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Intergenerational transmission of self-employed status in the informal sector: a constrained choice or better income prospects? Evidence from seven West-African countries

Laure PASQUIER-DOUMER

INTERGENERATIONAL TRANSMISSION OF SELF-EMPLOYED STATUS IN THE INFORMAL SECTOR: A CONSTRAINED CHOICE OR BETTER INCOME PROSPECTS? EVIDENCE FROM SEVEN WEST-AFRICAN COUNTRIES[1]

Laure Pasquier-Doumer
IRD, UMR 225 DIAL
Université Paris Dauphine
pasquier@dial.prd.fr

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Abstract

Social reproduction is the highest for self-employed as shown by an extensive literature from developed and developing countries. Very few studies however document the reason for this high intergenerational correlation of the self-employed status. The rare studies that have been done concern the US and show that children of self-employed benefit from an advantage when they are themselves self-employed. The purpose of this paper is to test if the second-generation of self-employed has an advantage related to the first-generation in the African context. It aims at highlighting the debate on firms heterogeneity in the informal sector, and seeks to contribute to understand the intergenerational transmission of inequalities. Using 1-2-3 surveys collected in the commercial capitals of seven West African countries in 2001-2002, this paper shows that the second-generation of informal self-employed does not have better outcomes than the first one, except when they choose a familial tradition in the same sector of activity. Thus, in the African context, having a self-employed father does not provide any advantage in terms of profit or sales and is not sufficient for the transmission of valuable skills. On the other hand, informal entrepreneurs who have chosen a specific enterprise based on familial tradition have a competitive advantage. Their competitive advantage is partly explained by the transmission of enterprise-specific human capital, acquired through experiences in the same type of activity and by the transmission of social capital.

Keywords: Informal sector, entrepreneurship, intergenerational link, human capital.

Résumé

Très peu d'études documentent les raisons la très forte reproduction sociale observée parmi les entrepreneurs, aussi bien dans les pays développés que dans les pays en développement. Les rares études, portant sur les E.U, montrent que les enfants d'entrepreneurs ont de meilleures performances quand ils sont eux-mêmes entrepreneurs que les enfants de salariés. Cet article teste si ce résultat se vérifie dans le contexte du secteur informel ouest-africain et cherche à en comprendre les raisons. Il vise par conséquent à éclairer le débat portant sur l'hétérogénéité des entreprises informelles, en identifiant des facteurs de succès, mais il cherche aussi à mieux comprendre les mécanismes à l'origine de la transmission intergénérationnelles des inégalités en Afrique. En se basant sur les enquêtes 1-2-3 collectées dans sept capitale ouest-africaines, cet article montre que la seconde génération d'entrepreneurs informels ne bénéficient pas d'un avantage comparatif, sauf s'ils bénéficient d'une tradition familiale dans leur secteur d'activité. Ainsi, dans le contexte ouest-africain, avoir un père entrepreneur ne suffit pas à la transmission de compétences managériales. En revanche, les entrepreneurs qui ont choisi leur secteur d'activité par tradition familiale ont un avantage qui s'explique principalement par la transmission de compétences spécifiques au secteur d'activité et par la transmission d'un capital social.

Mots clés : Secteur informel, entreprenariat, lien intergénérationnel, capital humain

JEL Classification: L26, J24, J62.

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1. Introduction

Since the 1970's, research on informal sector constitutes a growing part of the literature. The upsurge in interest is at least partly because most households in many developing countries, in particular poor households, derive a large part of their earnings from the informal sector. It constitutes an often unacknowledged contribution to national production levels as well. However, despite nearly four decades of research, no consensus has emerged on the origin and the persistence of the informal sector. A long tradition, namely the "dualist school", views informal sector as the less-advantaged segment of a dual-labour market (Lewis 1954, Harris and Todaro 1970, Pradhan 1995). In this view, informal entrepreneurship is the result of the saturation of the formal sector. Therefore, being worker in the informal sector is a constrained choice and a large informal sector is evidence of inefficiency. A more recent approach views the informal sector as a set of dynamic small firms, where individuals choose to be informal entrepreneurs because they expect a higher welfare than if they were wage-earners or formal entrepreneurs (Maloney 2004, Packard 2007). In this approach, a large share of informal self-employed may reflect an efficient allocation of labour. While the debate has become in the last years increasingly polarized (Bacchetta et al. 2009), an integrated approach is currently arising based on the idea of multi-segmented labour-markets (Chen 2005, Fields 2005). This alternative approach considers that the informal sector comprises different segments. The upper-tier segment may be populated by entrepreneurs who choose to enter into the informal sector while the lower-tier segment may be dominated by constrained households that may not have other choice of activity.

While there is no consensus on the voluntary nature of entry into informal self-employment, strong evidence points to a strong intergenerational transmission of the self-employed status. In the USA, half of the self-employed workers have a self-employed in their family (Dunn and Holt-Eakin 2000). In France, 41% of entrepreneurs have a father or father-in-law who is entrepreneur (Laferrère and McEntee 2001). This high intergenerational correlation of the self-employed status has been shown to be related to an advantage in terms of expected earnings of those entrepreneurs with self-employed fathers (Dunn and Holt-Eakin 2000, Lentz and Laband 1990, Fairlie and Robb 2007a 2007b, Colombier and Masclet 2006, 2008, Laferrère and McEntee 1996).

For developing countries, there is almost no evidence on the intergenerational transmission of the employment status. An exception is Pasquier-Doumer (2010a) who shows high social reproduction rates for the self-employed in West Africa. Starting from this observation, the present paper addresses the following questions: First, do the children of self-employed become themselves informal self-employed because they have an advantage relatively to the children of wage earner? Second, which are the sources of this advantage? Do they have a better access to valuable human capital, physical or social capital? If they had such advantage, one could support the idea that second-generation of self-employed would choose voluntary to enter into informal sector because they expect better incomes.

Addressing these questions is particularly relevant in the African context. Inequalities in Africa are very high and social mobility very low (Cogneau et al. 2007). The intergenerational

transmission of occupation is one possible cause of low social mobility. Furthermore, informal activities are the main provider of incomes and of jobs for most African urban dwellers (Brilleau et al. 2005). In addition, informal sector is the prevalent place of professionalization and integration of young people into the labour market, in particular for those who drop out of school (Walther 2007). Then, the paper will shed light on the heterogeneity of the informal sector, by testing whether entrepreneurial familial background may be a source of success for informal businesses.

To address these issues, I use a set of surveys called 1-2-3 surveys and carried out between 2001 and 2002 in seven economic capitals of West African Economic and Monetary Union. An important finding of this research is that having a self-employed father does not provide any advantage in terms of profit or sales and is not sufficient for the transmission of valuable skills, in the African context. However, informal entrepreneurs who have chosen a specific enterprise based on familial tradition have a competitive advantage. Their competitive advantage is partly explained by the transmission of enterprise-specific human capital, acquired through experiences in the same type of activity and by the transmission of social capital.

Section 2 presents the conceptual framework and the hypotheses to be tested. Section 3 provides an overview of the data and the main characteristics of the second generation of self-employed. Section 4 describes the estimation strategy. Section 5 examines the existence of a competitive advantage for the second-generation of informal self-employed. Section 6 analyses the composition of this advantage. Section 7 summarizes and concludes.

2. Conceptual background and hypotheses

Some studies analyze the impact of having self-employed parents for developed countries on the determinants of becoming self-employed rather than wage earner (Dunn and Holtz-Eakin 2000, Colombier and Masclet 2008, Laferrère and McEntee 1996). They all conclude that there is a substantially higher probability to become self-employed among children of self-employed. Two main channels are identified. First, successful entrepreneurs may be more able and willing to transfer financial wealth to their children and thus allow them to relax capital market constraints. Second, parents transmit to their children valuable work experience, reputation or other managerial human capital. Dunn and Holtz-Eakin (2000) find that, in the USA, family loans contribute very little to the correlation of self-employment status across generations. In contrast, self-employment experience of the parents has a strong effect. Because parental experience has a greater impact when parents were successful, the authors conclude that the significance of parents' self-employment reflects the transmission of skills or other aspects of human capital and not the conveyance of tastes for autonomy or for a self-employed lifestyle.

