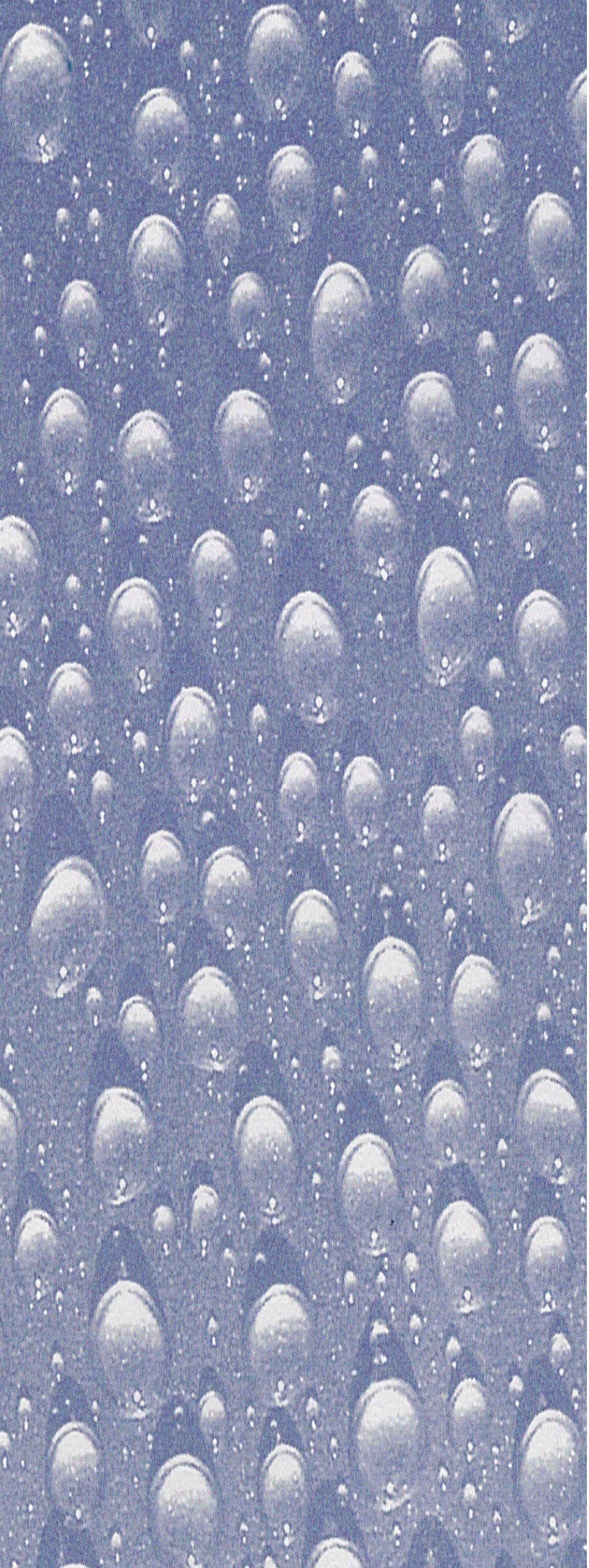

EMPLOYMENT SECTOR

– SOCIAL FINANCE PROGRAM –

Financial Arrangements in Informal Apprenticeships: Determinants and Effects – Findings from Urban Ghana

Julika Breyer

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Financial Arrangements in Informal Apprenticeships: Determinants and Effects – Findings from Urban Ghana

Julika Breyer

Abstract:

This paper uses quantitative and qualitative data collected through a survey among entrepreneurs and apprentices in micro and small enterprises in Accra, Ghana, to analyse the financial arrangements in informal apprenticeships. It discusses the relationship between the financing of apprenticeships and the financing of enterprises in which the training takes place. It also examines the way apprentices finance apprenticeship training. The findings suggest that masters commonly charge fees for the training, either at the beginning (commitment fees) and or at the end (graduation fee) of the training. The payment of an allowance to the apprentices (chop money) is a widespread practice. Even if the amount of this allowance in the majority of cases exceeds the amount of fees paid for the training, it would appear that the financing costs of the apprenticeship (fees and living expenses) restrict poor youth from entering and completing an apprenticeship. Finally, the paper presents potential entry points for microfinance institutions to support and improve the quantity and quality of apprenticeship training and ensure its positive contribution to youth employment.

