businesses focus on crops,

while 30% on livestock. Shares of the remaining categories (fishery, forestry, marketing and export, cold storage and logistics, wholesale and restauration) remain very limited.

Figure 4 Agribusiness categories



Note: Multiple answers possible.

Table A1 in the Appendix provides a list of main products without and with transformation commercialized by agripreneurs in each of the study countries. Irrespective of whether they identify their main business activities as on-farm (60% of the sample) or off-farm (40%), agripreneurs report selling products without (75% of the sample) and with transformation (25%). Hence, there is a certain overlap, and, for instance, while most on-farm businesses focus mostly on selling food products without transformation, 16% of them also sell transformed food products. Similarly, off-farm businesses sell both food products without and with transformation (70% and 46%, respectively). These figures suggest that post-harvest activities remain relatively under-represented among youth-run enterprises in the three countries.

The median turnover (measured over 6 months) is 5,827 intl. $ PPP[3] with a wide variation between the countries (Table 4). The turnover was measured as a sum of particular products sold with and without transformation as well as services over the last growing season or 6 months in case of on-farm activities; or over the last month in case of off-farm activities – then multiplied by 6 – that were reported by the respondents. The mean turnover, however, is much higher, at 15,513 intl. $ PPP. Note that these monetary indicators should be treated with extreme caution, as they are computed based on self-reported values and the total distribution has many outliers. The values used in the analysis were windsorized; nevertheless, the spread at the higher end of the distribution remains wide – but this would be in line with expectations (McKenzie & Woodruff, 2006). The median value of capital stock is 3,231 intl. $ PPP, and the mean is 10,028 intl. $ PPP.[4] A large majority of agripreneurs consider the

[3] This corresponds to 2,080 $.

[4] The case of Senegal appears striking with the highest mean turnover among the three countries while, at the same time, the lowest capital stocks. It is impossible to assess to which extent this is a result of underlying differences in rates of return to capital, and to which extent this is due to reporting error and differences in the PPP conversion.

performance of their businesses as similar to other businesses in the same field, and a fifth think their businesses are doing better than others.

On average, the businesses run by youth employ close to 4 people (excluding the owner), but 20% of the total staff are unpaid (usually a family member). Close to 40% of businesses do not have any paid staff, and the remaining 60% employ 3 people on average (excluding the owner). The businesses can be classified as micro or small enterprises; the highest number of paid staff is 50. Nevertheless, this is an important result suggesting that youth agripreneurs have the potential to create jobs not only for themselves, but also for others, and hence, providing policy support to youth agripreneurs may be an important element in addressing the youth employment challenge in SSA (Kubik, 2022; Kubik et al., 2022; Dolislager et al., 2021; Filmer & Fox, 2014). In total, the agripreneurs in the sample create more than 2,500 jobs, including their employment as well as paid employment for hired staff. Among the different categories of businesses, on-farm businesses employ more paid staff compared to off-farm businesses: 3.8 on average in farming, and 4.8 in fishing, but only 2.6 in forestry. Within the off-farm businesses, cold storage reports the highest level of employment among all agribusiness categories, with 5 paid employees per business, while retail ranks last, with 0.9 paid employees per business. The remaining categories (processing, marketing, wholesale, and restauration) employ between 2.4 and 3 people on average.

Around three-quarters of agripreneurs are the sole owners of their business, 20% share the ownership with family members (usually parents), and 13% with other non-relatives (Table 4). Only in Ethiopia is the percentage of businesses co-owned with others much higher. The majority of youth started their business on their own, while 21% inherited and 8% acquired the business. In particular, it is expected that inheritance and broader inter-generational linkages may play an important role in youth becoming successful entrepreneurs. Around a third of agripreneurs inherited some wealth from their parents. 60% received help from their parents while setting up the business, and more than 80% received advice on running the business from their parents.

The businesses are relatively young, just above 10 years on average[5]; if only businesses started by the youth are considered, the average age of the firms is half of that. 37% of agribusinesses are registered, whether with a business registrar (18% of registered businesses), tax authorities (41%), or local authorities (85%). It should be noted that the level of business formalization varies widely between countries, from barely 8% in Senegal to 91% in Ethiopia. The case of Ethiopia seems somewhat striking; however, this is largely due to the flexible definition of formality, which also includes registration with local authorities. If, for instance, only tax registration was accounted for, the share of registered agribusinesses in Ethiopia would fall to 36%.

In terms of management practices, most of the businesses rely on rather informal methods of organization. Only 9% of businesses employ formal and 42% informal bookkeeping. Almost half of the businesses keep no accounting books whatsoever. Similarly, only 17% of businesses have a business bank account. Note, however, that the share of agripreneurs with a personal bank account is much higher, at 51%. Nevertheless, the majority of agripreneurs set long-term, or a combination of long- and short-term production targets. Long-term orientation is often considered an important resource in entrepreneurship (Schepers et al., 2020). A rather pronounced seasonality of activities is another feature of the sampled agribusinesses. On average, these businesses report 4 months per year with no or low activities, out of which one month with zero activity. Rather surprisingly, there is no difference between on- and off-farm businesses in this regard; however, it might be due to the high degree of linkages between the two sectors. Surely, the seasonal pattern of activities may influence the performance of businesses and their job creation potential.

