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# Financing women entrepreneurship in the developing world: An fsQCA analysis of informal financing schemes

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**ABSTRACT**

This study adopts a configurational approach to facilitate a better understanding of the informal financing mechanisms inherent in women's entrepreneurship. It draws on observations involving 200 Nigerian women entrepreneurs to study the antecedents that underpin informal financing in women's entrepreneurship. Six antecedents, including firm age, size, entrepreneur's age, marital status, educational level, and industry, alongside *Ajo*—an informal financing scheme—are studied. Using fuzzy sets, the study deduces six configurations depicting the use of this informal financing scheme in women's entrepreneurship. FsQCA analysis reveals how these antecedents collectively form six configurations related to Ajo. Contrary to the bank–firm theory of formal financial relationships, this study uncovers how even educated women entrepreneurs also use Ajo for entrepreneurial purposes. We contend that simplistic predictions formed around a single antecedent must make way for a configurational approach, whereby a set of conditions must be in place to account for informal financing in women's entrepreneurship, especially in the developing world.

**KEYWORDS**

Informal financing; Ajo; women entrepreneurship; developing world; fsQCA

## Introduction

Research shows that women entrepreneurs generally find it tough to access the resources they need to support their entrepreneurial endeavors, often due to their gender profiles (Cozarenco & Szafarz, 2018; Kanze et al., 2018). In the developing world, where gendered aspects of regulatory (e.g., policies and laws) and normative (e.g., cultural expectations) institutions are intertwined with commonly accepted societal rules, norms, and practices (Kairiza et al.,

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2017), women are systematically sidelined from participating in the mainstream financial markets (Bapna & Ganco, 2021). This situation severely diminishes their chances of accessing key financial resources for entrepreneurship purposes (Leitch et al., 2018). Prior research acknowledges that the interplay between economic, political, and social elements in a specific entrepreneurial context can constrain the activities of women entrepreneurs (see Beck, Demirgüç-Kunt, et al., 2009; C. G. Brush et al., 2009; Bullough et al., 2022; Hechavarría et al., 2019; M. O. Ogundana et al., 2021).

Despite the manipulation of individual and local beliefs, societal norms, and institutional practices that undermine women entrepreneurs' access to financial resources in many regions of the developing world (see Koubâa, 2014; Le & Stefańczyk, 2018; Wasiuzzaman & Nurdin, 2019), women entrepreneurship has proliferated (Elam et al., 2019). This significant increase in women's entrepreneurial activity raises serious academic and policy-related questions with regard to the enablers that have facilitated women's entrepreneurship to evolve in the face of rigid institutional practices designed to restrict women. From this perspective, we use the following question as a guide in theorizing the configurations of their enablers: *What types of schemes do women entrepreneurs leverage to tackle the financial constraints on their enterprises caused by rigid social and cultural structures in patriarchal scenarios in the developing world?*

Existing studies describe finance as the single most important component of new venture creation (Mutsonziwa & Fanta, 2021; Steel et al., 1997; Wellalage & Locke, 2016, 2017). The International Labour Organization (ILO) points to traditional savings clubs (in the form of rotating savings groups), among other informal finance options, as a financial source for women entrepreneurs in the developing world to tap into to support their entrepreneurial endeavors (Adams, 1992; Aliber, 2015; Kariv & Coleman, 2015; Na & Erogul, 2021; Naegels et al., 2018). These financing options have gained traction (see Aliber, 2015), partly due to financial access barriers, including harsher credit approval requirements, lower credit ceilings, and the gender biases women entrepreneurs must contend with in the developing world (C. Brush et al., 2019; Bullough et al., 2022). As such, tracking and analyzing their antecedents and configurations can help us to better understand how and why they resort to Ajo—a traditional savings club—as opposed to bank credit amounts to the empirical pursuit of the intangible (cf., Rerup et al., 2022).

To track and analyze these antecedents and configurations, we utilized fsQCA qualitative comparison techniques. As a research approach grounded in set theory, this was considered suitable for mapping out explicit connections between Ajo and women's entrepreneurship. Furthermore, its focus on configurational reasoning allowed us to acknowledge the interdependence and interaction of many antecedent variables (Ragin, 2008). In particular, it enabled us to identify and examine different combinations of antecedents (educational qualifications, marital status, age, firm size, and age) that are equally linked to Ajo. Based on the empirical results generated from a comprehensive fsQCA qualitative comparative analysis of the links we established between women entrepreneurs, Ajo, and their business environment, we were able to identify and closely study configurations embedded in a maze of connections, all of which were intertwined with an overlay of elements pertaining to the gendered micro—macro—meso environment in Nigeria.

Building upon these empirical insights, we formulated theoretical assumptions with regard to informal financing for women's entrepreneurship within the developing world. Our theorizations were based on our observations and interpretations of a dataset containing the perspectives of women entrepreneurs on how and why they interacted with Ajo, along with our configurations derived through fsQCA techniques.

Ajo is an informal financing scheme in which participants contribute a fixed amount of money to a central pot each month. On a rotating basis, they take turns receiving the total sum raised (see Bruton et al., 2021; Simba et al., 2023). The scheme functions differently than conventional financing models, such as bank credit, which is impacted by the bank manager's relationship with the borrower and their previous interactions (see Simba et al., 2024). Given the high levels of information asymmetry (Beck & Cull, 2013), lack of fiscal discipline (Beck, Demirgüç-Kunt, et al., 2009), and high instability in the continents' financial markets (Asongu et al., 2016), deploying a Western-centered model known for its insensitivity to context (see Bruton et al., 2022) will involuntarily exclude underprivileged communities, including women, who are entrepreneurially active in large parts of the developing world (Kautonen et al., 2020).

Our empirical findings show that these women's reliance on Ajo overshadowed their use of bank credit. In our attempt to figure out why this was the case, we found that they valued specific aspects of a financial system and society as a whole. Specifically, availability, easy access, lower or no interest rates, application requirements (e.g., collateral, financial history, and a guarantor), reduced red tape, lengthy forms, and the societal perceptions of their gender were the important factors that influenced their choice to use conventional banking services or an informal financing scheme like Ajo (cf, Simba et al., 2023).

From the above, it is unequivocal that the self-reported opinions of our participants, and the resultant antecedents and configurations captured, provide evidence of an entrepreneurship phenomenon in which the impact of an overlay of elements related to a gendered micro–macro environment has dictated the financial source(s) that women entrepreneurs use. These elements have a far greater role to play in influencing the level(s) of interaction/relationship women entrepreneurs have with informal finance. Arguably, informal financing enabled these women entrepreneurs to have access to financial resources in such a way that these resources not only supported their venture creation initiatives but also helped them to tackle their social problems, including poverty and financial interdependence (cf., Adams, 1992; Bhatt & Tang, 1998; Coleman & Kariv, 2014). This shows that the use of informal finance in the developing world does not align with the one-sided view expressed in the formal vs. informal finance discourse, which seems to largely adopt a Western perspective (Simba, 2024). Within this debate, there is consensus that formal finance provides the most efficient way of boosting entrepreneurial activity, as borrowers will benefit from the managerial support and guidance (Ayyagari et al., 2010) that comes with most bank credit facilities.

However, our fsQCA analysis suggests that this perspective overlooks the influence of contextual factors specific to the financial markets in the developing world. In conclusion, our contribution to understanding entrepreneurship financing highlights the growing appeal of informal finance in the developing world, where women increasingly turn to Ajo schemes as a financing option for their ventures, irrespective of age, company size, or industry. Furthermore, our fsQCA analysis and the resultant configurations contribute theoretical insights that explain why, in a developing world scenario, women are more likely to rely on traditional savings clubs to fund their business initiatives compared to other sources, with a particular tendency to avoid using commercial banks. Arguably, we demonstrate that women are better supported by informal financing schemes in the developing world (cf., Aliber, 2015). Thus, we provide alternative explanations to the bank–firm theory of formal financial relationships, which we believe is not sensitive to context. Accordingly, we respond to research calls that advocate for scholarly conversation within context (see Hamann et al., 2020).