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Last but not least, I would like to thank Bernd Balkenhol, Head of the ILO Social Finance Programme, for making this study possible and for providing his strong support and encouragement throughout the work.

Executive Summary – Summary of Findings

The present paper is based on a survey among 200 micro entrepreneurs and apprentices in Accra, Ghana. The main aim of the survey was to analyse the financial arrangements in informal apprenticeships and study their determinants and effects. Four trades were examined: Tailoring, hairdressing, carpentry and mechanics.

The analysis of the data collected among entrepreneurs and apprentices suggests that

Financial arrangements

- The payment of apprenticeship fees is a very common practice in Ghana.
- The predominant types of fees include commitment fees at the beginning of the training (charged by 97% of enterprises in the sample), graduation fees at the end of the training (charged by 66% of entrepreneurs) and in kind fees, mostly in the form of drinks (charged by 74.5% of entrepreneurs). Recurrent fees in the course of apprenticeships do not seem to be common among micro entrepreneurs in Ghana.
- The total amount of fees charged (including all types of fees charged by the respective master) ranges from 22 USD to 616 USD, with an average of 160 USD.
- In the majority of cases, apprentices receive an allowance from their masters, commonly referred to as chop money. This chop money, paid on a daily or weekly basis, amounts to an average of 21 USD per month. The total amount of allowance received by apprentices in the course of the apprenticeship largely exceeds the total amount of fees charged by the master in 68.5% of cases.

Determinants of apprenticeship fees

- The amount of fees charged differs between the sectors of activity, the size and turnover of enterprises, the relationship between the master and apprentice and the average duration of the apprenticeship.

- The amount of fees charged seems to depend, among others, on the family relationship between the master and the apprentice, the size and reputation of an enterprise and/or master and the production costs in an enterprise.
- A large percentage of the amount of apprenticeship fees cannot be explained by the above mentioned factors. According to the masters, the amount of fees charged depends on various factors, including the ability of the apprentice to pay, the fees demanded by other masters, the relationship to the parents of the apprentice and the masters own will.
- Entrepreneurs mainly use internal sources (savings, retained earnings) to finance their working capital and investment needs. Only 3.5% of entrepreneurs had taken a loan from a bank or microfinance institution within the last two years.
- Lack of access to formal sources of finance does not seem to be related to charging apprenticeship fees. On the contrary, the amount of fees charged among enterprises with access to bank loans seems to be significantly higher than among enterprises without access to formal sources of credit.

Effects of apprenticeship fees

- The majority of apprentices rely on their parents or guardians for the financing of their apprenticeship, including fees and living expenses. Only 7% of apprentices in the sample state to be paying for the apprenticeship fees themselves, either with savings from previous income generating activities or through loans from family or friends.
- The data in this survey does not provide any evidence of apprenticeship training disguising child labour or other exploitative practices. This confirms the findings of previous studies on informal apprenticeships in Western African countries.
- The results of the survey suggest that the financing of an apprenticeship (fees and living expenses) might restrict the access of vulnerable youth (e.g. child labourers and street children).
- This might also be true for youth without access to formal education. Masters are reluctant to take on apprentices without formal education and the apprentices

in the survey have a higher level of education than the national average in Ghana (measured by the primary enrolment rate).

- Besides the financing of the apprenticeship, the lack of access to start up capital after the apprenticeship is a major concern among apprentices.