[5] In case of businesses that are inherited or acquired, the age of firm is computed starting from the first owner.

Table 4 Characteristics of agribusinesses

Variable	Total sample		Benin		Ethiopia		Senegal	
	Freq.	Share (Mean/ Median)	Freq.	Share (Mean/ Median)	Freq.	Share (Mean/ Median)	Freq.	Share (Mean/ Median)
Performance								
Turnover (6-mo, int. $ PPP, mean)		15,513		8,960		13,687		28,321
Turnover (6-mo, int. $ PPP, median)		5,827		3,434		5,575		21,702
Capital assets (int. $ PPP, mean)		10,028		6,741		15,409		8,903
Capital assets (int. $ PPP, median)		3,231		2,986		6,665		1,497
Self-assessed performance								
Better than others	135	21.29	38	14.13	58	29.15	39	23.49
Similar as others	460	72.56	219	81.41	121	60.80	120	72.29
Worse than others	39	6.15	12	4.46	20	10.05	7	4.22
Employment								
Total staff (excl. the owner, mean)		3.90		5.43		2.89		2.60
Paid staff (excl. the owner, mean)		3.03		4.21		2.28		1.99
Share of unpaid staff		0.22		0.28		0.15		0.21
Ownership								
Sole ownership	411	64.83	198	73.61	94	47.24	119	71.69
Together with parents	78	12.30	42	15.61	13	6.53	23	13.86
Together with other family members	51	8.04	8	2.97	30	15.08	13	7.83
Together with non-relatives	81	12.78	17	6.32	62	31.16	2	1.20
Does not own	13	2.05	4	1.49	-	-	9	5.42
Business started								
On my own	452	71.29	157	58.36	193	96.98	102	61.45
Inherited	132	20.82	81	30.11	3	1.51	48	28.92
Acquired	50	7.89	31	11.52	3	1.51	16	9.64
Age of business		10.59		14.39		2.97		13.55
Management								
Registered	235	37.07	41	15.24	181	90.95	13	7.83
Bookkeeping								
Formal	56	8.83	35	13.01	13	6.53	8	4.82
Informal	268	42.27	122	45.35	75	37.69	71	42.77
Business bank account	108	17.03	44	16.36	51	25.63	13	7.83
Production targets								
Short-term	204	32.90	72	26.77	103	51.76	29	19.08
Long-term	235	37.90	90	33.46	65	32.66	80	52.63
Combination of short- and long-term	147	23.71	97	36.06	21	10.55	29	19.08
No production targets	34	5.48	10	3.72	10	5.03	14	9.21
Technology and innovation								
Mechanization	147	23.19	72	26.77	30	15.08	45	27.11
Automation	47	7.41	23	8.55	7	3.52	17	10.24
ICT	107	17.15	70	26.02	6	3.02	31	19.87
Innovation (any)	138	21.77	78	29.00	6	3.02	54	32.53
Product or service	36	5.77	16	5.95	2	1.01	18	11.54
Processes	67	10.57	25	9.29	3	1.51	39	23.49
Marketing strategies	86	13.56	50	18.59	2	1.01	34	20.48
Seasonality								
No. of months with no activity (mean)		1.06		0.74		1.74		0.74
No. of months with no or low activity (mean)		4.44		4.16		5.48		3.66
No. of obs.		634		269		199		166

Not many youth-run businesses adopt technology and innovation. Only 23% of businesses use mechanization and 7% use automation. For comparison, a recent study of the agroprocessing sector in Africa found that all (registered) firms are mechanized and around a half are automated (Baumüller, Kubik & Getahun, 2023). Similarly, only 22% of agribusinesses report to have implemented any type of innovation over the last year. This is, again, below the levels reported in the literature. For instance, a study of manufacturing firms shows that in Benin, 32.5% of firms were engaged in product innovation and 16.9% in process innovation; in Ethiopia these figures were 37.8% and 20.5%; and in Senegal, 49.3% and 41.1% respectively (Sakyi & Tadesse, 2023).[6] Several reasons may help explain why the level of innovation and technology use is much lower among the youth agripreneurs compared to formal manufacturing firms. First, because of the life-cycle effects, youth lack access to resources, especially financial resources as well as skills (Resnick & Thurlow, 2015). Second, agribusinesses run by youth are micro or small in size, young and mostly informal hence it is difficult for them to compete with more established, bigger, formal firms that the studies on technology and innovation typically cover, as their resource endowments are much smaller.