## Theoretical argument

Recent studies have shown that informal finance can be important for businesses, especially in the developing world (Kairiza et al., 2017; Mertzanis, 2019; Simba et al., 2023; Turkson et al., 2022). As one of the most commonly used financing options by women entrepreneurs across many regions of the developing world (see Aliber, 2015), it is conceivable that informal finance has become too central in the financial markets of these regions to be dismissed as a phenomenon that will come to pass with time (Adams, 1992). Its features, frequent usage, and contextual relevance in the developing world are distinct enough to demand the development of representative constructs or explanations (cf., Bruton et al., 2018). This is important because, unlike the use of the bank–firm theory of formal financial relationships, there is no standard framework for studying informal finance (C. G. Brush et al., 2009; Meyer & Nagarajan, 1991; M. O. Ogundana et al., 2021). This limits our understanding of the theoretical mechanisms that underpin informal financing (Christianson & Whiteman, 2018).

From this perspective, developing theoretical configurations representative of the context in which Ajo is utilized can be helpful in presenting an entrepreneurship phenomenon in its purest form and uncovering its underlying mechanisms (Wilson, 1998). Thus, studying finance in women's entrepreneurship by exploring the conditions under which women entrepreneurs use/relate to informal finance in a gendered context can help us begin to imagine its significance to entrepreneurs, especially those dealing with an overlay of elements related to their micro and macro environments that may influence their choice of financial source(s).

Evidence of informal finance's frequent use as a means for supporting these entrepreneurs has shed light on what actually transpires in this environment, without the constraints of the universal theories often developed on the basis of a Western context (cf., Bamberger, 2018; Bruton et al., 2022; Filatotchev et al., 2022). Using this approach to explore such unique research settings essentializes context in a way that challenges predominant dialectic approaches to scholarship, as it signifies the essence of dialogical engagement across contexts, thus fostering contextual reflexivity in the theorizing processes related to acquiring finance for women entrepreneurs in the developing world (cf., Hamann et al., 2020). This emphasizes the importance of acknowledging the context in which entrepreneurship takes place (see Welter, 2011). Recognition of contextual factors within the formal vs. informal finance debate is essential when establishing relevant financing models for women entrepreneurs operating in financial markets across many gendered regions of the developing world. This understanding is essential for women entrepreneurs, as it helps them discover pathways that can assist them in leapfrogging some of the hurdles they are confronted with when they try to engage with more formal financing formats (cf., Beck & Cull, 2013).

### *Informal finance in women entrepreneurship*

In the developing world, informal finance has a long history (Adams & Fitchett, 1992; Allen et al., 2019; Smets, 1996). However, the problem in existing academic literature is that it has been under-represented or misunderstood, leading to its classification as "underground financing" in extant literature (e.g., Greenbaum et al., 2019). Moreover, research on informal finance largely appears in low-ranked journals and never makes it to so-called high-rated outlets. This has further contributed to its under-representation, even leading to confusion about what informal financing entails, particularly from a developing world perspective. Yet, as evidenced by its use by women entrepreneurs in Nigeria, informal financing arrangements form an important baseline for women entrepreneurs in this setting (Adams, 1992), which is often further complicated by gender-related biases (Aliber, 2015; Bullough et al., 2022; Hechavarría et al., 2019; Naegels et al., 2018) when it comes to securing vital financial support.

Contrary to popular opinion, studies that have focused on informal financial markets (see Turkson et al., 2022; Wellalage & Fernandez, 2019; Wellalage & Locke, 2017) show little evidence of exploitation or monopoly profits. Rather, there is some acknowledgment in scholarly literature that women entrepreneurs' financial needs for business reasons are better served through informal financial arrangements, especially in the developing world (Aliber, 2015; Jayawarna et al., 2012; Johnson, 2004, Leitch et al., 2018; Smets, 1996). Likewise, entrepreneurship research has shown that women entrepreneurs in many regions of the developing world, including sub-Saharan Africa, rely on internal or informal financing means to support their entrepreneurial endeavors (Allen et al., 2019; Aterido et al., 2013; Jamali, 2009; Naegels et al., 2018). The important function performed by informal finance in these contexts requires an academic focus to account for the actions and behaviors that make informal finance relatable or attractive to women entrepreneurs.

An important question that this research must address to begin to appreciate or understand informal finance from a developing world perspective, with a particular focus on women entrepreneurship, relates to its relevance and usage across many regions of the developing world (Allen et al., 2019; Naegels et al., 2018; Steel et al., 1997). Perhaps, as expressed above, the problem lies in how academic literature sometimes presents these systems as exploitative practices (see Meyer & Nagarajan, 1991). Arguably, if we examine informal finance from Adams' (Adams, 1992) and Aliber's (2015) perspectives, where it is seen as a financing mechanism that serves small firms in many regions of the developing world, we can start to appreciate its relevance and importance among marginalized groups, such as women entrepreneurs, who largely operate small enterprises in the developing world (Ascher, 2012).

### *Informal financial institutions in the developing world*

Academic literature identifies two dominant sources of informal financing, namely, Ajo—a traditional savings club—and family financial contributions, as most frequently utilized and most relatable/attractive to women entrepreneurs (in comparison to bank credit) in a gendered developing world (Simba et al., 2023). Women entrepreneurs operating within this context use informal finance because it provides a collage of dynamic, innovative, and flexible arrangements, enabling them to obtain the financial resources they require for business reasons (Adams & Fitchett, 1992). Academic literature discusses various forms of traditional savings groups, mainly from the perspectives of communities trying to deal with the challenges of formal financial markets.

To begin with, the literature suggests that saving clubs are financing mechanisms that are more relatable/attractive to marginalized members of society (Smets, 1996). Ajo functions in the same way as rotating saving and credit associations (ROSCAs) and savings associations. A core principle of these self-organized financing mechanisms is collectivism (Meyer, 2020). Members of a community come together to create a communal pool of financial resources (Bruton et al., 2021). They agree on a set amount of money to contribute to a central pot every month and, on a rotating basis, each member is allocated the full amount in the pot at that particular point (Biggart, 2001; Simba et al., 2023). The process is repeated until all the members have had their turn. In the subsequent months, the collections continue, and affiliated members have the opportunity to borrow money at a negotiated rate of interest (Adams, 1992).

Contrary to a bank's credit requirement, ROSCAs accept a relative or friend to act as a guarantor for a loan agreement, which may explain why disadvantaged groups, such as women entrepreneurs, who are often excluded from formal financial markets for gender reasons among others, relate to informal finance more (cf., Wellalage & Locke, 2017). Although research suggests that these saving clubs do not conform to legal and state controls to ensure enforcement of payment agreements made by participants (see Meyer & Nagarajan, 1991), members collectively produce written records that are often maintained by an elected treasurer. Because these are often locally devised financing systems based on kinship, local, and social ties, they have much fewer formal contracts, and they have collateral agreements to materially mitigate against default (cf., Peredo & Chrisman, 2006; Peredo & McLean, 2020). Instances of member defaults are infrequent, due to the nature of the social environment, inherent relational trust, and the characteristics of the participants, which contribute to the establishment and longevity of savings groups (Biggart, 2001; Bromiley & Cummings, 1995).

Family financial contributions also play a significant role in the financial support that women entrepreneurs in developing contexts rely on (Adams, 1992). In these contexts, family contributions are reported to make up more than half of all informal loans (Aliber, 2015). Compared with bank loans, financial contributions from friends and family often involve no interest or collateral. They can be large or small, and many will have open-ended repayment arrangements (Adams, 1992; Smets, 1996). One fundamental aspect of financial contributions from family and friends is reciprocity, meaning that lending is founded on the anticipation that the borrower will reciprocate the generosity shown to them in the future (Belmi & Pfeffer, 2015;

Platteau & Abraham, 1987). In cases where individuals (women entrepreneurs, for example) have limited access to formal financial sources, a reciprocal attitude is part of the mechanism for managing uncertainty and risk, as it often establishes and strengthens interpersonal ties (cf., Burt, 2002).