Potential role of Microfinance

- Microfinance has a role in the financing of apprenticeships. Improved access to finance for masters and apprentices could stimulate supply and demand and support access to apprenticeships for vulnerable youth. Also, better access to financial services could facilitate the transition from apprenticeship to self employment.

List of Abbreviations

AMA	Accra Metropolitan Assembly
ASSI	Association of Small Scale Industries
ATTC	Accra Technical Training Centre
CIBA	Council of Indigenous Business Associations
CPES	Customs Excise and Preventive Service
EPA	Environmental Protection Agency
FGD	Focus Group Discussions
GDWPP	Ghana Decent Work Pilot Programme
GHAMFIN	Ghana Microfinance Network
GSS	Ghana Statistical Service
GLSS	Ghana Living Standard Survey
IAT	Informal Apprenticeship Training
ILO	International Labour Organization
IPEC	International Programme on the Elimination of Child Labour
IRS	Internal Revenue Service
NBSSI	National Board of Small Scale Industries
NVTI	National Vocational Training Institute
SIF	Social Investment Fund
SME	Small and Medium Size Enterprises
SSNIT	Social Security and National Insurance Trust
VAT	Value Added Tax

1. Introduction

1.1 Background and justification

Informal apprenticeships are the most important mechanism for skills transfers in the informal economy in many African countries. In contrast to publicly financed training institutions, informal apprenticeships are considered to be more responsive to the training needs in the informal economy, offer a cost effective and flexible way of skills transfer and reach large numbers of African youth. Informal apprenticeship training is especially well established and common in West Africa. In Ghana, for example, informal apprenticeship training accounts for about 80-90% of all skills training in urban areas of the country[1].

Taking into account the size and importance of the informal economy, accounting for up to 80% of non-agricultural employment and over 90% of new jobs in many African economies, and the huge number of young people that are expected to enter the workforce over the next decade[2], the relevance of informal apprenticeships as a training mechanisms is even more striking. Education and training lead to more productive and effective employment outcomes of youth. Apprenticeships can therefore contribute decisively to more and better youth employment.

There appears to be a variety of ways in which informal apprenticeships are financed. Entrepreneurs may or may not charge apprenticeship fees, they may or may not pay wages to their apprentices and apart from these monetary transfers, different in-kind transfers may take place. Our knowledge of the financial arrangements of informal apprenticeship training is still limited; this applies to the financial arrangements in informal apprenticeships, as well as to their circumstances, determinants and effects.

1.2 Purpose of the study

There is some evidence that the charging of apprenticeship fees might be correlated to the use of informal sources of enterprise finance. This has given rise to the

1 Roeske, J. (2003) "Skills training strategies to combat worst forms of child labour in the urban informal economy: Ghana Country Study" ILO-IPEC, p. 80.

2 ILO (2006) "Global Employment Trends for Youth", International Labour Office, Geneva, p. 14.

hypothesis that apprenticeship fees might be charged to compensate for a lack of access to formal sources of working capital.[3]

Given the overall importance of informal apprenticeships for a huge number of young people who do not have an alternative but to work in the informal economy, the purpose of the study is to document and analyse the range of financial arrangements in informal apprenticeships, their determinants and effects and especially their relationship to enterprise financing.

The study also identifies entry points for microfinance interventions to facilitate the access to apprenticeships and the transition to employment.

For the analysis of financial arrangements in informal apprenticeships, empirical data has been collected in August/September 2006 among entrepreneurs and apprentices in Accra, Ghana. The underlying report presents the findings from this survey.

The study will serve as a pilot to orient and guide subsequent work by the ILO Social Finance Programme in the field of apprenticeship financing.

1.3 Structure

The paper is structured as follows: Section 2 presents an overview of the theoretical aspects of apprenticeship financing and summarizes the empirical evidence. Section 3 describes the research methodology and data collection process of the study, including the challenges and difficulties encountered. Section 4 describes and analyses the data while section 5 discusses entry points for interventions. Specifically, the potential role of microfinance and the role of the public sector in financing apprenticeships are discussed. Section 6 concludes.