3.5 Challenges and constraints

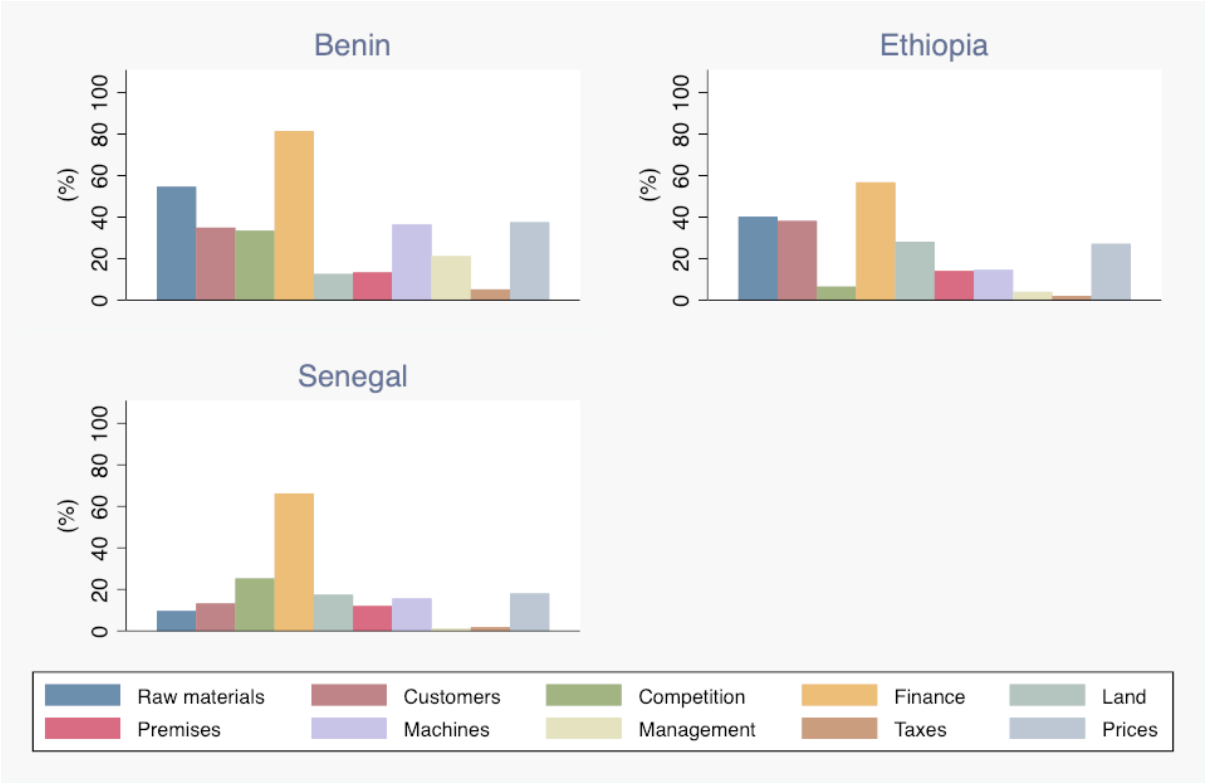
Looking at the main constraints that youth agripreneurs face in running their businesses (Figure 5), access to finance clearly tops the list. More than half of agripreneurs (between 57% in Ethiopia to 81% in Benin) consider access to finance as the principal challenge. In Benin and Ethiopia, supply of raw materials occupies is next on the list, with 55% and 40% of agripreneurs, followed by access to customers (35% and 38% respectively), and price fluctuations (38% and 27% respectively). In addition, in Ethiopia, access to land is seen as a barrier by 28% of agripreneurs. Interestingly, these constraints and their relative importance are virtually the same at the point of starting the business as they are for running the existing business. This suggests that businesses do not quickly outgrow their initial challenges despite moving along the stages of business life-cycle (Lichtenstein & Lyons, 2008); which, in turn, points to the persistence of barriers and constraints encountered by entrepreneurs in SSA.

These results are not surprising. The literature on youth employment has extensively discussed the problem of access to finance (Kubik, 2022). Financial expansion for youth in SSA remains an arduous task. First, youth rarely have sufficient collateral (formal land titles, valuable mobile assets, or a steady employment contract) which makes them ineligible for formal credit (Filmer & Fox, 2014). Additionally, from the bank's perspective, the cost of lending to youth remains high because the credits they contract are of a small amount, while the fixed costs for the bank are relatively large (ibid.). Indeed, formal banking remains relatively limited source of finance for business activities, with the share of agripreneurs using formal banking loans ranging from 10% in Senegal to 28% in Ethiopia (Figure 6). Only 27% of agripreneurs have ever applied for a loan, and for 63% of them, the loan was approved.[7]

[6] Note that the study by Sakyi and Tadesse (2023) used a three-year window to measure innovation.

[7] The main reasons for not applying for a loan were (i) too complicated procedures; (ii) too much collateral required; (iii) too high interest rates. The main reasons for rejecting the loan application by the bank were (i) incomplete documents; (ii) complete but not convincing documents; (iii) insufficient collateral. Some of these results suggest that the financial literacy may not be adequate among the youth.