To my knowledge, only two studies aim at understanding the impact of familial background on small business outcomes (Lentz and Laband 1990, Fairlie and Robb 2007b). Again both relate to the USA. Lentz and Laband (1990) suggest that individuals acquire general managerial skills while growing up in the context of family business through the continued

exposure to the family business. Children of self-employed have then an advantage compared with children of wage-earners, who do not see their parents at work: *"The father/teacher passes on to his son valuable human capital about running a business operation; the son acquires this integrated, managerial human capital as a by-product of growing up. By the time he reaches the age of, say, eighteen, when most other youths his age are just starting to acquire job-specific skills (via employment training programs) or more general occupational skills (via college), the son of proprietor normally has already had an opportunity to accumulate the equivalent of an integrated, managerial education."* (p. 564). The authors show that second-generation of self-employed have greater success compared with first-generation self-employed. Because second-generation of self-employed are found to start their businesses at a significantly younger age and to commence their business careers with a significantly greater quantity of managerial human capital, the authors conclude that children of self-employed have a competitive advantage through early acquisition of managerial human capital, and that this advantage will predictably serve to motivate voluntary choice of being self-employed in children of self-employed.

Along similar lines, Fairlie and Robb (2007b) identify three potential channels that can explain the better outcomes of the second generation of self-employed: the acquisition of general business or managerial experience in family-owned businesses, the acquisition of industry- or firm-specific business experience in family-owned businesses and inheritances of businesses. In the latter case, parents transmit capital as a reputation capital or an established clientele from one generation to the next. With another dataset than Lentz and Laband, they show that having a prior work experience in a family member's business is a significant determinant of small business outcomes. They also find that inherited businesses are more successful than non-inherited, but their representation among the population of small businesses is very limited. The authors conclude that the second-generation of self-employed has an advantage in terms of business outcomes compared with self-employed without self-employed family member through the transmission of managerial experience and/or firm-specific business experience.

In developing countries, there is no study that specifically addresses the impact of familial background on informal business outcomes. However, some evidence can be found in the related literature on social capital, in particular on the effects of familial kin-ship on businesses outcomes. For example, Fafchamps (2002) investigates whether social networks improve firm productivity among agricultural traders in Madagascar. While a quarter of surveyed traders had either a father or a mother in trade and 14% are in this business because of family traditions, the author finds that having close relatives in agricultural trade does not have a positive effect on productivity. Furthermore, productivity is higher among traders who learned the business on their own and did not receive coaching from relatives. The author therefore concludes that family relationships do not constitute a productive component of social capital. Following Granovetter (1995), the author interprets his result as evidence that strong links are less useful than weak links, perhaps because they carry less information. However, Fafchamps' results may not be generalized to the whole informal sector and to West African countries. Firstly, the way of acquisition of skills in West African countries is

very different from that in Madagascar and, secondly, trade is a specific sector of activity in terms of acquisition of skills and level of capital required.

In the West African informal sector, there are two main ways to acquire skills: through traditional apprenticeship training and through informal on-the-job learning (Haan 2006, Liimatainen 2002). Traditional apprenticeship in the informal sector consists of private contractual arrangements between an apprentice or his/her parents and a master craftsman who agrees to provide practical training in the workplace, and subsequently certify the training in return for a fee or reduced earnings while learning[1]. In the capital of seven West African countries, 28% of the informal business owners have learned their profession through traditional apprenticeship training, whereas this proportion is only 14% in the Malagasy capital. If trade is excluded, then the share of traditional apprenticeship training rises to 41% of informal business owners in West African countries but only 17% in Madagascar[2]. Therefore, informal apprenticeship is much less frequent in Madagascar than in West Africa, and less in trade activities than in manufacturing or non-trade service activities. Finally, trade is a very specific sector of activities in terms of the amount of capital required. For example, in the West African countries the average amount of capital in informal trade businesses is 528 international dollars compared with 1053 in the other sectors[3].

Hypotheses

The brief literature review illustrates that evidence on the effects of familial background on informal businesses outcomes is indeed scarce in the context of developing countries. The main hypothesis to be tested is whether second generation informal entrepreneurs has a competitive advantage compared with the first generation. I then attempt to identify the channels that can explain possible differences in business outcomes. Following the empirical literature on developed countries, two main channels are tested: physical capital transfers and human capital transfers. As in developed countries, having a self-employed family member may facilitate the acquisition of physical capital for two possible reasons: Self-employed, at least successful ones, may have more capacity to invest than a wage earner. Alternatively, some of the second generation self-employed simply inherit a part or the whole enterprise from their family member.

As Lentz and Laband (1990), I distinguish two types of human capital transfers, general-managerial and enterprise-specific skills. General administrative and personnel management skills fall into the former type, while information specific to the firm's production process characterizes the latter. I assume that growing up in a self-employed family may procure

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[1] In West Africa, informal apprenticeship training is commonly conceived in three phases: during the first year, the apprentice is expected to observe what the master craftsman and the workshop workers are doing. In a second phase, the apprentice is shown certain practices and gradually asked to do some practical work. In the ultimate phase, the apprentice is fully involved in workshop activities and held responsible for his or her output (Haan 2006). During this last phase, organizational, management and business skills are also transmitted, including costing, marketing, as supplier and customer relations.

[2] Source: Author's computation based on 1-2-3 surveys (Phases 2, 2001/02, AFRISTAT, DIAL, INS for Abidjan, Bamako, Cotonou, Dakar, Lome, Niamey, Ouagadougou and Phase 2, 2001/02, INSTAT, DIAL for Antananarivo).

[3] Source: Author's computation based on 1-2-3 surveys (Phases 2, 2001/02, AFRISTAT, DIAL, INS)

better endowments in general-managerial skills, as a by-product of the continued exposure to the family business. In addition, there is intergenerational transmission of enterprise-specific skills only if the sector of activity of the family business is closely related to the one of the respondent. For this reason, I consider two types of second-generation of self-employed. First, those whose parents were self-employed in a business which was essentially unrelated to the one of the respondent (*SE* hereafter), and second those whose parents or family members were owners of a highly similar business (*TRAD* hereafter).

Indeed, having a family member involved in the same type of activity can improve the acquisition of enterprise-specific skills, in particular in the West African context where traditional apprenticeship is prevalent. The choice of the master is essential for the transmission of skills. Some masters may take advantage of a high demand for training, multiplying the number of apprentices. Consequently, they do not have time to supervise the apprentices and they do not have enough turnovers to make them practice (Charmes and Oudin 1994). If one of the members of the family is involved in a certain type of business, it may be easier for the family to choose a master with high professional skills and sufficient turnover. Moreover, family ties continue to play an important role in the selection of apprentices in West Africa (Birks et al. 1994). Having family members in the same activity may allow young people to be more easily accepted by a "good" master. In addition, because traditional apprenticeship training has its roots in socio-cultural traditions that restricted the transfer of skills to members of the family or the clan (Haan 2006), one can think that the transmission of enterprise- specific skills may be better with a master related to the family.

In the case of acquisition of human capital through experience, having a self-employed family member may increase the opportunities to accumulate experience in his/her business. This experience may also be more valuable in terms of acquisition of skills because the owner may give more responsibility to a family member. Indeed, socio-cultural traditions facilitate transmission of skills inside the family, and the family could have a greater interest in the professional success of one of its members than in that of someone unrelated to the family.

For all these reasons, having a self-employed family member in the same type of activities may increase endowments in enterprise-specific skills but also return to these skills.