## Research approach

Prior research on women's entrepreneurship does not readily identify informal financing schemes that include traditional savings clubs, such as Ajo, as a solution for women entrepreneurs who find it hard to break the gender "glass ceiling" in the formal financial markets of the developing world (Jamali, 2009). This accounts for the absence of informal theories. Yet, theoretical perspectives that account for how women entrepreneurs relate to or are attracted to informal finance in the developing world not only help us understand how best to serve their needs but also increase diversity in entrepreneurship (Verheul et al., 2006) and empower women (Simba & Nziku, 2022). These societal benefits are rarely leveraged systematically because of a lack of understanding of the essence of informal financing systems in gendered contexts found across many regions of the developing world (Simba et al., 2023). In this project, as previously explained, we pay attention to the wider set of antecedents and configurations associated with the use of Ajo in the developing world.

### *Sample description and criteria*

Our choice to collect data from Nigerian women entrepreneurs was guided by our interest in informal financing—Ajo. Here, our expectation was that women would be more likely than men to face difficulty in accessing financial resources because of the unfavorable application requirements for formal financing (e.g., collateral, financial history, and guarantor) and the nature of the gendered society that favors patriarchy. Thus, women in our study's context need to overcome various constraints when trying to mobilize financial resources for their ventures (Simba et al., 2023). We took additional steps to validate this expectation and only included Nigerian women entrepreneurs who met the following criteria: (a) the woman must own and run a business; (b) the woman entrepreneur must have used informal financing means, such as Ajo, to start a business; (c) they must have at least one actively operating business; (d) the woman entrepreneur must have been involved in a group or association that provides informal finance; (e) the main operating business must have at least one employee. Table 1 illustrates the demographics of the participants who qualified for this study.

**Table 1.** Demographic profile of the sample.

| Entrepreneur's age group | Proportion of respondents | Educational level | Proportion of respondents | Marital status | Proportion of respondents | Industry | Proportion of respondents | Firm age | Proportion of respondents | No of employees (firm size) | Proportion of respondents |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18–30 yrs | 12% | Primary School certificate | 9% | Single | 34% | Agricultural & food sector | 11% | Less than a year old | 6% | 1–10 | 38% |
| 31–35 yrs | 19% | Secondary School | 25% | Married | 46% | Wholesale & retail | 25% | 1–5 yrs | 39% | 11–49 | 36% |
| 36–40 yrs | 16% | University degree | 39% | Divorced | 20% | Education | 13% | 6–10 yrs | 40% | 50–249 | 26% |
| 41–45 yrs | 17% | Masters degree | 17% | | | Hospitality | 13% | Above 10 years | 15% | | |
| 46–50 yrs | 28% | Doctorate degree | 1% | | | Manufacturing & IT | 35% | | | | |
| 51 yrs & above | 8% | Others | 9% | | | Fashion | 3% | | | | |
| **Total** | **100%** | | **100%** | | **100%** | | **100%** | | **100%** | | **100%** |

To identify potential participants for our study, we reached out to members of various local business associations that we considered popular among women entrepreneurs in Lagos State. These initial steps of the procedure were followed to identify suitable participants, and they led us to groups of women affiliated with Alagbado (meaning "corn-owner"), Egbe Alayo (meaning "association of the joyful ones"), and LAPO (meaning "Live Above Poverty") associations. After obtaining permission to contact these potential participants from the leaders of the aforementioned associations, we used their contact details, including telephone numbers and in some cases email addresses, to reach out to them. With their consent, each participant was sent a link to a self-reporting questionnaire survey via Microsoft Forms. The target participants were in the range of 220–235 women entrepreneurs affiliated with the associations mentioned above. Given our target population, a response rate of 200 usable questionnaires was considered significant (cf., Frohlich, 2002).

Leveraging existing connections was crucial, as several studies from the West African region have highlighted the importance of existing networks in mitigating the difficulties of accessing data within this area (e.g., Ogundana et al., 2023). The business associations in Lagos State, Nigeria, were of great interest to us because of their large population of women-owned enterprises compared to other parts of West Africa, or even Africa as a whole. Furthermore, women in Africa constitute a minority group and play a leading role in addressing poverty, underscoring the importance of highlighting their entrepreneurial endeavors in places like Nigeria. The process of collecting data commenced in June 2020 and continued through March 2022. Next, we will describe the methods we used and the operationalization of our variables.

### Data collection

To capture our theoretical constructs, we relied on self-reporting from women entrepreneurs. Although concerns about common method variance may arise when using this approach, we provide explanations as to how we addressed this. First, the context of our study—Nigeria—necessitates the exploration of alternative explanations. This is important because Nigeria is an understudied context. This contributes to a scarcity of data with regard to its entrepreneurship landscape. Accordingly, and because of the scarcity of research in this area, there is a greater need to consider other research approaches, including fuzzy sets over standard methodologies (Chang et al., 2010; Conway & Lance, 2010).

Second, prior studies on entrepreneurship support the validity and reliability of self-reported measures (Lechner et al., 2006; Semrau & Werner, 2014). To safeguard against the possibility of common method bias, we followed the recommendations of Podsakoff et al. (2003) and Chang et al. (2010), who evaluated and minimized the effect of common method bias in their research design. With this in mind, respondents were assured that the data we collected would remain anonymous and would be analyzed for research purposes only at an aggregate level (Chang et al., 2010). We followed Podsakoff et al. (2003) by creating a psychological and methodological separation in a way that guaranteed confidentiality, provided a cover story, and applied different response formats to prevent respondents from linking predictor variables to the criterion variables. We also used filtering questions in the questionnaire and interspersed questions about Ajo with requests for basic information on their firms and about their industry (Murray et al., 2005). Filtering questions create psychological breaks between questions on outcomes and antecedents, which help control for potential common method variance (Conway & Lance, 2010; Kammeyer–Mueller et al., 2010; Podsakoff et al., 2003). Third, we endeavored to employ existing metrics from the literature as extensively as feasible and, in doing so, affirm the internal consistency and factor structure of the measurement scales (Conway & Lance, 2010; Putka & Sackett, 2010).

### FsQCA analysis

For data analysis, we used the fuzzy set-based approach termed fsQCA. As a research technique, this has gained the attention of many scholars (e.g., Beynon et al., 2016; Huang et al., 2022; Stroe et al., 2018; Xie et al., 2021). We considered fsQCA a suitable research approach for our study for three main reasons. First, Ajo's significance as a source of informal finance, particularly within the context of a developing country, lacks substantial empirical evidence (Simba & Nziku, 2022; Simba et al., 2023). By developing typologies and assessing interactions, our goal was to show how existing assumptions about informal financing misrepresent business financing in the developing world. Second, a "configurational" approach places assumptions concerning informal finance like Ajo more clearly in focus. Third, although traditional correlational methods focus on associations between variables that are additive and symmetrical, our interest is in relationships between contextual factors that are complicated and may take diverse paths to reach certain outcomes (equifinality). While we do not claim that this approach is better than others, we do consider fsQCA to be particularly well-suited to this kind of research.

FsQCA, as a research approach, is based on fuzzy sets and is particularly suitable when the phenomenon being studied (in our case, informal finance—Ajo) is complicated, and the outcome could arise as a result of numerous different combinations of antecedents (Ciravegna et al., 2018). We adhere to the methodological guidelines outlined by Ragin and Pennings (2005) when utilizing fsQCA. First, we calibrate the antecedents (firm age, entrepreneur's age, firm size, marital status, educational level, and industry) and outcome (Ajo) into fuzzy-set ratings based on our theoretical underpinnings. Next, we identify the causal complexity through patterns of necessary and sufficient conditions (Ciravegna et al., 2018). Lastly, we follow Ragin and Pennings (2005) to assess the causal parameters for fit consistency and coverage in fsQCA against statements of sufficiency and necessity.