[3] Velenchik, A. D. (1995) "Apprenticeship Contracts, Small Enterprises, and Credit Markets in Ghana", The World Bank Economic Review, 9(3)

2. Financing of Apprenticeships: Theoretical Analysis and Empirical Evidence

2.1. Theory

Informal apprenticeships are based on a learning-by-doing strategy: an apprentice takes part in the production processes of an enterprise in exchange for skills training by the master or senior employees. Apprenticeship training thus involves two types of transaction: the provision of labour by the apprentice to the enterprise and the provision of training by the entrepreneur to the apprentice. An important characteristic of the two transactions (training and work) is that they do not occur at the same point of time. At the beginning the master provides training while the apprentice cannot yet fully participate in the production process of the enterprise. At a later stage of the apprenticeship this is inversed. The longer the training, the higher the productivity of the apprentice and the lower the additional training input by the master. Without further payments or contributions from the master or the apprentice, the master is providing a "training loan" or credit to the apprentice, who repays it in the course of the apprenticeship through his/her labour input. The rationale for such a "training loan", as explained by Smits and Stromback (2001), is to enable credit- and capital- constrained youth to invest in training[4]. Without any monetary payments to the master, apprentices pay back the loan through their labour input.

Besides in-kind transfers in form of training and labour input, apprenticeships mostly involve the payment of fees, allowances, in-kind support to the apprentice and presents or drinks for the master. Theoretically, financial arrangements in informal apprenticeships can take one of the three following forms:

i. Cash or in-kind payments by the entrepreneur to the apprentice in case the value of the labour input exceeds the value of the training;

ii. Cash or in-kind payments by the apprentice to the entrepreneur when the value of training exceeds the value of labour inputs and

[4] Smits, W. and T. Stromback (2001) "The Economics of the Apprenticeship System", Edward Elgar Publishing, Cheltenham, UK, p. 68ff.

iii. No payments of either type when the values of the labour and training inputs are equal[5].

The amount of cash or in-kind payments theoretically depends on the net costs of the training, i.e. the training costs including costs for material and technology and the opportunity cost of the masters' time minus the productive labour input of the apprentice. Also, the length of the apprenticeship training influences its costs: with growing productivity of apprentices in the course of the training, the longer the apprenticeship training, ceteris paribus, the higher the productive labour input and thus the lower the net training costs.

The cost for masters and apprentices also depends on the way in which the net training costs are shared. In theory, this depends on the demand and supply of apprenticeships, as well as on the distribution of benefits of the training. As analysed by Becker (1975) in his human capital theory of on-the-job training, the way of sharing the benefits of the training influences the costs of the training for both parties. If the master is able to retain his apprentice after an apprenticeship, without paying higher wages for the increased productivity of the apprentice, the master benefits from the training. This will more likely occur if the training provides enterprise specific skills. If general skills are transferred, on the other hand, the apprentice benefits in form of an increased marginal human capital that he/she can employ wherever the rate of return is the greatest.[6] If the training enterprise wants to retain the apprentice, it has to pay higher wages. It is therefore the apprentice who reaps the larger part of benefits of the training. Payments between the master and the apprentice can be made at different points of time. The apprentice can pay his/her share of training costs at the beginning of the apprenticeship in the form of a fee or in-kind donation, in the course of his apprenticeship by reduction from wages or regular fees or in the end of the training period in form of further labour input at low wages, payments and presents to the master. The contribution of the master in form of training input, financial and in-kind contributions to the living expenses of the apprentice as well as wages or allowances are usually highest in the beginning, when the training input is the highest.

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[5] Velenchik (1995), p. 455.

[6] In practice, this further depends on the demand and supply of labour in the respective sector of activity and the flexibility of the labour market.