In their study, Lentz and Laband (1990) do not include social capital as a possible way of intergenerational transmission of self-employed status. Fairlie and Robb (2007b) introduce it but very indirectly, as a component of the inheritance of a family enterprise. They do not formally test it. Because of imperfect markets, social capital plays in developing countries a crucial role in the performance of informal businesses (Bacchetta et al. 2009). As shown by Fafchamps (2002), social capital and more precisely social networks improve the circulation of reliable information about technology and market opportunities as well as the blacklisting of unreliable agents. Social capital can also make it easier to build up a clientele through reputation and trust. In addition, as shown by Pasquier-Doumer (2010b) a large part of the social network mobilized with the aim of improving professional activities is related to the family. One can thus think that the potential advantage of entrepreneurs with family members

involved in this type of business can be partly explained by better endowments in social capital but also by higher return to this capital.

To sum up, I suppose that the channels that can explain possible competitive advantage of second-generation of self-employed are the intergenerational transmission of general-managerial skills and physical capital or higher return to these factors, as far as children of self-employed are concerned (*SE*). For entrepreneurs with self-employed family member in the same type of activities (*TRAD*), one may add two other channels: transmission of enterprise-specific skills and social capital.

3. Data and characteristics of second-generation of self-employed

The Data

In this study, I use a set of surveys called 1-2-3 surveys and carried out between 2001 and 2002 in seven economic capitals of West African Economic and Monetary Union (WAEMU) countries: Cotonou (Benin), Ouagadougou (Burkina Faso), Abidjan (Côte d'Ivoire), Bamako (Mali), Niamey (Niger), Dakar (Senegal) and Lomé (Togo). A 1-2-3 survey is a multi-layer survey organized in three phases and specially designed to study the informal sector (see Brilleau, Ouedraogo and Roubaud, 2005). For this paper, I use the phases 1 and 2 of the surveys. Phase 1 is a representative labour force survey collecting detailed information about individual employment and socio-demographic characteristics, in particular the sector and status of activity of the father when the individual was 15 years old. Phase 2 is a survey which interviews a sub-sample of informal production units identified in Phase 1. It provides very detailed data on profit, sales, investment, and inputs of the informal enterprises and on the characteristics of the owner. The 1-2-3 surveys define informal enterprises as small production units that (a) do not have written formal accounts and/or (b) are not registered with the tax administration. The 1-2-3 surveys do not apply a size criterion.

A major advantage of the 1-2-3 survey is its nested structure because Phase 1 ensures that Phase 2 delivers a representative picture of the informal sector. Another one is that it allows us to identify the second generation of self-employed. Second generation of self-employed is defined in two ways. In a broad definition, it includes the informal business owners, whose father was self-employed (*SE*)[4]. In a narrow definition, informal entrepreneurs of the second generation of self-employed are defined as entrepreneurs whose benefit from a familial tradition in the way to run a business in their sector of activity (*TRAD*)[5]. It is important to note that *SE* and *TRAD* are not exclusive: an informal entrepreneur may have a father self-employed in a different sector of activity and another family member in the same sector of

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[4] The activity of the mother was not included in the Phase 1 questionnaire. This is the reason why I had to limit the analysis to the activity of the father.
[5] More precisely, TRAD takes the value 1 if the owner says
- She or he has created the informal business by familial tradition, and/or
- She or he has chosen the informal business' product/services by familial tradition, and/or
- One of his/her family members has created the informal business.

activity. Overlap may also exist when the father is self-employed in the same sector of activity.

1-2-3 survey also provides a number of useful proxies of skills, social capital and the intergenerational transmission of physical capital. To take into account general managerial skills, I have three variables at my disposal. The first one is whether the entrepreneur has had a managerial experience before becoming the owner of the informal business surveyed. A previous experience as entrepreneur in another business is supposed to increase the ability of the owner to manage the informal business. The second proxy is whether the owner knows micro-finance institutions. It reveals better access to information that could improve productivity, and better access to external finance as well. The last one is whether the owner keeps books. It implicates better organization in the way of conducting the business.

There are three proxies of enterprise-specific skills. The first one takes the value 1 if the owner learned his profession by traditional apprenticeship training and the value 0 otherwise, for the most part if he or she learned his profession on his own. Traditional apprenticeship training gives to the owner a previous experience in his sector of activity during which transmission of enterprise-specific skills may be high. The second proxy is whether the entrepreneur has worked in the informal business before becoming the owner. This experience may give him a good knowledge of technology used in the business, of market opportunities, of clientele and suppliers. It also allows him to be known by the clientele. The third one is the number of years of experience in his actual activity.

Social capital of the informal entrepreneur is approached by two dummies. The first one takes the value 1 if the entrepreneur says he or she doesn't have any difficulties in finding clientele and that the lack of clients is not the main obstacle to activity development. It takes the value 0 if one of these statements is not made. This variable may reflect consumer loyalty, good reputation, and that the business is well-known. However, this variable may generate an endogeneity bias because it is likely that the self-assessment of the owner is influenced by the profit level. Entrepreneurs with high profit are more likely to say they don't have any lack of clientele. That is why I retain the membership to a professional association as proxy of social capital. This variable is supposed to be more exogeneous. In the West-African context, knowing the way of joining a professional association and being accepted as member may be more linked with the level of social capital than with the size of the enterprise, although this topic is very poorly documented. Another way of convincing the reader is that the size of the enterprise measured by the log of the amount of capital or by the log of the profit is a very poor predictor of the membership to a professional association[6].

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[6] When I estimate a logit model, where membership to a professional association is the dependant variable, the log of the amount of capital and the age of the enterprise are the regressors, and where sex, level of schooling, migration status, religion, ethnic group, polygamous status of the owner are introduced as controls, I am able to predict correctly the membership to a professional association in only 0.3% of cases.

Inherited physical capital is taken into account using two variables: (i) the amount of physical capital obtained from the family[7], and (ii) a dummy that takes the value 1 if the physical capital obtained from the family is higher than half of the whole amount of physical capital.

For all countries, I have at my disposal 5718 informal enterprises surveyed with corresponding data of the phase 1, and thus, on average, 817 enterprises per economic capital[8]. Unfortunately, the scarcity of entrepreneurs with family members involved in the same type of activity (on average 120 per capital) does not allow me to conduct a separate analysis for each city. All the data are pooled and I use country dummies in the estimations.

What distinguish second generation of self-employed?

The second-generation of self-employed represents 66% of the informal business owners. Among them, 61% have a self-employed father and 16% benefit from familial tradition[9] (Table 1). As expected, second-generation of self-employed has on average better outcomes than the other informal business owners[10]. However, the difference is only significant for the informal businesses with familial tradition. Their enterprises are older, in particular when they benefit from a familial tradition and they are more homogeneous with regard to ethnic criteria and familial relationship. Informal businesses with familial tradition are in addition more labour intensive and less capital intensive. They are overrepresented in the sector of wholesale or retail shops and services, with the exception of repair services and transport, where they are underrepresented, as in the sector of construction (Table 1). On the contrary, entrepreneurs with a self-employed father are overrepresented in the sector of petty traders and underrepresented in the sector of services.

Besides differences in the characteristics of their businesses, second generation of self-employed distinguish themselves by several personal characteristics (Table 2).

First, they are less educated and more experienced. They have on average two less years of schooling and two more years of experience in their profession. This result is similar to the one obtained by Lentz and Laband (1990) for USA and by Colombier and Masclet (2006) for Europe. These authors explain this result by a relatively less need for second-generation of self-employed to acquire formal training since they have the opportunity to accumulate equivalent training through the occupation of their father.

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[7] More precisely, I consider that physical capital is obtained from the family if the owner said that the capital is funded by familial loan, inheritance or by donation from one member of the family or from a friend. Unfortunately in the latter case, we cannot distinguish in the survey between friends and family. I suppose that donation from friends is virtually nonexistent, as shown by Pasquier-Doumer (2010b) in the case of Ouagadougou.

[8] Minimum: 632 in Niamey; Maximum: 942 in Dakar.