### *Calibration*

In line with the established approach used in fsQCA studies (Fiss, 2011; Verbeke et al., 2019; Woodside, 2015), we employed a calibration process for all variables, including the outcome variable, Ajo, and the six antecedents, utilizing a three-value system. A value of 1 signifies full membership, indicating entrepreneurs who use financial sources that unequivocally align with a specific set; for example, entrepreneurs who use Ajo. A value of 0 represents full nonmembership, signifying entrepreneurs who use other sources of finance distinctly outside of the defined set; for example, entrepreneurs who use banks. The value of 0.5 represents the point of "maximum ambiguity," serving as the threshold that distinguishes between "in" and "out." We calibrated the membership of financial sources into the corresponding fuzzy sets by drawing on insights from prior empirical studies and external benchmarks (Fiss, 2011; Verbeke et al., 2019). Below, we provide information pertaining to our calibration of the outcome variable and the antecedents for this study.

#### *Ajo*

The outcome of interest in this study is informal finance—*Ajo*, i.e., using a traditional savings club. Following prior empirical research (Simba et al., 2023), we assessed whether women entrepreneurs use Ajo or banks to fund their businesses by using the following proxy: *Where did you get the money to start your business project?* In our study, we employed the fuzzy set, as we calibrated using Ajo by setting 1 as full membership, that is, an entrepreneur who uses a traditional savings club (i.e., Ajo) to fund her business, and 0 as the nonmembership score, representing an entrepreneur who uses other sources of finance, such as a bank.

#### *Firm age*

We measured firm age as the number of years since the founding of the firm (Anderson & Eshima, 2013; Wennberg et al., 2016). We conducted a literature review to guide us in selecting relevant intervals for calibration. Research describes young firms as those that are within the first 10 years of a firm's founding (Coad et al., 2016). Elsewhere, scholarly research defines young firms as those aged five years or less (Arend, 2014). The age of firms owned by women entrepreneurs in our dataset spans from less than a year to 10 years and beyond. Following Arend (2014), we chose zero years (fuzzy score = 1) denoting young firms (with all firms aged five years and less also having full membership), and seven years as the point of maximum ambiguity, which defines the boundary between being "in" or "out" of the set of young firms (fuzzy score = 0.5). We chose 10 years for nonmembership (fuzzy score = 0), denoting older firms (with all firms aged 10 years and older having full nonmembership).

### *Firm size*

We follow prior empirical studies to measure firm size as the number of employees working for our target woman entrepreneurs (Boling et al., 2016; Eddleston et al., 2016; Wennberg et al., 2016). Empirical evidence suggests that informal financing is more popular in smaller firms due to limited access to bank loans, but not in large firms (Degryse et al., 2016).

To corroborate this, Berg and Fuchs (Berg & M, 2013) observed that the proportion of SME lending in the total loan portfolios of banks varies between 5 percent and 20 percent in five sub-Saharan African countries. This finding further indicates that informal financing is the primary source enabling smaller firms to acquire the necessary financial resources they need. Arend (2014), in an empirical study of SMEs, measured small firms as firms with 10 employees or less and large firms as firms with 100 employees or more. Consistent with Arend (2014), to validate our calibration, we chose one employee as full membership (with all firms having less than 10 employees being granted full membership), denoting small firms (fuzzy score = 1) and 25 employees as the point of maximum ambiguity, marking the cross-over point (fuzzy score = 0.5). We chose 50 as nonmembership (with all firms with more than 50 employees having full nonmembership), denoting larger firms (fuzzy score = 0).

### *Entrepreneur's age*

An entrepreneur's age is a proxy for their risk propensity. Older entrepreneurs' propensity for risk-taking declines with age (Josef et al., 2016), and they become less likely to consider taking out bank loans to fund their businesses. Physiological changes may influence mature entrepreneurs to gradually become more risk-averse and cautious in their decision-making processes with regard to risk. Moreover, due to their increased responsibility to care for children and family from around the age of 30, many entrepreneurs, particularly women, are more risk-averse and would therefore prefer an informal source of finance, such as Ajo, as it has no interest rate in comparison to a formal bank loan. Younger entrepreneurs, in contrast, are more willing to take risks, and this may make them more willing to take out bank loans to fund their businesses.

Younger entrepreneurs often possess higher levels of knowledge and skills, acquired through contemporary education and training in technology and business management (Zhao et al., 2021). This education equips them to navigate the intricate process of loan applications, thereby increasing their overall likelihood of obtaining a bank loan. We follow Zhao et al. (2021) to measure entrepreneurs' age as their chronological age, calculated from their birthday to the time when the survey data was collected.

For calibration, we rely on prior empirical studies (Zhang & Acs, 2018) that suggest that the age for risk propensity decline starts in a person's 30s due to changing responsibilities and lifestyles (Zhang & Acs, 2018). Following Zhang and Acs (2018), we chose 30 years as the threshold score for nonmembership (fuzzy score = 0) in the set of young entrepreneurs (with all entrepreneurs younger than 30 also having nonmembership), 36 years as the age that qualifies the entrepreneur for full membership (fuzzy score = 1) in the set of older entrepreneurs (with all entrepreneurs older than 36 years also having full membership), and 33 as the point of maximum ambiguity, which defines the boundary between being "in" or "out" of the set of older entrepreneurs.

### *Marital status*

Following previous empirical research (Delmar & Davidsson, 2000; Eddleston et al., 2016), we measured this variable using the marital status of women entrepreneurs (i.e., either single, married, or divorced). Empirical research suggests that married and divorced women entrepreneurs are less likely to suffer from high collateral requirements, interest rates, and personal guarantee requirements when using bank loans compared to single women entrepreneurs (Naegels et al., 2018). As such, marital status is transformed into a fuzzy set. That is, we categorize women entrepreneurs who are single in our dataset as the reference point for full membership (fuzzy set = 1). We categorize married and divorced individuals together and set this as the reference point for nonmembership (fuzzy set = 0).

### *Educational level*

Empirical evidence suggests that women entrepreneurs with at least a graduate education are more likely to use formal financing (Carter et al., 2003). Other studies suggest that entrepreneurs who have a higher educational background will find it easier to navigate the loan application process at banks than those who are less educated (Halkias et al., 2011). This assumption in academic literature suggests that highly educated women entrepreneurs are not likely to use Ajo and will instead prefer to use formal finance options, such as banks. However, whether this applies in a developing world scenario has not been substantiated. We measured the educational level as the highest level of education attained by women entrepreneurs (Eddleston et al., 2016). Following previous empirical studies (e.g., Eddleston et al., 2016, Naegels et al., 2018), we calibrated educational levels into a fuzzy set, with 1 denoting "less educated" (i.e., entrepreneurs with secondary school education or less) and 0 denoting "highly educated" (i.e., entrepreneurs who have a minimum of a university degree and above).

### Industry

Industry can be classified as capital-intensive. This is a proxy for the amount of capital needed to fund an entrepreneur's business. The larger the capital needed, the more we expect that women entrepreneurs will go to the bank, as banks are more likely to provide loans for such projects. Our data shows that women entrepreneurs operate in various industry sectors, such as agriculture, wholesale, retail, education, hospitality, information technology, manufacturing, food, and fashion. Prior research suggests that retail and service businesses tend to require less formal financing (Constantinidis et al., 2006; Eddleston et al., 2016; Orser et al., 2006). Based on prior research, as well as our understanding of the Nigerian context, we consider wholesale, retail, hospitality, and fashion as business activities that require low capital, with 1 denoting a low capital-intensive industry.

Industries such as agriculture, education, information technology, and manufacturing are defined as requiring high capital and are set at 0, denoting high capital-intensive industries.