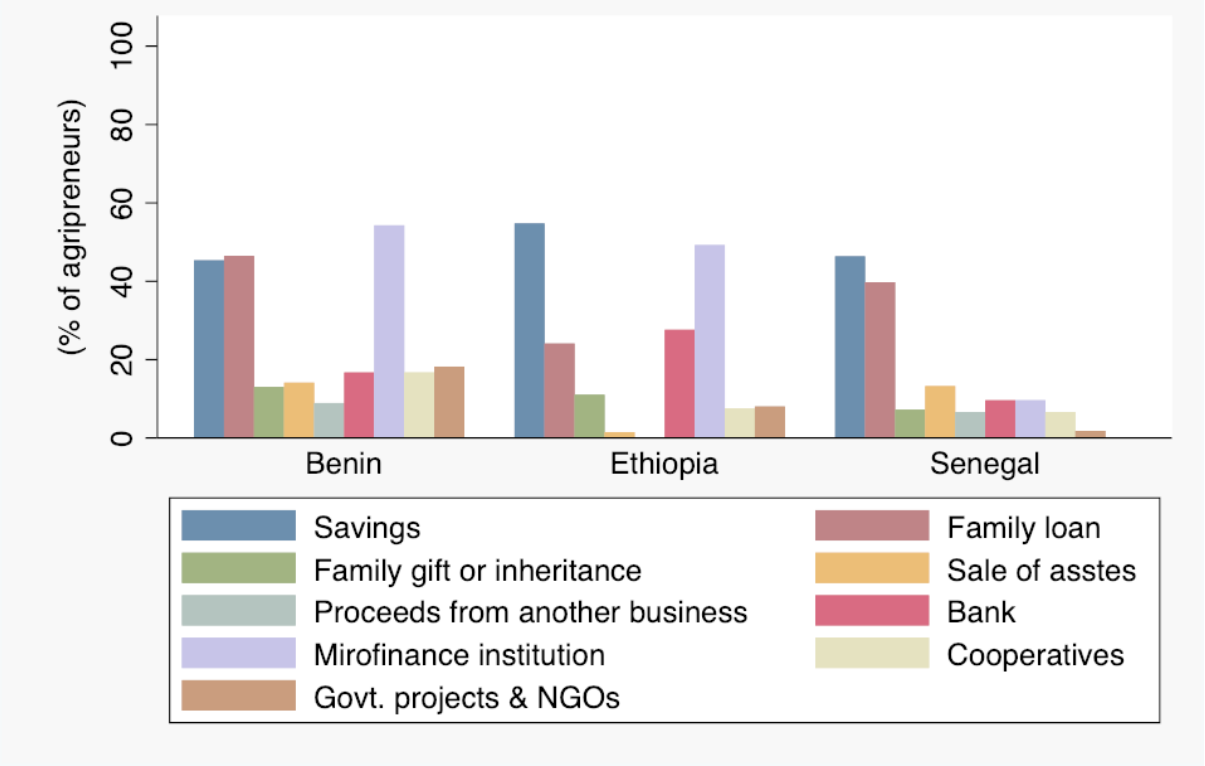
Figure 5 Main constraints experienced by youth agripreneurs in running their business



Instead, a much greater share of youth agripreneurs resort to microfinance institutions (MFIs) (54% in Benin and 50% in Ethiopia), except Senegal where the share is only 10%. The relative importance of microfinance in financing agribusinesses owned by the youth in Benin and Ethiopia is worth noting. Both countries made significant progress in enhancing financial inclusion. In Ethiopia, the percentage of adults with a bank account has more than doubled since 2014 and reached 46% (Demirgüç-Kunt et al., 2022). In Benin, MFIs reached a third of the adult population already as of 2014, with good coverage in rural areas (IMF, 2016). In contrast, in Senegal, the share was only 10% – the same as in the sample of youth agripreneurs in this report – and with a weak coverage in rural areas (WB, 2016). On the other hand, the evidence on the impact of microfinance on economic activities is not clear. For instance, results from a randomized control trial in rural Ethiopia found no statistically significant impacts on nonfarm business activities, or other economic activities, although some of the estimates were large in magnitude (Tarozzi, Desai & Johsnon, 2015).

Overall, own savings are by far the largest form of financing the businesses – between 45% and 55% of agripreneurs. In addition, an equally large share of agripreneurs used informal sources to finance their business activities, including family loans (38%), family gifts (9%) and inheritance (3%). The use of these informal sources was much more prevalent in Benin and Senegal compared to Ethiopia. Family and friends remain the most common source of credit in many developing economies (Demirgüç-Kunt et al., 2022). On the other hand, and somewhat contrary to expectations, proceeds from other businesses are rarely used to finance the activities of agribusinesses: 2% of agripreneurs use proceeds from other agricultural businesses and 3.5% use proceeds from other non-agricultural businesses. Note that similar patterns are observed for the sources of start-up capital for the agribusinesses.