[9] 16% of second-generation of self-employed have both a self-employed father and have benefited from a familial tradition.

[10] Except for sales as far as the whole second generation of self-employed or owner with self-employed father are concerned;

Then, the second generation of self-employed has a disadvantaged background, as shown by the weaker level of schooling of their father. They are more often migrants, whatever the definition of self-employed used.

Table 1: Characteristics of informal businesses

Informal business characteristics	(1) 2nd genera-tion	(2) First genera-tion	(2)-(1)	(3) With self-employed father (*SE*)	(4) Non SE	(4)-(3)	(5) With familial tradition (*TRAD*)	(6) Non Trad	(6)-(5)
Profit (mean, Int. $)	348.0	323.1	NS	328.5	309.2	NS	379.6	309.6	**
Sales (mean, Int. $)	1133.6	1027.9	NS	990.8	959.9	NS	1170.3	941.7	***
Capital (mean, Int. $)	790.0	757.4	NS	790.2	761.6	NS	713.2	791.6	NS
Paid labour (mean, monthly hours)	247.6	243.4	NS	246.0	246.5	NS	271.7	241.3	***
Age of the enterprise (mean)	7.5	5.9	***	7.2	6,5	***	9.9	6,4	***
Ethnic homogeneity in the enterprise (%)	95.7	94.4	***	95.7	94.6	***	96.1	95.1	***
Share of the workers from the same family (%)	92.0	90.4	***	91.9	90,9	**	93,6	91.1	***
Sectors of activity (%)									
Clothing and apparel	9.7	11.0	*	9.7	10.7	NS	7.4	10.6	NS
Other manufacturing and food	11.5	13.4	NS	11.4	13.3	NS	11.6	12.2	NS
Construction	5.7	5.7	NS	5.8	5.6	NS	2.9	6.2	***
Wholesale/retail shops	12.0	9.6	NS	12.0	9.9	NS	15.9	10.2	***
Petty traders	35.0	33.4	***	35.0	33.7	***	33.8	34.6	NS
Hotels and restaurants	6.3	6.1	NS	6.3	6.2	NS	5.8	6.3	NS
Repair services	4.4	4.9	***	4.4	4.8	**	3.3	4.8	***
Transport	3.8	3.6	NS	3.8	3.6	NS	1.9	4.1	***
Other services	11.7	12.3	NS	11.7	12.3	NS	17.2	10.8	***
N obs	*3571*	*2147*		*3253*	*2465*		*843*	*4875*	
Frequency	*66.2*	*33.8*		*60.7*	*39.3*		*16.2*	*83.8*	

Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS)
Note: The column Sign test with t-test the significance of the difference between *SE* versus non-*SE* and between *TRAD* and non-*TRAD*. *, **, ***, NS means respectively that the difference is significant at the 10% level, 5% level, 1% level, not significant.

If the results of Lentz and Laband (1990) stand in the West African context, I expect that children of self-employed have more managerial skills and a higher familial investment in terms of physical capital. In this first descriptive approach, it seems not to be true. Although they have more often a prior experience as manager, they neither have a better knowledge of financial institutions nor a better managerial organization. Moreover, their family did not invest more in their business than the average of informal entrepreneurs.

As far as informal entrepreneurs with familial tradition are concerned, I expect that they are endowed with more enterprise-specific skills, social capital and familial investment. It seems at this first stage largely true. On average, they have accumulated more experiences that are likely to give them higher enterprise-specific skills: experience in the informal business before becoming the owner, experience in their profession, and informal apprenticeship

training. Their social capital seems to be larger through a more frequent membership of a professional association and through a more loyal clientele. Their family contributes more to the capital formation than family of informal business owner as a whole, both in absolute and relative terms.

Table 2: Informal entrepreneurs characteristics

Owner characteristics	(1) 2nd generation of self-employed	(2) First generation of self-employed	(2)-(1)	(3) Self-employed father (SE)	(4) Non SE	(4)-(3)	(5) With familial tradition (Trad)	(6) Non Trad	(6)-(5)
Female (%)	49.1	52.3	***	54.2	60.6	***	55.4	57.0	NS
Years of education	2.9	5.0	***	2.8	4.6	***	3.0	3.6	***
Literacy in French (%)	40.1	59.9	***	37.0	58.7	***	40.7	46.4	***
Polygamous (%)	18.2	14.0	***	18.3	14.3	***	19.2	16.3	**
Muslim (%)	59.1	52.8	***	58.4	54.7	***	66.5	55.1	***
Has not migrated (%)	31.3	56.6	***	28.7	57.1	***	40.8	39.6	NS
Has migrated recently (%)	10.4	5.9	***	10.8	5.8	***	11.2	8.4	**
Father has primary education (%)	3.5	13.7	***	2.8	13.3	***	4.9	6.5	**
Father has second. edu. or more (%)	1.9	14.6	***	1.0	14.3	***	5.3	6.9	**
Managerial skills									
Prior management experience (%)	19.0	16.0	***	19.3	16.0	***	14.5	18.6	***
Knowledge of MFI (%)	34.1	40.4	***	34.0	39.8	***	31.7	37.1	***
Owner keeps books (%)	30.1	40.8	***	29.3	40.5	***	35.1	33.4	*
Enterprise-specific skills									
Trad. apprenticeship training (%)	28.7	26.7	NS	28.0	28.2	NS	31.8	27.3	***
Exp. in that enterprise before becoming the owner (%)	47.3	38.2	***	47.4	39.4	NS	51.8	43.8	***
Experience in this profession outside this enterprise (%)	33.7	40.6	***	33.2	40.4	***	33.7	36.5	NS
Years worked in this profession	10.1	8.2	***	10.1	8.6	***	11.5	9.1	***
Social capital									
No difficulties to find clientele (%)	26.6	25.1	NS	26.5	25.4	NS	31.8	25.0	***
Member of a prof. association (%)	4.8	2.8	***	4.6	3.3	***	7.2	3.5	***
Familial investment									
Share of familial investment in total investment (%)	40.0	40.6	**	39.3	41.6	NS	44.8	39.3	***
Amount of familial investment	240.0	197.7	NS	238.1	206.6	NS	262.7	218.5	**
Family gives a location (%)	5.9	6.5	NS	5.8	6.6	NS	7.0	5.9	***

Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS)
Note: The column Sign test with t-test the significance of the difference between SE versus non-SE and between TRAD and non-TRAD. *, **, ***, NS means respectively that the difference is significant at the 10% level, 5% level, 1% level, not significant.

4. Estimation strategy

The first step is to test whether being second-generation of self-employed affects firm performance. For the reasons mentioned above, I anticipate that *TRAD* has higher positive effects on the productivity of the factors that *SE*.

Let us consider a firm with labour, physical, and human capital denoted by *L*, *K*, and *H* respectively. The functional form used for regression analysis is basically a Cobb-Douglas production function and is estimated in log form. Given the Cobb-Douglas functional form, *SE* and *TRAD* potentially raise the efficiency of labour, physical and human capital out as a Hicks-neutral multiplicative term. I will then estimate the following equations:

$$V - (g_{SG}(SG)L)^{\alpha}(h_{SG}(SG)K)^{\beta}(l_{SG}(SG)H)^{\gamma} - f_{SG}(SG)L^{\alpha}K^{\beta}H^{\gamma} \tag{1}$$

where *V* stand for the profit, SG indicates whether the owner is a second-generation of self-employed with $SG = SE, TRAD$, $g_{SG}(SG)$, $h_{SG}(SG)$, $l_{SG}(SG)$, and $f_{SG}(SG)$ are functions that express the effect of *SE* or *TRAD* on the efficiency of labour *L*, physical capital *K*, and human capital *H*.

If *SE* or *TRAD* has a significant positive effect on *V*, this shows that businesses with owners belonging to the second-generation of self-employed get higher return from their labour and physical and human capital. In that case, *SE* and *TRAD* enters the regression as a productivity shifter.