## The fsQCA model

Table 2 presents descriptive statistics. Following the process of calibrating the outcome and antecedent variables (as shown in Table 3), we proceeded to identify potential configurations related to informal finance—Ajo. There are two important measures to be considered, with the fsQCA research approach comprising consistency and coverage. On the one hand, "consistency" denotes the degree of agreement among cases (combinations of antecedents) that are related to an outcome, in our case, Ajo. Explained differently, consistency measures the degree to which a causal solution results in an outcome, with values ranging from 0 to 1 (Skarmeas et al., 2014). Following Ragin (2008), we calculated consistency using the following formula: Consistency $(XiYi)$ = [min $(Xi, Yi)]/(Xi)$, where $Xi$ represents the degree of membership in a configuration

**Table 2.** Descriptive statistics for the antecedents of informal financing (Ajo) examined.

| Variables | Mean | Standard deviation | Count | Missing count |
|---|---|---|---|---|
| Informal finance (Ajo) | 0.845 | 0.362 | 200 | 0 |
| Firm age | 0.695 | 0.460 | 200 | 0 |
| Entrepreneur's age | 0.565 | 0.496 | 200 | 0 |
| Firm size | 0.845 | 0.362 | 200 | 0 |
| Marital status | 0.345 | 0.475 | 200 | 0 |
| Educational level | 0.72 | 0.449 | 200 | 0 |
| Industry | 0.725 | 0.447 | 200 | 0 |

**Table 3.** Calibration table.

| Conditions | Definition for coding | Role in theoretical model | Coding gradations |
|---|---|---|---|
| Using Informal finance (Ajo) | Getting money from a group-based savings/lending (Ajo) in which individuals, in a group, put in a given amount each month and one person in the group, on a rotating basis, takes the total amount raised that month (Simba et al., 2023) | Outcome condition | 0 = No use of Ajo<br>0.3 = A little<br>0.5 = Moderate<br>0.7 = Fairly<br>1 = Full use of Ajo |
| Firm age | The number of years since the founding of the firm (Anderson & Eshima, 2013; Wennberg et al., 2016). | Antecedent condition<br>The age of the firm. We chose 0 years for full membership. We then chose 10 years nonmembership. | 0 = Not young<br>0.25 = A little<br>0.5 = Moderate<br>0.75 = Fairly<br>1 = Very young |
| Firm size | The number of employees in the firm of the women entrepreneur (Boling et al., 2016; Eddleston et al., 2016; Wennberg et al., 2016) | Antecedent condition<br>Number of employees currently working in the firm. We chose one employee as full membership. We then chose 50 employees as nonmembership. | 0 = Not small<br>0.25 = A little<br>0.5 = Moderate<br>0.75 = Fairly<br>1 = Very small |
| Entrepreneur's age | Entrepreneurs chronological age at the time of the survey (Zhao et al., 2021) | Antecedent condition<br>The age of the women entrepreneur. We chose 30 years for nonmembership. We then chose 36 years full membership. | 0 = Not old<br>0.25 = A little<br>0.5 = Moderate<br>0.75 = Fairly<br>1 = Very old |
| Marital status | The marital status of women entrepreneurs (i.e., either single, married or divorced) (Delmar & Davidsson, 2000; Eddleston et al., 2016) | Antecedent condition<br>Single women entrepreneurs as full membership. 0 to represent married/divorced women as nonmembership. | 0 = Not single<br>0.3 = A little<br>0.5 = Moderate<br>0.7 = Fairly<br>1 = Fully single |
| Educational level | The highest level of education attained by the women entrepreneurs (Eddleston et al., 2016). | Antecedent condition<br>The level of education. Not educated women as full membership. 0 representing highly educated. | 0 = highly educated<br>0.3 = significantly<br>0.5 = Moderate<br>0.7 = Some<br>1 = Not educated |
| Industry | The type of industry that women entrepreneurs operate in based on the amount of capital required (Constantinidis et al., 2006; Eddleston et al., 2016; Orser et al., 2006) | Antecedent condition<br>Amount of capital required. Low capital-intensive industry as full membership. 0 represent high capital-intensive industry | 0 = high capital-intensive<br>0.3 = Significantly<br>0.5 = Moderate<br>0.7 = Some<br>1 = Not capital-intensive |

**Table 4.** Consistency values of plausible configurations.

| Firm size | Entrepreneur's age | Marital status | Educational level | Firm age | Industry type | Number of cases with membership greater than 0.5 in this plausible combination of antecedents | Informal Finance (Ajo) | Raw consistency |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | 1 | 1 | 9 | 1 | 0.995 |
| 0 | 1 | 1 | 1 | 0 | 0 | 4 | 1 | 0.990 |
| 0 | 1 | 0 | 1 | 0 | 1 | 5 | 1 | 0.939 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0.916 |
| 1 | 1 | 0 | 1 | 0 | 1 | 14 | 1 | 0.915 |
| 1 | 1 | 1 | 1 | 1 | 1 | 24 | 1 | 0.896 |
| 1 | 0 | 0 | 1 | 1 | 1 | 6 | 1 | 0.877 |
| 1 | 0 | 1 | 0 | 1 | 0 | 10 | 1 | 0.833 |
| 1 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 0.824 |
| 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0.819 |
| 0 | 0 | 1 | 0 | 1 | 1 | 34 | 1 | 0.814 |
| 0 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0.799 |
| 0 | 1 | 0 | 1 | 0 | 0 | 13 | 0 | 0.766 |
| 1 | 0 | 0 | 1 | 1 | 0 | 3 | 0 | 0.714 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0.558 |
| **Total** | | | | | | **200** | | |

and $Yi$ represents the degree of membership in the actual outcome (Verbeke et al., 2019).

Table 4 outlines the values of plausible configurations, along with the corresponding consistency values, using the recommended minimum threshold of 0.8 (Schneider & Wagemann, 2012). This threshold served as the basis for claiming "sufficiency" for the plausible configurations in our limited dataset. On the other hand, coverage evaluates how well a specific solution accounts for cases in the dataset that have a strong affiliation with the outcome condition (Skarmeas et al., 2014). It assesses how well the sum of the antecedents accounts for specific occurrences of the outcome (Ciravegna et al., 2018). Coverage essentially acts as a coefficient that indicates the proportion of outcomes that a specific solution covers (Ragin, 2008). To determine the empirical significance of individual solutions, both raw coverage and unique coverage are examined (Ragin, 2006).

Raw coverage displays the portion of the outcome that the given solution explains, whereas unique coverage shows what portion of the outcome is exclusively accounted for by the specific solution (Schneider & Wagemann, 2010). Additionally, overall solution coverage measures the degree to which the outcomes of interest can be ascertained based on the extracted set of solutions (Aluko et al., 2022). Thus, coverage functions as a measure of the solution's importance or relevance.

Table 5 presents the raw coverage and unique coverage of each configuration solution and the overall solution coverage.

To include long-term dimensions in our QCA analysis, we followed one of the five ways suggested by Fischer and Maggetti (2017). Fischer and Maggetti suggest using a separate condition to distinguish between younger and older

**Table 5.** Configurations linked to informal finance––Ajo.

| | Configuration solutions | | | | | |
|---|---|---|---|---|---|---|
| Antecedents | 1 | 2 | 3 | 4 | 5 | 6 |
| Firm age | ⊗ | ⊗ | ⊗ | • | □ | ⊗ |
| Firm size | • | • | □ | • | • | • |
| Entrepreneur's age | ⊗ | • | • | ⊗ | • | ⊗ |
| Marital status | □ | ⊗ | ⊗ | □ | • | ⊗ |
| Educational level | ⊗ | ⊗ | ⊗ | • | • | □ |
| Industry | ⊗ | □ | ⊗ | • | • | ⊗ |
| Raw coverage | 0.073 | 0.124 | 0.135 | 0.101 | 0.217 | 0.221 |
| Unique coverage | 0.073 | 0.031 | 0.043 | 0.040 | 0.217 | 0.160 |
| Consistency | 0.831 | 0.890 | 0.923 | 0.945 | 0.902 | 0.857 |
| **Solution coverage:** | **0.746** | | | | | |
| **Solution consistency:** | **0.882** | | | | | |

⊗ = Absence of an antecedent; • = Presence of an antecedent; □ = The presence or absence of the antecedent does not affect whether Informal finance—Ajo was used.