Figure 6 Source of finance for business activities



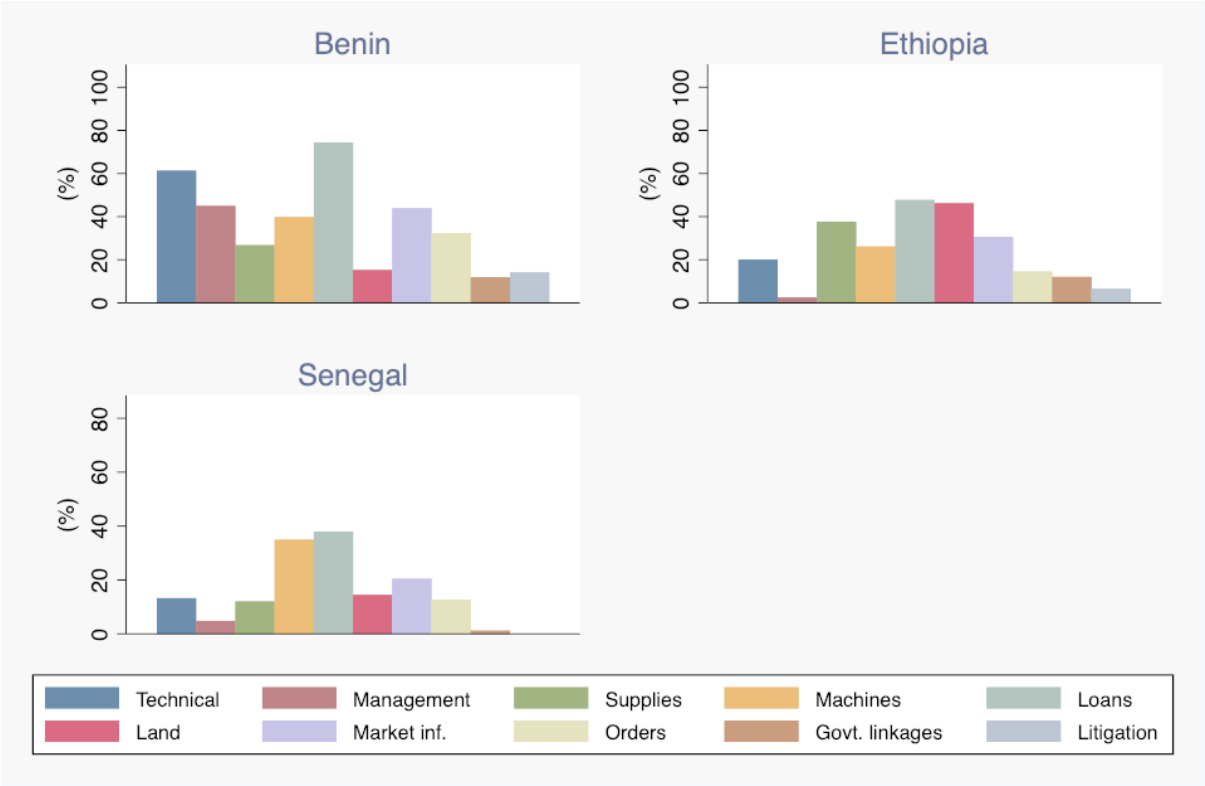
Note: Multiple answers possible.

3.6 Policy interventions

Figure 7 presents the main policy support measures that the youth would expect to receive from their government or other institutions. Unsurprisingly, facilitating access to loans appears on top of the list; however, the share of youth demanding such measures ranges from 38% in Senegal to 75% in Benin. The relative interest in other measures varies by country. Facilitating access to land is almost as important as access to finance in Ethiopia, while in Senegal, this is access to machines. In Benin, more support in training – both technical training as well as training in management and organization – is considered necessary. In all three countries, assistance in obtaining supplies of raw materials as well as access to market information are also demanded by a significant number of agripreneurs.

It is important to note, however, that the measures requested by the youth are by no means absent in their environment. 43% of respondents confirm that the type of interventions they demand are already available. Interestingly, however, a third of respondents don't know if such interventions are available or not. In addition, around half of all sampled agripreneurs confirm having received policy support in the past. Most of them received support in terms of access to loans (32% of agripreneurs), technical training (21%), access to land (18%) and market information (16%). The large majority were satisfied with the support provided (39% were very satisfied and 47% were somewhat satisfied). The fact that the same measures which were already provided are still requested may raise questions concerning these past measures' effectiveness or scope – despite the very high level of satisfaction these measures provided.

Figure 7 Expected policy support measures



3.7 Motivations, aspirations and perceptions

Despite the multiple constraints, youth agripreneurs appear to be overall satisfied with their business activities and career choices. 34% report to be very satisfied, and 59% are satisfied (Table 5). An even higher share of agripreneurs consider the food and agriculture sector to be an attractive sector to work in (98%); with a very even distribution across countries. In line with that, 93% of youth agripreneurs want to continue their business in the future. Nevertheless, around half of them are looking for new opportunities (whether a new job or a new business venture); however, this share is much higher in Benin (74%) compared to Ethiopia and Senegal (30% and 24% respectively). Considering the narrative presented so far in this paper, especially with respect to multiple job holding and the complexity of livelihoods, the choice of looking for new opportunities does not appear to be contradictory with the plan of continuing the same business activities in the future. As already observed earlier, to a great extent, multiple-job holding is opportunity- rather than necessity-driven and, in this context, should be interpreted as a sign of dynamism and agency in striving for a better future.