To estimate equation (1), I choose profit as the firm's performance measure. Profit is the difference between total sales and total purchases in value that means all costs for intermediate inputs including all paid wages and the income of the owner. Price differences between countries are adjusted. Profit is the preferred measure of output but I use total monthly sales as an alternative measure of output, as robustness check.

Labour (*L*) is defined as the number of monthly hours used in the informal business. Physical capital (*K*) includes buildings and other locations, machines, furniture, vehicles and tools. All items are evaluated at replacement costs. Like for profit, price differences between countries are adjusted. Human capital (*H*) is measured by the potential experience of the owner[11] in the labour market which reflects the gross time that entrepreneurs have spent while in the labour force, and by the owner's education.

In these estimations, I am confronted with the usual problem of possible endogeneity of the production factors because of accumulation over time and unobservable characteristics. Unfortunately, to correct for this bias I have at my disposal neither panel data nor good instruments. That is why I choose a very simple approach that just splits the sample into informal businesses with different levels of capital stock and labour.

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[11] Age minus years of schooling minus seven, the legal age at school entry.

In a second step, I examine the channels through which these variables raise owner productivity. As argued above, one possible channel is through intergenerational transmission of factors of production allowing a better access to these factors, in particular managerial skills, enterprise-specific skills, physical and social capital. Another possible channel is through higher total factor productivity. To test these hypothesizes, I expand the estimation of equation (1) to include proxy of inherited physical capital K_I. I also split human capital into general managerial skills H_{MS} and enterprise-specific skills H_{ESS}, and, following Fafchamps (2002), I introduce in the production function social capital as input, denoted S. The production function becomes:

$$V = F(L, K_I, K_{NI}, H_{MS}, H_{ESS}, S) \qquad (2)$$

I then identify which of these variables is the more able to capture the effect of having benefited from a familial tradition or of having a self-employed father.

Finally, employing decomposition methods will allow me to evaluate the respective weights of greater performance due to better endowments and those due to higher returns.

5. Does second generation of informal self-employed have a competitive advantage?

To test if having a self-employed father procures an advantage for informal business owner in terms of business performance, I estimate equation (1) where business performance is measured by the log of profit and sales[12]. The regressors include a dummy that take the value 1 if the owner has a father self-employed (*SE*), labour and capital in the log form[13], and human capital variables.

I introduce also some additional variables to control for various background characteristics: owner's sex because women may face difficulties entering the upper-tier segment of informal sector for various reasons (household responsibilities, discrimination, restricted mobility); polygamous status because redistributive pressure inside the family may be higher and thus capital accumulation more difficult (Morrisson 2006); religion and ethnic group because they may give access to different social networks; migration status because recent migrants may have weaker knowledge about market opportunities[14].

Because of moral hazard consideration, family workers or workers from the same ethnic group as the owner may be more productive. For this reason, I include the share of family workers and the share of workers from the same ethnic group as the owner in the informal business' workforce as well. In addition, since old enterprises should be better established

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[12] More precisely, the variable used is the log of the profit (resp. sales) plus one to avoid losing observations with profit (resp. sales) equal to 0.

[13] As for profit, regressors used are log(labour or capital +1).

[14] Father education is not included as control because it is highly correlated with the status of activity of the father.

than young ones (they have survived), I introduce the age of the enterprise. Lastly, I control for the sector of activity and the country.

Table 3 below reports the main results from OLS regression for all enterprises[15]. Because of endogeneity bias in the estimation of capital and labour parameters, I estimate equation (1) with and without introducing them in the regressors.

Contrary to expectations, having a father self-employed is shown to have no effect on profit and sales. This result remains unchanged when I split informal businesses into different terciles of capital or of labour, or when I introduce interactions between *SE* and country dummies (not reported) to take into account potentially different effects of *SE* between countries. Another robustness check consists in introducing interactions between *SE* and factors of productions, but *SE* and interactions coefficients are not significant. Thus, informal entrepreneurs that have a father involved in self-employed activities do not benefit from an advantage, compared to informal entrepreneurs without self-employed father. This result suggests that there is no intergenerational transmission of valuable managerial skills nor physical capital for children of self-employed.

Table 3: Effect of having a father self-employed on profit and sales

VARIABLES	(1) Log profit	(2) Log profit	(3) Log sales	(4) Log sales
Father was self-employed (SE)	**-0.0608**	**-0.0333**	**-0.00566**	**0. 0202**
	(0.0456)	**(0.0463)**	**(0.0338)**	**(0.0332)**
Owner's potential experience	0.0281***	0. 0196***	0.0423***	0.0305***
	(0.00648)	(0.00642)	(0.00481)	(0.00461)
Owner's potential experience squared	-0.00043***	-0.0003***	-0.000607***	-0.000456***
	(9.45e-05)	(9.35e-05)	(7.02e-05)	(6.72e-05)
Owner's education	0.0113	0. 0024	-0.00305	-0.01501
	(0.0148)	(0.0146)	(0.0110)	(0.0104)
Owner's education squared	0.00156	0.00183	0.00451***	0.0048***
	(0.00114)	(0.00112)	(0.000844)	(0.000802)
Amount of capital in log		0. 0833***		0.127***
		(0.0117)		(0.00844)
Amount of labour in log		0. 231***		0. 255***
		(0.0212)		(0. 0154)
Constant	5.659***	3.596***	7.326***	4.917***
	(0.211)	(0.258)	(0.156)	(0.186)
Observations	5712	5712	5701	5701
R-squared	0.171	0.200	0.316	0.373

Controls: Owner's sex, polygamous status, religion, ethnic group, migration status; Ethnic homogeneity inside the enterprise, share of family workers, age of the enterprise; Sectors of activity and countries dummies.
Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).

Regarding the other variables, results by and large conform with expectations: other things being equal, higher levels of labour, human and physical capital lead to higher performance

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[15] The full table is presented in appendix as Table A.

(Table 3); men have better business outcomes than women; being born in the city is an advantage compared with migrants. However, marital status, religion and ethnic group are not significant[16] and ethnic homogeneity and the share of family members in the enterprise has a significant but negative effect on outcomes (Table A in Appendix). As in Fafchamps (2002), family members thus appear to work less hard than hired workers. This could be explained by a familial pressure to distribute work that leads to a number of workers uncorrelated with the necessary amount of work to produce.

We now consider the narrower definition of second generation of self-employed, that is informal entrepreneurs whose benefit from a familial tradition. If the coefficient of *TRAD* is significant and positive, I can conclude that *TRAD* enters the regression as productivity shifter. I also estimate the equation on subsamples, splitting informal businesses into different terciles of capital (models (7), (8) and (9) for profit, (15), (16) and (17) for sales) or of labour (models (10), (11) and (12) for profit, (18), (19) and (20) for sales). Results are presented in Table 4 for profit and Table 5 for sales[17].

Tables 4 and 5 show that having benefited from a familial tradition has a positive and significant effect on informal businesses outcomes: other things being equal, informal entrepreneurs with a familial tradition have a profit 13.6% higher than the other informal entrepreneurs (model 5). The level and the significativity of the effect is robust to the choice of outcomes variables and to the inclusion of capital and labour variables[18]. It remains unchanged for informal businesses with high level of production factors as well[19]. But having benefited from a familial tradition has no significant effect for low and medium level of production factors, with the exception of a positive and significant effect of *TRAD* on sales for businesses with medium level of capital.

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[16] Polygamous status is significant and has a positive effect on profit and sales, contrary to expectations, but only when capital and labour are not introduced in the regression. One of the reasons may be that polygamy status is highly correlated with capital, because richer men may have more women.

[17] Table B in the appendix presents the full table.

[18] The competitive advantage of TRAD entrepreneurs is equal to 9.9% of the profit (model 6) or 9.7% of sales (model 14) when level of capital and labour are included.

[19] With the exception of the upper tercile of capital for profit.