While the master's pre-financing of the apprenticeship can be interpreted as a credit to the apprentice, the payment of fees at the beginning of the training constitutes a credit by the apprentice to the entrepreneur. In the following, the credit and fee element in apprenticeship financing will be analysed in further detail and its consequences for the access to apprenticeships for poor and credit constrained youth will be discussed.

2.2 Empirical evidence

The financial arrangements of informal apprenticeships in Africa vary from individual to individual, sector to sector and country to country.[7] One finds different combinations of payment and in-kind contributions. Common payments from the apprentice or his family to the master include fees and presents like drinks, tobacco, sheep or goats and the financing of a ceremony at the beginning and conclusion of the apprenticeship. Payments by the master to his apprentices may take the form of wages, allowances for food, clothes and transportation as well as in kind provisions like shelter at the master's house or the workplace (apprentices might at the same time serve as night guards).[8]

In Ghana, informal apprenticeship training usually involves the payment of fees by the apprentice or his family, either in cash or in kind. Fees are paid at the beginning and/or the end of the apprenticeship training and vary in their amount. Among others, the type of trade, the popularity of the master and the costs involved in the production process seem to influence the amount of fees charged.[9] Also, according to Velenchik (1995), the access of enterprises to formal sources of enterprise finance seems to have an influence on the charging of apprenticeship fees: enterprises with access to formal sources of finance are less likely to charge fees for their training.

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[7] See for example

Haan, H.C. (2002) "Informal Sector: Training for Work in the Informal Sector: New evidence from Kenya, Tanzania and Uganda", IFP/SKILLS Working Paper No. 11, ILO, Geneva.

Haan, H. C. (2002) "Training for Work in the Informal Sector: New Evidence from Eastern and Southern Africa", International Training Centre of the ILO, Turin.

Grierson, John (Ed.) (2002) "Enterprise-Based Training in Africa: Case Studies from Kenya and Zambia", International Training Centre of the ILO, Turin.

Birks, Stace et al. (1994) « Skills Acquisition in Micro-Enterprises: Evidence from West Africa », OECD Development Centre, Paris, ILO, Geneva, World Bank, Washington.

Peil, M. (1970) "The Apprenticeship System in Accra", Africa Vol.40 No.2, p.137-150

Peil, M. (1970), p.144ff.

[9] Roeske, J. (2003) "Skills training strategies to combat worst forms of child labour in the urban informal economy: Ghana Country Study", ILO-IPEC, p. 83.

In 1997 in Ghana, the total cost of an apprenticeship of around three years was between 20 and 200 USD, for apprentices.[10]

3. Methodology

3.1 Data Collection

The report is based on qualitative and quantitative data, selected during a five week mission to Accra, Ghana, in August –September 2006.

- The qualitative part of the survey involved interviews with key informants and stakeholders of the micro and small enterprise sector as well as with financial service providers and youth organizations[11]. This information served as a background for the quantitative data collection.
- The quantitative data was collected through structured interviews in 200 micro enterprises in Accra/Ghana, all engaged in apprenticeship training, 50 each in tailoring and dressmaking, hairdressing, carpentry and mechanics.
- Furthermore, focus group discussions (FGD) with selected participants of the quantitative survey were conducted in the end of the survey, to verify answers and get a more in depth understanding of some of the arising results.

3.1.1 Sample Selection

The composition of the sample takes into account the relative number of apprentices trained in each of the trades, the level of skills and technology required as well as gender aspects: carpentry and mechanics are male dominated, hairdressing female dominated and tailoring and dressmaking mostly female but mixed. According to the Ghana Living Standard Survey Round 4 (GLSS IV), tailoring, carpentry and mechanics are the most prevalent trades learnt through informal apprenticeship.[12] These

[10] Haan, H.C. and N. Serrière (2002) "Training for Work in the Informal Sector: Fresh evidence from West and Central Africa", International Training Centre or the ILO, Turin, p. 34.

[11] See appendix I for a complete list of institutions and stakeholders consulted.