Looking at the principal reasons that motivated youth agripreneurs to choose their business activities, two groups of factors appear to be relevant: independence (27%), better income (17.5%) and stability (5%) on the one hand, and family tradition (26%), knowledge of the profession (11.5%) and low capital requirements (12%) on the other. On top of that, there is a clear divide between those who work in agribusiness because this is what they wanted to do in file (46%) vs. those who could not find a better job (39%) or for whom it was their parents' decision (15%). While the data at hand does not allow for a more in-depth analysis of the behavioural aspects of entrepreneurship in agribusiness, the results point to the dichotomy between opportunity- vs. necessity-driven agripreneurs; or intrinsically vs. extrinsically motivated agripreneurs.

Table 5 Motivations, aspirations and perceptions

Variable	Total sample		Benin		Ethiopia		Senegal	
	Freq.	Share	Freq.	Share	Freq.	Share	Freq.	Share
Motivation								
I am in this business because…								
… this is what I wanted to do in life	289	45.73	119	44.24	93	46.73	77	46.95
… better jobs were not available	249	39.40	107	39.78	90	45.23	52	31.71
… my parents wanted me to do so	94	14.87	43	15.99	16	8.04	35	21.34
Main reason to choose this activity								
Family tradition	167	26.34	70	26.02	32	16.08	65	39.16
The profession I know	73	11.51	48	17.84	14	7.04	11	6.63
Easy to start/ low capital requirements	77	12.15	22	8.18	32	16.08	23	13.86
Better income than other activities	111	17.51	29	10.78	63	31.66	19	11.45
More stable returns	33	5.21	12	4.46	19	9.55	2	1.20
To be independent	173	27.29	88	32.71	39	19.60	46	27.71
Aspirations								
Do you want to continue this business in the future?								
Yes	590	93.06	256	95.17	187	93.97	147	88.55
No	44	6.94	13	4.83	12	6.03	19	11.45
Are you looking for a different job or business opportunity?								
Yes	299	47.16	199	73.98	60	30.15	40	24.10
No	335	52.84	70	26.02	139	69.85	126	75.90
Perceptions								
Do you consider food and agriculture to be an attractive sector to work in?								
Yes	623	98.26	264	98.14	195	97.99	164	98.80
No	11	1.74	5	1.86	4	2.01	2	1.20
How satisfied are you with what you do now?								
Very satisfied	216	34.07	65	24.16	83	41.71	68	40.96
Somewhat satisfied	376	59.31	186	69.14	97	48.74	93	56.02
Not satisfied	38	5.99	18	6.69	16	8.04	4	2.41
Not at all satisfied	4	0.63	-	-	3	1.51	1	0.60
No. of obs.		634		269		199		166

3.8 Opportunity- vs. necessity-driven agripreneurs

Start-up motivation has been found to influence entrepreneurial performance (Caliendo, Kritikos & Stier, 2023). To test if the opportunity-driven agripreneurs systematically differ from the necessity-driven agripreneurs, Table 6 below presents the results of several statistical tests for differences in means, medians, and distributions among the two samples, i.e. the Student's t-test, the k-sample test on the equality of medians, based on chi-squared test statistic, and the Wilcoxon rank sum test (or the Mann – Whitney U-test). The definition of opportunity- and necessity-driven agripreneurs is based on self-reported motivation, as indicated in Table 5. Opportunity-driven agripreneurs are those who are in the business "because this is what they wanted to do in life", as well as those who are in the business "because their parents wanted them to do so". Regarding the latter, it is not straightforward to qualify them as opportunity-driven in the same sense as the former. For robustness, the same tests are conducted based on a sample excluding agripreneurs who chose to run their business because of their

parents; the results remain overall unchanged. In contrast, necessity-driven agripreneurs are those who are in the business because “better jobs were not available”.

Table 6 focuses on selected proxies of business performance. There appear to be important and statistically significant differences between the opportunity- and necessity-driven agripreneurs. First of all, the opportunity-driven agripreneurs report much higher turnover, and while the monetary values in this data should be interpreted with caution, as mentioned earlier, the fact that not only the difference in means but also in medians and the overall distribution remain significant, clearly points to divergent outcomes of the two groups. Interestingly, necessity-driven agripreneurs are more likely to be involved in off-farm commercialization of transformed food products and derive a larger share of the total turnover from sales of transformed food products. This observation appears counter-intuitive, especially considering expectations of value addition potential in post-harvest activities of the food value chains; and suggests that youth agripreneurs continue seeing more opportunities in the traditional sector.