Table 4: Effect of inheriting a familial tradition on profit

VARIABLES	(5) All	(6) All	(7) K<q33	(8) q33<K <q66	(9) K>q66	(10) L<q33	(11) q33<L <q66	(12) L>q66
Enterprise with familial tradition (*TRAD*)	**0.128**** **(0.0607)**	**0.094*** **(0. 0597)**	**0.0983** **(0.0935)**	**0.145** **(0.0916)**	**0.138** **(0.130)**	**0.0313** **(0.116)**	**0.0334** **(0.0952)**	**0.239**** **(0.105)**
Owner's potential exp.	0.0297*** (0.00651)	0. 0202*** (0.00643)	0.0316*** (0.00906)	0.0300*** (0.0108)	0.0164 (0.0142)	0.0283** (0.0112)	0.0269*** (0.00996)	0.0221* (0.0127)
Owner's potential exp. sqd	-0.0004*** (9.47e-05)	-0.0003*** (9.35e-05)	-0.0004*** (0.0001)	-0.0004*** (0.0001)	-0.0002 (0.0002)	-0.0003** (0.0001)	-0.000*** (0.0001)	-0.0003* (0.0001)
Years of edu.	0.0113 (0.0147)	0. 00376 (0.0144)	0.0261 (0.0233)	-0.00986 (0.0252)	-0.0198 (0.0286)	0.0395 (0.0262)	-0.00327 (0.0238)	-0.00601 (0.0262)
Years of edu.sqd	0.00156 (0.00114)	0.00182 (0.00111)	0.00141 (0.00189)	0.00227 (0.00214)	0.00281 (0.0019)	0.000339 (0.00200)	0.00204 (0.00191)	0.00283 (0.00198)
Amount of capital in log		0.0836*** (0.0117)						
Amount of labour in log		0. 2298*** (0. 0212)						
Constant	5.58*** (0.210)	3.57*** (0.256)	5.56*** (0.451)	6.03*** (0.355)	5.65*** (0.407)	4.73*** (0.467)	4.99*** (0.356)	5.82*** (0.361)
Observations	5712	5712	1865	1925	1922	1736	1993	1983
R-squared	0.172	0. 200	0.174	0.184	0.154	0.108	0.177	0.194

Controls: idem models (1) to (4) plus education of the father.
Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).

With regard to these results, we can conclude that informal business owners who have family members involved in the same sector of activity have on the whole an advantage in terms of business performance, compared with owners without familial tradition. This result differs from the one of Fafchamps (2002) but, as already said, the context and the field of study are very different. However, this result is no longer true when we only consider owners of businesses with low or medium level of production factors. For these informal entrepreneurs, having benefited from a familial tradition provides no advantage. As far as heterogeneity of informal businesses is concerned, we can conclude that such entrepreneurial familial background is irrelevant when informal businesses represent a form of urban subsistence production.

Concerning the other variables, results are the same than those of the estimation of equation including the variable having a self-employed father (Table B in Appendix).

Table 5: Effect of inheriting a familial tradition on sales

VARIABLES	(13) All	(14) All	(15) K<q33	(16) q33<K<q66	(17) K>q66	(18) L<q33	(19) q33<L<q66	(20) L>q66
Enterprise with familial tradition (TRAD)	**0.127*****	**0. 093****	**0.0317**	**0.154****	**0.204****	**-0.0164**	**0.0888**	**0.173****
	(0.0450)	**(0.0428)**	**(0.0781)**	**(0.0674)**	**(0.0846)**	**(0.0886)**	**(0.0707)**	**(0.0735)**
Owner's potential exp.	0.0437***	0.0310***	0.0492***	0.0368***	0.0269***	0.0421***	0.0390***	0.0305***
	(0.00483)	(0.00461)	(0.00758)	(0.00798)	(0.00923)	(0.00859)	(0.00741)	(0.00882)
Owner's potential exp. sqd	-0.0006***	-0.0004***	-0.0006***	-0.0005***	-0.0003***	-0.0005***	-0.0006***	-0.0004***
	(7.03e-05)	(6.72e-05)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Years of edu.	-0.00495	-0.0155	0.0181	-0.0304	-0.0293	0.0241	-0.0362**	-0.0129
	(0.0109)	(0.0103)	(0.0195)	(0.0185)	(0.0186)	(0.0199)	(0.0177)	(0.0183)
Years of edu.sqd	0.0046***	0.0048***	0.0034**	0.0044***	0.0058***	0.0021	0.0071***	0.0056***
	(0.0008)	(0.0008)	(0.0015)	(0.0015)	(0.0013)	(0.0015)	(0.0014)	(0.0013)
Amount of capital in log		0. 127***						
		(0.00843)						
Amount of labour in log		0. 253***						
		(0. 0154)						
Constant	7.288***	4.927***	6.797***	7.628***	7.569***	6.206***	6.577***	7.550***
	(0.156)	(0.184)	(0.376)	(0.261)	(0.265)	(0.356)	(0.264)	(0.251)
Observations	5701	5701	1857	1924	1920	1729	1990	1982
R-squared	0.318	0. 383	0.258	0.287	0.365	0.238	0.282	0.322

Controls: idem models (1) to (4) plus education of the father.
Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).

6. What is the source of advantage?

After having established the positive effect of having benefited from a familial tradition with the same choice of activity, we have to highlight the channels though which this familial tradition provides an advantage. I will then test the hypothesis that this advantage is mainly due to better endowments in enterprise-specific skills, physical capital, social capital, and secondly to higher returns to these factors. To this end, I expand the estimation of equation (1) to include social capital, familial investments, general and enterprise-specific skills in the production function.

If the hypothesis is true, I expect two results. First, I anticipate that the effect of social capital, familial investments, general and enterprise-specific skills are significant and positive. Second, I suppose that these effects capture the one of having benefited from a familial tradition. It means that the variable *TRAD* would be significant in equation (2) only because it would reflects better endowments and/or returns to managerial skills, enterprise-specific skills, familial investment and/or social capital. To know which factors better capture the effect of *TRAD*, I will introduce them step by step, first one by one (not reported) and then by pairs (Table 6).

I find that when I introduce only one of these factors, the effect of *TRAD* is still significant. Among proxies of managerial skills, only book keeping has a positive and significant effect on profit. However, prior management experience doesn't have any effect on enterprise performance. This could be explained by the wide variety of management experiences that not necessarily provide better knowledge on how to run a business. Knowledge of microfinance institutions is not significant as well. This may be due to the high correlation between this variable and the level of schooling of the owner[20]. All proxies of enterprise-specific skills have positive and significant effect: informal apprenticeship, experience in the informal business before becoming the owner and years of experience in the profession. In addition, the membership to a professional association has a significant and positive effect on profit. As far as proxies of familial investment are concerned, I find a significant effect of the two variables but the share of familial investment in total investment has a negative effect.

Table 6 presents the estimation of equation (3) introducing proxies of transmission channels by pairs. It shows that the effect of having benefited from a familial tradition disappears only when we jointly introduce proxies of enterprise-specific skills and social capital. The other combinations do not allow capturing the whole effect of *TRAD*. In the same way, when I measure business performance by sales instead of profit (not reported), I find that the decrease of *TRAD* effect is the highest when proxies of enterprise-specific skills and social capital are jointly introduced. In this case, the estimated coefficient is almost halved.

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[20] The coefficient of correlation is equal to 0.22 and significant at the 1% level.