[12] According to the GLSS IV, 37% of apprentices are trained in tailoring (66 % of all females and 13% of all males), 9% in Carpentry (16 % of all males and only 0.2 of all females) and 7% in Mechanics (14% of all males, 0.3 % of all females). Source: Ghana Statistical Service (2000) "Ghana Living Standard Survey Round 4", GSS, Accra.

figures are in line with the distribution of apprentices by trade and sex found by Palmer in the Ashanti region in Ghana. Hairdressing, which is not included in the GLSS IV[13], accounted for 20% of all apprentices in Palmer's survey.[14]

In the light of the lack of data on the exact number and location of enterprises in Accra, the relatively small sample size of the survey (200) and the restricted time and budget of the study, a combination of quota sampling and accidental sampling was used. To ensure an approximate representation of the city, Accra was divided into 5 areas, each area comprising 3-4 town councils as defined by the Town and Country Planning Unit in the Greater Accra office.[15] Each interviewer was assigned to one of the 5 areas with the task of randomly surveying 10 representatives of each trade in his area.

3.1.2 Quantitative data collection

Quantitative data was collected through structured interviews with masters and apprentices. In each enterprise, the master and one of his apprentices were interviewed, using two separate questionnaires. The interviews took place at the workplace, i.e. the micro enterprise. The questions asked concentrated on the financial arrangement of the apprenticeship (fees demanded, salaries and in kind contributions given to the apprentice), the financing of enterprise activities (start up, working capital, investments, relationships to suppliers and clients, access and use of loans and saving accounts), the apprenticeship training (entry, duration, content, future prospects of graduate apprentices) as well as general questions about the master, the apprentices and the enterprise.

The length of the interviews varied between 30 to 60 minutes (in the case of the masters) and 15 to 30 minutes (in the case of the apprentices).

The interviews were carried out by five graduate students of the Institute of Development and Planning at KNUST University in Kumasi. The interviewers all had prior experience in survey techniques and were fluent in the local languages Twi and Ga.

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[13] The GLSS does not provide disaggregated information about apprentices in the hairdressing trade. According to discussions with representatives from the Ghana Statistical Survey, though, hairdressing is one of the most common trades learnt among females in Ghana, just after tailoring and dressmaking. This information is supported by the findings of Palmer (2007).

[14] Palmer, R. (2007) "Skills Development, the Enabling Environment and Informal Micro-Enterprise in Ghana", PhD, University of Edinburgh, p. 254.

[15] See appendix II for grouping of Accra Town Councils for the quantitative data collection.

To ensure a common understanding of the research aim and the questions in the survey, the interviewers were trained in a two day workshop that involved the testing and subsequent finalization of the questionnaires.

3.1.3 Focus Group Discussions

Following the quantitative survey, focus group discussions were held to verify some of the answers and to get a more in depth understanding of some of the arising results. For this purpose, four FGD were organized, one for each trade. To each FGD, selected masters, apprentices and representatives of the trade associations were invited. In total, each FGD was comprised of 5-6 persons.

3.2 Data Analysis

The data collected through structured interviews was entered into spreadsheets, cleaned and analysed with SPSS. The statistical methods applied include comparison of means, correlation analysis and linear regressions. The qualitative data was used to verify and interpret the results from the quantitative data analysis.

3.3 Challenges and limitations

One of the major constraints encountered in the sampling process was the lack of statistical data available on the number of enterprises in the informal sector, their distribution per trade, their location within Accra and the number of employees and apprentices employed in those enterprises. The industrial census conducted by the Ghana Statistical Service only covers formal sector enterprises in its totality. Regarding enterprises in the informal sector, no such complete listing and survey exists and even if it would exist, it would very rapidly be out of date again. Given the restricted time and resources and the pilot character of the survey, the preparation of a complete listing of the sample population did not seem to be efficient. Therefore, instead of random sampling, a combination of quota sampling and accidental sampling was used.