Each column represents a combination of antecedents, or a configuration, leading to the outcome 'use of informal finance—Ajo. Configuration 1 represents highly educated young women entrepreneurs with small older firms operating in a high capital-intensive industry (marital status not relevant for using Ajo). Configuration 2 represents highly educated older married/divorced women entrepreneurs with small older firms (industry not relevant for using Ajo). Configuration 3 represents highly educated, married/divorced older women entrepreneurs with older firms operating in high capital-intensive industry (firm size not relevant for using Ajo). Configuration 4 represents less educated young women entrepreneurs with small young firms operating in a low capital-intensive industry (marital status not relevant for using Ajo). Configuration 5 represents less educated single older women entrepreneurs with small firms operating in a low capital-intensive industry (firm age not relevant for using Ajo). Configuration 6 represents young married/divorced women entrepreneurs with small older firms operating in high capital-intensive industry (educational level not relevant for using Ajo).

cases to address time. This strategy requires conducting separate QCAs for the same sample of cases for different time periods, and subsequently inspecting the solution formulas for these different time periods (cf., Fischer & Martino Maggetti, 2017; Verweij & Vis, 2021).

For our purpose, we found firm age to be useful in identifying time-related factors, as it allows us to see whether particular antecedent conditions at that $\text{time}_0$ are associated with the use of Ajo at $\text{time}_1$. Given that our data collection ended in March 2022, we calculated the reporting firm age from 2022 going backward and consequently divided the 200 cases of women entrepreneurs into two time periods: "2013–2017" (for older cases) and "2018–2022" (for younger cases). Subsequently, we divided the data into two separate data matrices, one for each time period, with 111 and 89 cases included in each, respectively. We conducted QCA analysis to generate solution formulas for the two time periods, establishing a time series of antecedent configurations that lead to the outcome—the use of Ajo. This time series reveals both the conditions that remain constant over time and those that change, which helps "to find a set of explanatory factors that are stable for a certain period" (Fischer & Martino Maggetti, 2017, p. 356). Table 6 presents the solution terms for each specific time period, with the raw coverage and unique coverage of each configuration solution and the overall solution coverage.

**Table 6.** Configurations linked to informal finance––Ajo (for different time periods).

| Antecedents | Configuration Solutions 2013–2017 | | | Configuration Solutions 2018–2022 | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 |
| Firm age | ⊗ | ⊗ | ⊗ | • | • | • |
| Firm size | □ | □ | □ | • | • | □ |
| Entrepreneur's age | • | • | • | ⊗ | ⊗ | • |
| Marital status | ⊗ | ⊗ | ⊗ | ⊗ | • | • |
| Educational level | • | • | • | • | ⊗ | • |
| Industry | □ | ⊗ | □ | □ | □ | • |
| Raw coverage | 0.518 | 0.296 | 0.399 | 0.087 | 0.392 | 0.323 |
| Unique coverage | 0.094 | 0.058 | 0.110 | 0.068 | 0.283 | 0.323 |
| Consistency | 0.857 | 0.800 | 0.881 | 0.808 | 0.853 | 0.866 |
| **Solution coverage:** | 0.703 | | | 0.822 | | |
| **Solution consistency:** | 0.868 | | | 0.851 | | |
| Number of cases per analysis | 111 | | | 89 | | |

## Results

We identified six configurations of antecedents linked to informal finance (Ajo) in the context of women entrepreneurs in Nigeria. Table 5 provides a summary of our findings. Each column represents a unique combination of antecedents, or a configuration associated with Ajo. Black circles indicate that the presence of an antecedent links to the outcome. For example, in configurations 1, 2, 4, 5, and 6, firm size was identified as an antecedent of Ajo. On the other hand, a white circle with a cross indicates that Ajo is associated with the absence of specific antecedents. For example, the absence of firm age and educational level led to the use of Ajo in configurations 1, 2, and 3. In cases where there is a white square in the table, it indicates that the presence or absence of the antecedents did not have any impact on the outcome. For instance, marital status was not relevant for the use of Ajo in configurations 1 and 4. Figure 1 further elaborates on these six configurations.

Finally, to track configurations over time based on the results in Table 6, we compared the results of the model for the two time periods that had the highest consistency and coverage scores, thus taking a longer-term perspective (Verweij & Vis, 2021). In both time periods, "2013–2017" and "2018–2022," two antecedent conditions, including the entrepreneur's age and educational level, remained stable. Older women entrepreneurs who were less educated were more likely to use Ajo over time. For single women operating in a low capital-intensive industry classified as younger firms (2018–2022), marital status and industry were antecedent conditions influencing their use of Ajo.

## Discussion

The objective of this study was to examine informal finance (Ajo) and its antecedents among women entrepreneurs in Nigeria. Much of the extant literature acknowledges the important role informal financing schemes play

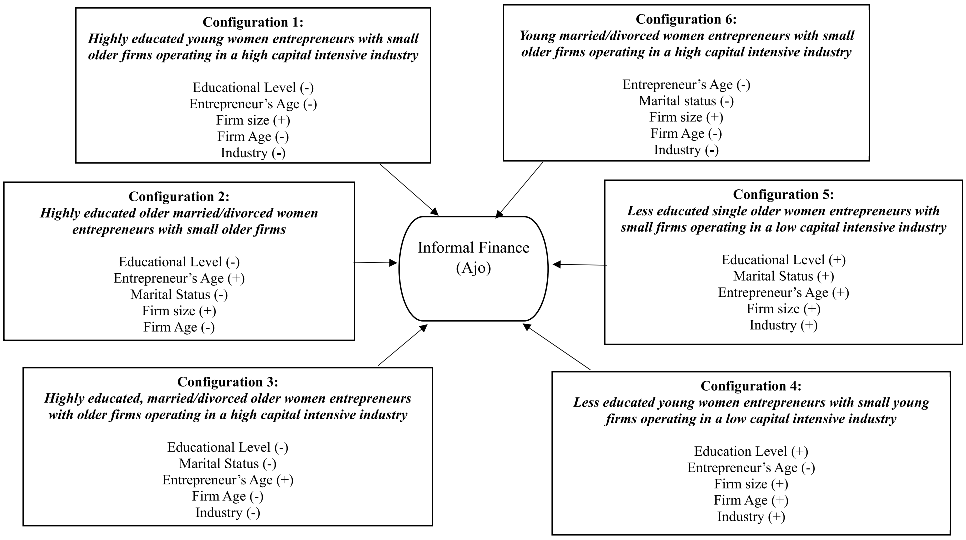


**Figure 1.** Configurations of informal finance ––Ajo. The configurations represent the six combinations of antecedents equifinality linked to informal finance—Ajo. The signs (+) and (-) denote how each antecedent appears in each configuration that, in our sample, was linked to the use of Ajo. For example, Configuration 1 depicts highly educated [Educational Level (-)] young women entrepreneurs [Entrepreneur's Age (-)] with small [Firm size (+)] older firms [Firm Age (-)] operating in a high capital-intensive industry [Industry (-)]. Antecedents that do not have any effect on Ajo in that specific configuration do not appear in the box representing such configuration. For example, in Configuration 2, industry is not relevant, and thus is not depicted in the box representing that configuration—Configuration 2 entails that highly educated older married/divorced women entrepreneurs with small older firms may use Ajo regardless of whether they operate in high or low capital-intensive industries

in women's entrepreneurship within the developing world (Kairiza et al., 2017; Mertzanis, 2019; Simba et al., 2023; Turkson et al., 2022). For women entrepreneurs in this context, pursuing an entrepreneurial endeavor is at least partly dependent on how they can draw on their savings or access informal finance (Allen et al., 2019; Aterido et al., 2013; Jamali, 2009Naegels et al., 2018). Existing studies that have focused on women's entrepreneurship and their access to finance have examined the conditions under which informal financing occurs, and this has had two effects. First, the absence of a standard framework for studying informal finance has limited our understanding of the theoretical mechanisms that underlie informal financing (C. G. Brush et al., 2009; Christianson & Whiteman, 2018; M. O. Ogundana et al., 2021). This has reduced the predictive power of theory-based assertions, for which the assumption of informal financing is critical. Second, informal financing has remained undercontextualized, with most studies focusing on universal theories often developed on the basis of a Western context (cf., Bamberger, 2018; Bruton et al., 2022;

Filatotchev et al., 2022). A very limited number of studies have focused on a developing world context (Aliber, 2015).