Table 6: Effect of inheriting a familial tradition on profit introducing social capital, two types of skills and inherited physical capital

VARIABLES	(21) Log profit	(22) Log profit	(23) Log profit	(24) Log profit	(25) Log profit	(26) Log profit
MSE with familial tradition (Trad)	0.114*	0.113*	0.135**	0.0894	0.112*	0.110*
	(0.0604)	(0.0604)	(0.0602)	(0.0606)	(0.0605)	(0.0604)
Proxies of managerial skills						
Prior management experience	0.0233	0.0154	0.00619			
	(0.0560)	(0.0559)	(0.0558)			
Knowledge of MFI	0.0666	0.0589	0.0550			
	(0.0461)	(0.0462)	(0.0460)			
Owner keeps books	0.461***	0.460***	0.462***			
	(0.0609)	(0.0609)	(0.0610)			
Proxies of enterprise-specific skills						
Owner was informal apprentice	0.0777			0.0811	0.0671	
	(0.0516)			(0.0517)	(0.0517)	
Exp. in that enterprise before becoming the owner (Y/N)	0.250***			0.255***	0.255***	
	(0.0741)			(0.0743)	(0.0742)	
Exp. in this profession (years)	0.00827***			0.00783***	0.00774***	
	(0.00296)			(0.00297)	(0.00296)	
Proxy of social capital						
Owner is member of a business association		0.414***		0.423***		0.421***
		(0.0973)		(0.0976)		(0.0973)
Proxies of familial investment						
Share of familial invesment in total investment			-0.359***		-0.360***	-0.363***
			(0.0540)		(0.0542)	(0.0541)
Log of amount of familial investment			0.0464***		0.0541***	0.0528***
			(0.0151)		(0.0151)	(0.0151)
Constant	5.139***	5.399***	5.509***	5.699***	5.805***	6.054***
	(0.199)	(0.187)	(0.187)	(0.183)	(0.183)	(0.170)
Observations	5712	5712	5712	5712	5712	5712
R-squared	0.181	0.180	0.184	0.175	0.179	0.178

Controls: Owner's sex, education level, education level squared, polygamous status, religion, ethnic group, migration status; Ethnic homogeneity inside the enterprise, share of family workers, age of the enterprise; Sectors of activity and countries dummies.
Note: Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).

Taken together, these results suggest that more valuable social capital and higher enterprise-specific skills contribute to why informal business owners with family members involved in the same sector of activity have better outcomes. One question remains: is the advantage explained by better endowments of social capital and enterprise-specific skills or by higher returns to these factors?

To address this issue, I use the Machado and Mata (2005) technique to decompose the profit gap between informal entrepreneurs with and without a familial tradition into two components – the effect of the difference in the distribution of characteristics and the effect of the differences in the distribution of returns to these characteristics. This method extends the traditional Oaxaca-Blinder decomposition of effects on mean (Blinder 1973, Oaxaca 1973) to

the entire distribution. This is done by combining quantile regression and bootstrapping to generate two counterfactual distributions: (i) the distribution of the log profit of non-*TRAD* entrepreneurs that would arise if non-TRAD entrepreneurs had the same characteristics or endowments as the *TRAD* entrepreneurs, and if the returns to these endowments remain unchanged (counterfactual 1); (ii) the distribution of the log profit of non-*TRAD* entrepreneurs that would arise if non-*TRAD* entrepreneurs retained their own characteristics but had the same returns to these characteristics as the *TRAD* entrepreneurs (counterfactual 2).

Let $Q_\theta(V|x)$ for $\theta \in (0,1)$ denote the θth quantile of the distribution of the (log) profit (V), given a vector x of covariates. Under the assumption of linearity, these conditional quantiles are:

$$Q_\theta(V|x) = x'\beta(\theta)$$

where $\beta(\theta)$ is a vector of coefficients.

The outcomes gap can then be decomposed as follows:

$$x'_{NTrad}\beta_{NTrad}(\theta) - x'_{Trad}\beta_{Trad}(\theta)$$
$$= x'_{NTrad}\left(\beta_{NTrad}(\theta) - \beta_{Trad}(\theta)\right) + (x'_{NTrad} - x'_{Trad})\beta_{Trad}(\theta)$$

To construct the counterfactual density, I rely on the three following steps. First, I draw a random sample of 100 numbers from a standard uniform distribution[21]. Then, using these different numbers denoted by θ_j, with $j = 1, ..., 100$, I estimate the quantile regressions coefficient vectors $\beta_{Trad}(\theta_j)$ for the various j using the subsample of *TRAD* entrepreneurs. Finally, I take a draw j times with replacement from the non-*TRAD* entrepreneurs subsample and generate the predicted log profit $x'_{NTrad}\beta_{Trad}(\theta_j)$. This counterfactual log profit density indicates which log profit non-*TRAD* entrepreneurs would have created if they had the same returns as *TRAD* entrepreneurs.

Figures 1 to 4 presents the decomposition results when covariates include proxies of managerial skills, enterprise-specific skills, social capital, and familial investment, plus controls of models (21) to (26)[22].
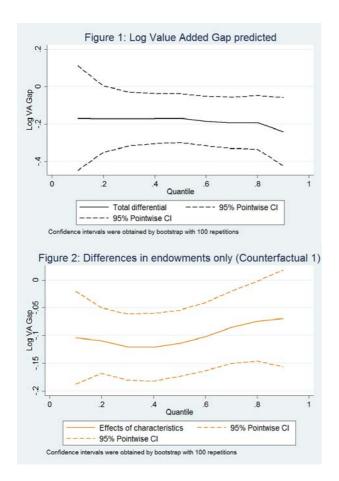
As shown in Figure 1, the gap between profit conditional distributions of *TRAD* and non-*TRAD* entrepreneurs is constant through the distribution. From the second decile, the gap is significantly different from zero, as the confidence band, defined by the dashed lines, does not cross zero. Figure 4 combines this gap with the two components of the gap decomposition: (i) the first one due to differences in characteristics between *TRAD* and non-*TRAD* entrepreneurs (represented in Figure 2 as well, with the confidence band in dashed), (ii) the second related to differences in the returns of these characteristics (reports in Figure 3 as well, with the
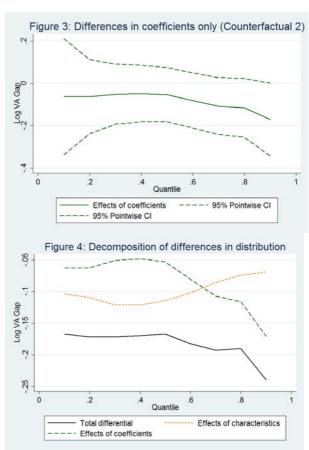
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[21] For details on the asymptotic inference procedures about the coefficients $\beta(\theta)$ used in the paper, see Chernozhukov, Fernandez-Val and Melly (2009).

[22] The Stata ado cdeco developped by Chernozhukov, Fernandez-Val and Melly (2009) was used for ths decomposition.

confidence interval). Figure 4 shows that the effect of characteristics dramatically dominates the effect of coefficient at the bottom of the distribution. At the 2th decile, it explains 64% of the gap, and 72% at the 4th decile. Thus, among entrepreneurs with a profit lower than the median, the one whose benefit from a familial tradition have an advantage, related to the entrepreneurs without a familial tradition and this advantage is mainly due to better endowments. However, they don't have significantly better returns, as showed by Figure 3, where zero is included in the confidence band.

From the 6th decile, this pattern does not stand anymore: the effect of coefficient becomes significative and higher than the effect of endowments. Thus, informal entrepreneurs with a familial tradition and at the top of distribution have an advantage related to other entrepreneurs mostly because they have better returns in their factors of production.

Figure 1: Log Value Added Gap predicted

Figure 3: Differences in coefficients only (Counterfactual 2)

Figure 2: Differences in endowments only (Counterfactual 1)

Figure 4: Decomposition of differences in distribution

7. Conclusion

This paper has shown that, for West-African informal entrepreneurs, having a self-employed father does not provide any advantage in terms of profit or sales. Children of self-employed do not have better access to valuable human, physical or social capital. In contrast to USA or European countries, there is thus no intergenerational transmission of general managerial skills, which would explain such a competitive advantage for children of self-employed. This specificity of West African countries with regard to USA or European countries might be due to a different way of being exposed to the business of the father.