Another limitation of the study lies in its pilot character, the relatively small sample size and the lack of information on the exact size and characteristics of the sample population. The results of the analysis therefore cannot be considered as strictly statistically significant, but rather as a rough indicator of patterns. Regional differences

in the financing of apprenticeship training within Ghana or within the region are also not captured by this study, as it focuses on urban Ghana and the Capital Accra only.

4. Research Results

4.1 Background data on sample

4.1.1 Enterprises

The 200 enterprises in the sample are equally distributed over four trades: tailoring and dressmaking, hairdressing, carpentry and mechanics. Per definition, all of them are engaged in apprenticeship training and train between 1 to 25 apprentices, the average being four. There are considerable differences between the four trades (Table 1).

Table 1.[16] **Number of Apprentices in Enterprise**

Sector of Enterprise	N	Minimum	Maximum	**Mean**
Tailoring	50	1	14	**3.32**
Hairdressing	50	1	24	**4.60**
Mechanics	50	1	25	**5.16**
Carpentry	50	1	7	**2.92**
Total	50	1	25	**4.00**

Besides employing apprentices, 13.5% of enterprises also employ salaried workers, ranging from 1 to 5 with an average of 2 employees. Therefore, all except one enterprise in the sample classify as micro enterprises under the classification by number of employees that is commonly applied in Ghana[17]. 13% of the enterprises also state to have between 1 to 6 (average 1.8) journeymen[18].

Most enterprises operate somewhere in the middle between complete informality and full compliance with all the registration requirements established by the government (see Appendix III for details on registration requirements for enterprises in Ghana as well as evidence from the survey).

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16 All the Tables in the paper, unless otherwise indicated, are based on the author's calculations from the survey on financial arrangements in informal apprenticeships, August/September 2006.

17 Commonly applied classification in Ghana: Micro enterprises: those with up to 5 employees; small enterprises: enterprises employing between 6 to 30 employees. See: Manu, G., P. Morton and D. Eku, EMPRETEC Ghana Foundation (2003) "Background paper on micro and small enterprise development and the informal economy", ILO, Ghana, p.10

18 Journeymen, often former apprentices, operate on their own account and work in the enterprise occasionally, when the workload demands or permits it.

4.1.2 Entrepreneurs and Apprentices

The entrepreneurs or masters in the sample have an average age of 34 years, ranging from 20 to 60 years. Apprentices are on average 21.5 years old, ranging from 14 to 35. With the youngest apprentice being 14 years old, 99.5% aged 15 and above[19] and only 5% of all apprentices in the sample being under the age of 18, it is clear that apprenticeships do not disguise child labour here.[20]

Apprentices have a slightly lower average educational level (Table 2). Only one master and six apprentices did not go through any formal education.

Table 2. Highest Educational Level Completed by Apprentices and Entrepreneurs

	Apprentices	**Entrepreneurs**
Educational Levels	Percent	Percent
Vocational/Technical Training	3.5	9.5
Apprenticeship Training	0.0	14.0
Senior Secondary School (3 years)	4.0	12.5
Junior Secondary School (3 years)	**67.5**	**50.0**
Primary School (6 years)	22.0	13.0
No formal education	**3.0**	**0.5**
No Response	0.0	0.5
Total	100.0	100.0

When asked for the reason for doing an apprenticeship, 51% of the apprentices stated that they could not afford higher or technical education. The lower educational level of the apprentices, in comparison to the masters, can thus be explained by the fact that apprenticeship training is an accessible option for youth that do not have the chance to go through technical/vocational training or senior secondary school.

The gender breakdown (Table 3) shows that 61% of both entrepreneurs and apprentices in the sample are male. While carpentry and mechanics are male dominated, hairdressing is female dominated (with 2 of the apprentices and none of the masters being male) and tailoring and dressmaking mixed (about 40% male and 60% female apprentices and masters).