The opportunity-driven agripreneurs create more (paid) employment (3.4 employees per business compared to 2.4) and are more likely to innovate, albeit only in the case of process innovation. They are more likely to use formal management practices, such as formal bookkeeping and long-term production targets; and their activities are somewhat less affected by seasonality. On the other hand, there is barely any difference in terms of technology use, i.e., mechanization, automation and ICT, nor in the business registration status. Finally, in terms of self-assessed performance, opportunity-driven agripreneurs are twice as likely to consider their businesses to perform better than other businesses compared to necessity-driven agripreneurs; they are also slightly more likely to consider themselves as successful entrepreneurs.

While the magnitude of the differences turns out to be rather small in the case of many variables, their statistical significance nevertheless points to some underlying differences between the two types of agripreneurs. This is especially important considering the otherwise relatively homogenous sample of young entrepreneurs. When testing the differences between the opportunity- and necessity-driven agripreneurs in terms of their socio-demographic characteristics, it appears that the two groups are indeed very similar, for instance in terms of age, gender, educational attainment, family background, rural or urban location etc. (figures not reported here). The only noticeable difference, both in economic and statistical terms, is that the necessity-driven agripreneurs are more likely to be migrants who have migrated from a different location. More specifically, migrants constitute 46% of the necessity-driven sample, compared to 30% of the opportunity-driven sample. This result is in line with expectations. Excluding migration for family reasons, most of the internal migration flows in SSA can be classified as economic migration. The same pattern is observed for youth agripreneurs in Benin, Ethiopia and Senegal, as already noted earlier. 42% of migrants in the sample migrated in search of work, and 16% in search of land. It is therefore likely that the migrant agripreneurs started their businesses out of necessity, first, at their origin whereby a lack of work or land may have served as a push factor in migration, and second, at the destination, whereby any other jobs may have not been directly available to the migrants.

These results are only descriptive and do not account for endogeneity; nevertheless, they provide evidence of the dichotomy between opportunity- vs. necessity-driven agripreneurs. Even though the sample in this analysis includes both formal and informal, as well as both urban and rural businesses, the results share similarities with the literature on the (mostly urban) informal sector and its heterogeneity (Cunningham & Maloney, 2001; Mead & Morisson, 1996). In case of SSA, this debate has mostly focused on the usually very pronounced two-tier distribution of informal firms, with a small group of successful entrepreneurs and a large group of entrepreneurs that barely survive (Fields, 1990; Mead & Liedholm, 1998; WB, 2007) – but a strikingly missing middle of small and medium-sized enterprises (Fafchamps, 1994). The more recent literature contested the idea of the missing middle. Grimm, Knorringa & Lay (2012) propose a classification whereby in between the survivalist in the lower tier and the top performers in the upper tier they identify “constrained gazelles” – firms that share some characteristics with the top performers but which are not yet successful, mainly due to lack of

capital. In the case of the food value chains (including formal firms), Reardon, Liverpool-Tasie & Minten (2021) show evidence of a rapid proliferation of the small and medium enterprises – so far considered to be the missing middle – over the past decades. The analysis in this report is not detailed enough to support any particular hypothesis in this regard; also, the distinction between the opportunity vs. necessity-driven agripreneurs does not exactly correspond to the distributional analyses of performance done in this strand of literature.

Table 6 Differences in selected indicators between opportunity- and necessity-driven agripreneurs

	Opportunity-driven	**Necessity-driven**	**T-test**	**Non-parametric equality of medians test (Chi-square test)**	**Wilcoxon rank sum test (Mann - Whitney U test)**
Variable	Mean	Mean	Difference (means)	Difference (medians)	Difference (distributions)
Turnover (int $ PPP)	17588.0	12304.7	**	**	**
Share of transformed prod. in total turnover	0.19	0.26	*		*
Involved in on-farm, without transf.	0.57	0.55			
Involved in on-farm, with transf.	0.09	0.07			
Involved in off-farm, without transf.	0.28	0.27			
Involved in off-farm, with transf.	0.16	0.25	**	**	***
Employment: total staff	4.374	3.149	**		**
Employment: paid staff	3.408	2.434	*		***
Employment: unpaid staff	0.966	0.715	*		
Innovation	0.247	0.173	*	**	**
Innovation: product or service	0.0693	0.0402			
Innovation: processes	0.135	0.0602	**	***	***
Innovation: marketing strategy	0.138	0.133			
Mechanization	0.257	0.193		*	*
Automation	0.0805	0.0643			
ICT	0.187	0.149			
Formal bookkeeping	0.114	0.0482	**	***	***
Long term production target	0.673	0.494	***	***	***
Registered	0.356	0.394			
No. of months with no activity	0.914	1.281	*	**	**
No. of months with low or zero activity	4.400	4.506			
Perform better than other businesses	0.262	0.137	**	***	***
Successful entrepreneur	0.686	0.578	**	**	**
No. of observations	634				

***p<0.01 **p<0.05 *p<0.1

4 Conclusion

This report offers a snapshot of youth agripreneurs in Benin, Ethiopia and Senegal and their businesses. The results show a diversity of businesses across the entire food value chain with a strong concentration in farming, followed by processing and retail. A non-negligible share of agripreneurs is involved in a mix of business categories, potentially adding more value along the value chain. The businesses are micro or small in size but offer a significant job creation potential overall. Not only does each business mean employment for its owner, it also creates 3 paid jobs on average. While this may not seem a large number, considering the number of such businesses across SSA, the overall job creation potential of youth-owned agribusinesses is substantially large. The agribusinesses, despite their small scale, report a substantial turnover – with a median of almost 6,000 int. $ PPP and the mean is more than double that. A large majority of agripreneurs assess their business performance as average or better than other businesses and consider themselves to be successful entrepreneurs.