This implies that the strong correlation of self-employment status across generations cannot be explained by the existence of such a competitive advantage. Alternative determinants of this correlation can then be put forward: the conveyance of taste for autonomy, a self-limitation of professional aspirations or a segmented structure of the labour market that constrain children of self-employed to be themselves self-employed in the informal sector. However, we do not have evidence to justify acceptance of one hypothesis over another. Further research is needed.

A second important result of this paper is that having family members involved in the same type of activity is important for informal businesses, in particular for businesses with high level of production factors. The informal entrepreneurs with familial tradition have a competitive advantage in terms of profit or sales. At low and medium level of business performance, this advantage is mostly explained by the transmission of enterprise-specific human capital, acquired thanks to higher opportunities to accumulate experiences in the same sector of activity, and by the transmission of social capital that guarantees a better clientele and a reputation. At high level of informal business performance, this advantage is mainly due to better returns of informal entrepreneurs with familial tradition.

These findings are important from a policy perspective. Most policies currently in place aiming at improving efficiency of informal sector are targeted toward alleviating financial constraints. Other programs focus on reinforcing general business human capital, for example management and financial skills. My findings suggest that providing opportunities for work experience in informal businesses and developing professional networks through associations may be effective policies. They might allow would-be informal entrepreneurs to acquire enterprise-specific skills and develop their social capital. They would then contribute to improving informal sector efficiency and reduce intergenerational inequalities in business ownership patterns. However, these issues deserve further investigation on the effectiveness of these types of policies, especially evidence from impact evaluations of experimental programs.

Moreover, this paper casts a new light on the heterogeneity of informal sector, by identifying social background, in particular entrepreneurial familial background, as a source of heterogeneity in terms of performance.

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Appendix

Table A: Effect of having a father self-employed on profit and sales (full table)

VARIABLES	(1) Log profit	(2) Log profit	(3) Log sales	(4) Log sales
Father was self-employed (SE)	**-0.0608**	**-0.0333**	**-0.00566**	**0. 0202**
	(0.0456)	**(0.0463)**	**(0.0338)**	**(0.0332)**
Owner's female	-0.615***	-0.505***	-0.603***	-0.454***
	(0.0508)	(0.0509)	(0.0377)	(0.0367)
Owner's education	0.0113	0. 0024	-0.00305	-0.01501
	(0.0148)	(0.0146)	(0.0110)	(0.0104)
Owner's education squared	0.00156	0.00183	0.00451***	0.0048***
	(0.00114)	(0.00112)	(0.000844)	(0.000802)
Owner's polygamous	0.00294	-0.00906	0.0654	0.0510
	(0.0592)	(0.0585)	(0.0439)	(0.0421)
Owner's Muslim	0.106	0.118*	0.0745	0.0921*
	(0.0668)	(0.0660)	(0.0497)	(0.0476)
Owner belongs to the majority ethnic group	0.00713	-0.0113	-0.00856	-0.0362
	(0.0450)	(0.0445)	(0.0334)	(0.0321)
Owner's not a migrant	0.111**	0.117**	0.0945***	0.102***
(ref. has migrated 5 years ago)	(0.0477)	(0.0470)	(0.0354)	(0.0339)
Owner's migrated recently	0.0127	0.0645	-0.0808	-0.0132
(ref. has migrated 5 years ago)	(0.0794)	(0.0785)	(0.0589)	(0.0566)
Owner's potential experience	0.0281***	0. 0196***	0.0423***	0.0305***
	(0.00648)	(0.00642)	(0.00481)	(0.00461)
Owner's potential experience squared	-0.000430***	-0.0003***	-0.000607***	-0.000456***
	(9.45e-05)	(9.35e-05)	(7.02e-05)	(6.72e-05)
Ethnic homogeneity in the enterprise	-0.183	-0.0785	-0.494***	-0.356***
	(0.159)	(0.157)	(0.118)	(0.113)
Share of family members in the enterprise	-1.064***	-0.687***	-1.288***	-0.799***
	(0.119)	(0.121)	(0.0884)	(0.0875)
Age of the MSE	0.0176***	0.0167***	0.0179***	0.0165***
	(0.00315)	(0.00311)	(0.00234)	(0.00224)
Amount of capital in log		0. 0833***		0.127***
		(0.0117)		(0.00844)
Amount of labour in log		0. 231***		0. 255***
		(0.0212)		(0. 0154)
Constant	5.659***	3.596***	7.326***	4.917***
	(0.211)	(0.258)	(0.156)	(0.186)
Observations	5712	5712	5701	5701
R-squared	0.171	0.200	0.316	0.373

Controls: Sectors of activity and countries dummies.
Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).

Table B: Effect of having benefited from a familial tradition on profit and sales (full table)

VARIABLES	(5) Log profit	(6) Log profit	(13) Log sales	(14) Log sales
Informal business with familial tradition (Trad)	0.128**	0.094*	0.127***	0.093**
	(0.0607)	(0.0597)	(0.0450)	(0.0428)
Owner's female	-0.614***	-0.506***	-0.605***	-0.458***
	(0.0507)	(0.0509)	(0.0376)	(0.0367)
Owner's education	0.0113	0. 00376	-0.00495	-0.0155
	(0.0147)	(0.0144)	(0.0109)	(0.0103)
Owner's education squared	0.00156	0.00182	0.00460***	0.0048***
	(0.00114)	(0.0011)	(0.000843)	(0.0008)
Owner's polygamous	0.00190	-0.00964	0.0670	0.0531
	(0.0592)	(0.0584)	(0.0439)	(0.0421)
Owner's Muslim	0.104	0.117*	0.0739	0.0925*
	(0.0668)	(0.0660)	(0.0497)	(0.0476)
Owner belongs to the majority ethnic group	0.0121	-0.00735	-0.00319	-0.0318
	(0.0451)	(0.0445)	(0.0334)	(0.0321)
Owner's not a migrant *(ref. has migrated 5 years ago)*	0.112**	0.117**	0.0872**	0.0937***
	(0.0472)	(0.0466)	(0.0350)	(0.0336)
Owner's migrated recently *(ref. has migrated 5 years ago)*	0.00415	0.0575	-0.0859	-0.0165
	(0.0795)	(0.0786)	(0.0589)	(0.0566)
Father's primary education	0.0973	0.0983	0.123**	0.123**
	(0.0817)	(0.0806)	(0.0606)	(0.0582)
Father's secondary education or more	0.158*	0.143	0.0805	0.0579
	(0.0890)	(0.0879)	(0.0660)	(0.0633)
Owner's potential experience	0.0297***	0. 0202***	0.0437***	0.0310***
	(0.00651)	(0.00643)	(0.00483)	(0.0046)
Owner's potential experience squared	-0.000445***	-0.0003***	-0.000621***	-0.0004***
	(9.47e-05)	(9.35e-05)	(7.03e-05)	(6.72e-05)
Ethnical homogeneity in the enterprise	-0.184	-0.0790	-0.495***	-0.357***
	(0.159)	(0.157)	(0.118)	(0.113)
Share of family members in the enterprise	-1.068***	-0.692***	-1.292***	-0.805***
	(0.119)	(0.121)	(0.0883)	(0.0875)
Age of the MSE	0.0162***	0.0155***	0.0165***	0.0154***
	(0.00321)	(0.00317)	(0.00238)	(0.00229)
Amount of capital in log		0.0836***		0. 127***
		(0.0117)		(0.00843)
Amount of labour in log		0. 2298***		0. 253***
		(0. 0212)		(0. 0154)
Constant	5.585***	3.57***	7.288***	4.927***
	(0.210)	(0.256)	(0.156)	(0.184)
Observations	5712	5712	5701	5701
R-squared	0.172	0. 200	0.318	0. 383

Controls: Sectors of activity and countries dummies. Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Source: Author's computation based on 1-2-3 surveys (Phases 1 and 2, 2001/02, AFRISTAT, DIAL, INS).