Contrary to what prior literature suggests, this study posits that no single variable, including firm size or marital status, is by itself a sufficient antecedent of informal finance in a developing world scenario. Instead, specific configurations of antecedents in the gendered micro–macro–meso environments of women entrepreneurs are associated with their use of Ajo, and there can be multiple configurations equifinally linked to their use of Ajo. One can interpret these configurations as syndromes–sets of elements working together to create a scenario where women entrepreneurs in the developing world, including Nigeria, obtain the financial resources they require for business reasons (Adams & Fitchett, 1992). We found support for the use of Ajo, an important, yet mostly untested, informal financing mechanism in the developing world. When the barriers to accessing formal financing services, including bank credit, are present, the use of informal financing mechanisms, such as Ajo, does occur under certain conditions (C. Brush et al., 2019; Bullough et al., 2022; Rerup et al., 2022).

The analysis of Ajo as an observed outcome arising in a developing world context suggests that this concept needs further review. As argued by scholars, different informal financing mechanisms can be used as a financial source by women entrepreneurs in the developing world to support their entrepreneurial endeavors (Adams, 1992; Aliber, 2015Na & Erogul, 2021; Naegels et al., 2018). However, given that such informal financing mechanisms have gained traction (see Aliber, 2015), tracking and analyzing the antecedents and configurations for a specific informal financing mechanism (Ajo) in a particular developing world context (women entrepreneurs in Nigeria) helps to provide alternative theoretical explanations to the bank–firm theory of formal financial relationships, which we believe have little sensitivity to context. We also identify the specific conditions under which the use of Ajo can become attractive in the developing world, regardless of the women entrepreneurs' age, firm size, and industry. We found that the six configurations of antecedents linked to informal finance (Ajo) lay a basis for actionable dialogue with scholars on how and why the use of Ajo has become an attractive financing option for women entrepreneurs in the developing world, showcasing that women are better served by informal financing schemes in these contexts (cf., Aliber, 2015).

### *Configuration 1 – highly educated young women entrepreneurs with small, established firms operating in highly capital-intensive industries*

In the developing world, young women entrepreneurs who are highly educated and own small enterprises established in highly capital-intensive industries will use Ajo for their entrepreneurial activities (cf., Simba et al., 2023).

Contrary to scholarly works that suggest that educated business people will prefer to use bank loans as a source for financing their entrepreneurial activities (see Carter et al., 2003; Irwin & Scott, 2010; Matlay & Solomon, 2008), this configuration illustrates that they also use Ajo. We find evidence suggesting that, regardless of the age of the entrepreneur (young), the age of their enterprise, and their industry, Ajo is accessible to them. The idea that young women entrepreneurs in the developing world have recourse to financial resources pooled via an Ajo scheme, as illustrated in Configuration 1, diverges from the tradition of the bank–firm theory of formal financial relationships, whereby formal financial institutions often consider an entrepreneur's age as a criterion for assessing their loan application (Hussain et al., 2019; Kairiza et al., 2017). Thus, the accessibility of Ajo to young women positions this informal financing scheme as an alternative financial source available to those operating in the developing world.

Furthermore, such insights demonstrate that taking a more contextual look at informal financing leads to unexpected places and critical questions (Hospes, 1997). From this perspective, there is a strong case for developing context-sensitive theories to depict categories of finance for women entrepreneurship in such conditions (cf., Na & Erogul, 2021; M. O. Ogundana et al., 2021). Scholarly literature recognizes the need to take a more global view on women entrepreneurs' financing in order to assist in developing better, more contextualized theories and concepts (Leitch et al., 2018; Na & Erogul, 2021). To that end, we put forward the following proposition:

**Proposition 1:** *In the developing world, young, educated women entrepreneurs who have established ventures draw on Ajo to finance their entrepreneurial activities.*

### *Configuration 2 – highly educated, older married/divorced women entrepreneurs with small, older firms*

This configuration suggests that, in a developing world scenario, mature women who may be either married or divorced and own a small but older venture will opt for Ajo as their preferred source of funding for their entrepreneurial activities. Regardless of their educational qualifications, their marital status, or the age of their ventures, Ajo remains attractive as a source of finance. When compared with the requirements of collateral security, credit history, and lengthy application procedures (Bhatt & Tang, 1998; Chen et al., 2017), Ajo is appealing to these women entrepreneurs due to its instant access, less bureaucratic application procedures, and flexible repayment arrangements (Simba et al., 2023). From a developing world perspective, this configuration suggests a traditional saving club (in the form of a rotating savings group, in this case, Ajo), is a financial source women entrepreneurs tap into to support their entrepreneurial endeavors (cf, Adams, 1992; Aliber, 2015; Na & Erogul, 2021; Naegels et al., 2018). Although critics of informal finance systems suggest that they emerge as a result of financial repression, such systems have proved resilient in the developing world and continue to shape women entrepreneurship (cf., Aliber, 2015). With this in mind, we offer the following proposition:

**Proposition 2:** *In a developing world scenario, traditional savings clubs like Ajo have become attractive as a source of finance, even for highly educated older women entrepreneurs with small, older enterprises, due to their accessibility in comparison with a bank loan.*

### *Configuration 3 – highly educated, married, or divorced older women entrepreneurs with older firms operating in a high capital-intensive industry*

Configuration 3 illustrates that highly educated, mature women entrepreneurs, either married or divorced, running an established enterprise in a high capital-intensive industry will use Ajo for entrepreneurial purposes. Even though their age is a factor in the choice of funding they can go for, other antecedents, including educational level, marital status, firm age, and industry, play some part in their decision in a developing world scenario. Informal financing mechanisms represent a substantial part of the financial system in the developing world (see Klapper & Singer, 2015; Tchamyou, 2019). Therefore, it is conceivable for women entrepreneurs, described in this configuration, to fulfill their entrepreneurship goals through informal financing schemes like Ajo, granting them access to financial resources they would otherwise not have via formal financing means (cf., Asiedu et al., 2013; World Bank, 2011). Existing scholarly research acknowledges that access to capital for business development is essential (e.g., Aterido et al., 2013; Beck et al., 2005; De Mel et al., 2008; Klapper et al., 2006). Consistent with that, this configuration positions Ajo as a source of essential financial resources for women entrepreneurs, even if their business profiles fall below the threshold required for a bank loan (cf., Simba et al., 2023). In view of this, the following proposition is presented:

**Proposition 3:** *In the developing world, Ajo enables even highly educated, mature women entrepreneurs to access the essential financial resources they require to support their entrepreneurial activities, regardless of the industry they are in, their marital status, and their educational qualifications.*

### *Configuration 4 – less educated young women entrepreneurs with small, young firms operating in a low capital-intensive industry*

A disproportionate number of women in the developing world, not least those who engage in entrepreneurship, are known to be less educated (Berguiga & Adair, 2021). In some way, their vulnerabilities translate into their systematic exclusion from participating in economics (see Bullough et al., 2022; Hechavarría et al., 2019). Notwithstanding that, empirical evidence underlying Configuration 4 suggests that Ajo provides this type of entrepreneurs, who are often less educated but own small, young enterprises in a low capital-intensive industry within a developing world context, an alternative financial source (cf., Aliber, 2015; World Bank, 2011).