Nevertheless, youth agripreneurs experience multiple challenges and constraints, both at the time of setting up their businesses, as well as while running the already existing businesses. In this regard, the results from this analysis are by no means new. Access to finance is clearly by far the largest constraint – more than half of agripreneurs lack adequate financial means to invest in their businesses; and in most cases, they rely either on their own savings or informal sources of finance. The use of formal banking remains low – for reasons already well-known in the literature. On the other hand, microfinance appears to play an important role for youth-owned agribusinesses. Not surprisingly, facilitating access to finance is at the top of policy measures requested by the youth. However, the policy-mix that youth would expect from the policy makers is more comprehensive, also including facilitating access to raw materials, market information, or land. It is important to stress that in many cases, such support measures are available for youth; and an important share of youth have already benefited from such interventions. The fact that the same measures are requested over and over again raises some concerns over their effectiveness.

The results of the analysis suggest that youth agripreneurs struggle to overcome the initial challenges and leapfrog into the state of stabilization whereby they can compete with the more established firms. This is of course in line with expectations, especially considering the young age of these businesses, as well as the fact that the youth entrepreneurs are exposed to particular challenges compared to the adult entrepreneurs – this is because of the life-cycle effects and generational effects. Unfortunately, the cross-sectional nature of the data at hand does not allow for a more detailed analysis of the life-cycle of these businesses. Nevertheless, the youth agribusinesses clearly perform weekly in terms of factors such as innovation and technology use. Most likely, this may be explained by the limited access to finance, as already mentioned above.

Finally, the analysis in this report points to a dichotomy between opportunity- vs. necessity-driven agripreneurs. Rather than just being an interesting behavioural trait, the start-up motivation is likely to influence the future performance of the businesses. While the analysis in this report is only descriptive and does not account for endogeneity, it nevertheless clearly shows that the opportunity-driven agripreneurs score better on a number of indicators, including turnover, job creation, innovation, and the self-assessed overall business performance. It is very likely that the two types of agripreneurs may require different policy support in order to help them realize their full potential. Nevertheless, a more in-depth analysis is required to offer sound policy recommendations.

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Annex

Table A1. Most common products produced by the youth agripreneurs

Most common products	
Benin	
Without transformation	*With transformation*
Maize	Cassava products (atiecke, cassava flour, gari, tapioca)
Rice	Yam products (wassa-wassa, yam chips)
Soja	Soya products (soya cheese, soya drink)
Peanut	Maize products (husked maize, akassa)
Cashew	Rice products (husked rice, paraboiled rice)
Cassava	Wheat products (husked wheat, biscuits)
Yam	Oils (palm oil, peanut oil)
Sorghum	Juice (pineapple, mango, orange, carrot, cashew apple, baobab, ginger, tamarind)
Peas and niébé	Shea products (shea butter)
Fruit and vegetables (carrot, cabbage, okra, onion, sweet potatoe, cucumber, watermelon, eggplant, salad, tomato)	Vegetable products
Fish	Spices
Goat	Alcohol (palm wine)
Sheep	Animal feed
Pork	
Poultry	
Cotton	
Eggs	
Ethiopia	
Without transformation	*With transformation*
Poultry	Injera
Beef	Bread and biscuits
Sheep	Kocho
Pork	Meat (raw and prepared)
Milk	Prepared food (misr and other)
Eggs	Spices (abish and other)
Grains (maize, teff, wheat)	Coffee and tea
Peas, beans, lentils	Juice
Fruit and vegetables (cabbage, onion, pepper, potato, tomato, carrot, cucumber, lettuce, banana, sunflower mango)	Oil
Honey	
Coffee	
Khat	
Sugarcane	
Animal feed	

Senegal	
Without transformation	*With transformation*
Maize	Peanut products (peanut butter, tiga)
Rice	Maize products
Peanut	Sorghum and millet products (thiakry and other)
Cassava	
Yam	Fruit and vegetable products
Peas and niébé	Meat (raw meat, grilled meat)
Sorghum and millet	Rice products
Wheat	Fish products (smoked fish)
Fruit and vegetables (carrot, celery, cabbage, okra, onion, sweet potatoe, cucumber, lemon, watermelon, eggplant, diakhatou, salad, tomato, tamarind, bissap)	
Fish and seafruit	
Goat	
Sheep	
Poultry	
Beef	
Milk	
Honey	
Animal feed	

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Working Paper Series

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Published by:
Zentrum für Entwicklungsforschung (ZEF)
Center for Development Research
Genscherallee 3
D – 53113 Bonn
Germany

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