While their personal and business profiles make them less attractive to formal financial lenders, Ajo, which is described in this research as a form of a traditional savings club (see M. O. Ogundana et al., 2021), is arguably a viable source of finance, filling the void left by formal financing services. Thus, a transaction lending criterion based on the profiles of young women entrepreneurs operating in the developing world involuntarily excludes them from meaningfully participating in formal financial markets (Simba et al., 2024). In some ways, considering this study's observations, crystallized to form Configuration 4, it can be argued that traditional methods of assessing and lending to the types of women entrepreneurs we have studied may not be as applicable to them, which is why their entrepreneurial context must be considered. Taking that into account, this study puts forward the following proposition:

**Proposition 4:** *In the developing world, Ajo provides less educated young women entrepreneurs who own small enterprises in a less intensive industry with the financial resources they need for their entrepreneurial activities.*

### *Configuration 5 – less educated, single, older women entrepreneurs with small firms operating in a low capital-intensive industry*

Configuration 5 suggests that, in the developing world, women entrepreneurs who are mature and own a small enterprise in a low capital-intensive industry heavily rely on Ajo for their entrepreneurial endeavors. This scheme of informal financing suits their types of businesses, which often range from hospitality, tailoring, retail, and accessories, to food items (also see O. Ogundana et al., 2022). This configuration indicates that being an uneducated, single, mature women entrepreneur does not exclude one from utilizing the Ajo scheme for entrepreneurial purposes (Aliber, 2015). In some way, the Ajo scheme can be considered inclusive and can appeal to vulnerable groups in society. Accordingly, Ajo must be considered a potent financing scheme that could signal a shift in how current research portrays informal finance in the formal sector versus informal finance literature. That is, instead of continuously taking a financial repression approach (see Roubini & Sala–i–Martin, 1992; Shaw, 1973), which tends to advance a bank–firm perspective of lender/borrower relationships, researchers must consider the configurations and the conditions underpinning informal financing for women entrepreneurship in the developing world. Against this backdrop, the following proposition is presented:

**Proposition 5:** *In the developing world, Ajo schemes constitute a crucial component of an inclusive informal credit market where uneducated, single, mature women entrepreneurs, who are involuntarily excluded from formal financial services, acquire vital financial resources for entrepreneurial endeavors.*

### *Configuration 6 – young, married/divorced women entrepreneurs with small, older firms operating in a high capital–intensive industry*

For Configuration 6, young, married, or divorced women entrepreneurs with small but established enterprises draw on Ajo to support their entrepreneurship. The size of their enterprise in particular can draw them toward Ajo. Other antecedents, including their age, the age of their enterprises, and their industry, have some level of influence on their decisions to use Ajo. This configuration implies that, for women entrepreneurs in the developing world who align with the profile and operational circumstances outlined, an informal financing scheme such as Ajo offers a different avenue for securing funds for entrepreneurial purposes, even within a capital-intensive industry. This goes to show that the overlay of elements in these women entrepreneurs' micro–macro–meso environments dictates the financial source(s) they use (Bullough et al., 2022; M. O. Ogundana et al., 2021; Simba et al., 2023). Such insights foreshadow the utilization of informal financial schemes like Ajo, whose underlying mechanisms could not be accounted for or fully understood by using the bank–firm paradigm often associated with assessing lender/borrower relationships in formal financing settings (Meyer & Nagarajan, 1991). This is not meant to praise the benefits of informal finance, but rather to contemplate and address the issues that frequently result in biased perspectives on informal finance. Therefore, we propose the following proposition:

**Proposition 6:** *In the developing world, young, married, or divorced women entrepreneurs who own established enterprises utilize Ajo schemes to fund their entrepreneurial endeavors in highly intensive industries.*

### *Research contributions*

Based on the theoretical arguments advanced through the configurations and propositions presented above, this study contributes to research on women entrepreneurship and entrepreneurial financing in the following ways. First, the study provides alternative theoretical explanations to the conventional bank–firm theory of formal financial relationships by depicting informal financing in the form of a scheme—Ajo—that is relatable to women entrepreneurs who are involuntarily excluded from participating in the formal finance markets in the developing world, thus, positioning Ajo as an informal financing paradigm suited to contexts where women entrepreneurs face prejudices in their entrepreneurship context (cf., Aliber, 2015; Simba et al., 2023).

Second, the study develops new knowledge, showcasing the antecedents and configurations that depict the conditions underpinning the use of Ajo by women entrepreneurs in the developing world. This study contributes to research calls for studies that pay attention and enable scholarly conversation within this context (Hamann et al., 2020) by revealing combinations of antecedents and configurations of Ajo. In some ways, this study also contributes toward contextualizing theory development in entrepreneurship research (Newbert et al., 2022; Welter, 2011).

### *Research implications*

The explanations that this study presents, through its configurations and antecedents, have academic, policy, practical, and social implications. Existing paradigms for exploring financing in a given context, e.g., bank–firm theory, seem to be more suitable for explaining lender/borrower relationships in formal financial markets and are less applicable for informal market relationships. This reveals the need for a better conceptualization of informal financing. Likewise, entrepreneurship-related policies that recognize the role of informal markets are needed. Instead of portraying informal financial markets as “underground financing” (Greenbaum et al., 2019) or employing financial repressive approaches to define them (see Gahadassi, 1998), policies must recognize the role and significance of informal finance systems in the developing world by reforming financial markets.

Based on the arguments presented in this study, there is an urgent need for policy reforms to recognize informal financing as a continuum of formal financing models in Africa’s financial markets. Such recognition will have significant practical implications for women entrepreneurs. Indeed, in addition to granting them financial freedom and empowerment, this could boost their capacity to finance and back their new ventures. This would increase the number of women-owned business ventures, creating equal opportunities for all, irrespective of one’s gender or orientation. Establishing a scenario characterized by vibrant women entrepreneurship is crucial to development in many regions of the developing world and can significantly contribute to poverty alleviation.

### *Research limitations and suggestions for future research*

Although this study was based on a vibrant community involving women entrepreneurs, it was limited to a single region. While this raises research questions pertaining to the generalizability of our findings, it also presents opportunities for future studies. To that end, we recommend future researchers replicate the fsQCA qualitative comparison techniques that we used for this study in different settings on a population with characteristics that are similar to the women entrepreneurs we sampled for our study. Using fuzzy sets, new empirical work should explore the women entrepreneurship and entrepreneurial financing nexus. The work should be guided by research questions aiming to develop new knowledge about the factors driving women entrepreneurs toward using informal finance more than formal financial services.

Crucially, these studies should pay attention to the psychosocial conditions behind the informal financing phenomenon. We believe that the findings from this work can potentially provide a better understanding of the reasons informal financing schemes have become an option for financing women-owned enterprises (see Bruton et al., 2021; Simba et al., 2023). A comprehensive fsQCA analysis of the factors that position informal financing schemes as the preferred business financing option can enhance our understanding of the interdependence and the interaction of the influential antecedents in a given context. Insights into the causations arising from such interdependence and interaction can contribute different perspectives that could enhance the polarized debate on informal vs. formal business financing.

## Conclusion

This confirms that informal financing schemes, including Ajo, provide meaningful support for businesses. In women's entrepreneurship, Ajo enables new venture creation and, as a result, we argue that such informal financing schemes should no longer be disregarded as remnants of the past that will fade away as societies modernize. Indeed, as this study has demonstrated, informal financing schemes like Ajo cater to women entrepreneurs with profiles that formal financing institutions would never consider as potential borrowers in the developing world. From this perspective, we conclude that schemes like Ajo provide equal opportunities in the developing world, regardless of one's gender or orientation. Thus, enabling access to key resources for business development in an inclusive way.

Our main arguments, through the configurations we have established, contribute to knowledge by showing that, in a developing world scenario, women entrepreneurs are, on the whole, better served by informal finance schemes than by formal financial services. This means that we can no longer adopt a one-sided view with regard to informal financing schemes in the developing world. Informal financing schemes must be recognized as a viable solution, and efforts to incorporate them into financial markets through policy development must be a priority, especially in the developing world.

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