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[19] The 1998 Children's Act in Ghana states that youth are not meant to start apprenticeship until age 15 or after completion of Junior Secondary School.

[20] This confirms the findings of previous studies on the informal apprenticeship in Western Africa , see for example Fluitman, Fred (1994) "Africa: Traditional Apprenticeship" in: Husén, T. and T.N. Postlethwaite (ed.) *International Encyclopedia of Education*, Pergamon, New York.

Table 3. Distribution of entrepreneurs and apprentices by sex

	Entrepreneurs (in %)		Apprentices (in %)		Total (in %)	
Sector of Enterprise	Male	Female	Male	Female	Male	Female
Tailoring	42	58	40	60	41	59
Hairdressing	0	100	4	96	2	98
Mechanics	100	0	100	0	100	100
Carpentry	100	0	100	0	100	100
Total	**60.5**	**39.5**	**61**	**39**	**60.75**	**39.25**

4.1.3 Apprenticeships

The average length of an apprenticeship in the enterprises in the sample is 36 months, ranging from 12 to 72 months with a median duration of 36 months (60% of the enterprises). During this time, apprentices take part in the production process of the enterprise and learn the trade through observation, learning by doing, demonstration and instructions[21]. Characteristics of apprenticeships regarding contracts, training plans, training certificates and participation in external certification exams (Table 4) indicate that informal apprenticeships create linkages to formal training institutions (e.g. vocational training centres) and move away from complete informality.

Table 4. Characteristics of apprenticeships in sample

	Yes (%)	Details (% of total yes)
Master issues apprenticeship contract	64	50 Signed by parent or guardian 45 Signed by apprentices 5 Signed by both
Master follows training plan	35	83 Unwritten training plan 14 Self written training plan 3 Training plan of trade association
Apprentice participates in external classes	0	
Master issues training certificate	79	
Apprentice planning to take external certification exam	43	70 National Vocational Training Institute (NVTI) 33 Trade Association 5 Accra Technical Training Centre (ATTC)
Masters stating that former apprentices have taken part in external certification exams	43[22]	

[21] Most common training methods, as stated by masters.

[22] A note of caution has to be added to these figures as they seem very high. According to information from Robert Palmer, in a 2006 conducted household survey in Accra only 5% of apprentices got NVTI certification, 25% got trade association certificates and 65% of apprentices did not get any certification.

4.2 Financial Arrangements in informal apprenticeships

This section discusses the payments and transfers involved in informal apprenticeships to then analysis their determinants and possible effects.

4.2.1 Payments by apprentices

Informal apprenticeships in urban Ghana usually require the payment of a fee to the master. Among the enterprises in the sample, across all four trades, all but five masters (2.5%) charge fees from their apprentices (Table 5).

Table 5. Charging of apprenticeship fees per sector of enterprise

		Sector of Enterprise				Total
		Tailoring	Hairdressing	Mechanics	Carpentry	
Yes	Count % within Sector	48 96%	49 98%	49 98%	49 98%	195 97.5%
No	Count % within Sector	2 4%	1 2%	1 2%	1 2%	5 2.5%

Apprentices commonly pay fees at 2 different points in time: a fee in the beginning of the training, the "commitment fee", and/or a fee in the end of the training, the "graduation fee". In addition, some masters ask for in kind contributions, commonly a crate of minerals (soft drinks) or malt (malt beer), a bottle of spirits, cigarettes or a goat. Payment of fees in the course of the training is not practised among the enterprises in the sample. Table 6 provides an overview of the frequency of the different combinations of fees and in kind contributions charged by the masters. Commitment fees, charged by 97% of all the enterprises in the sample, is the most widespread and common fee.

Table 6. Type and frequency of fees charged by entrepreneurs

Fee	Frequency	Percent	Cumulative Percent
Commitment, In Kind & Graduation	110	55.0	55.0
Commitment & In Kind	39	19.5	74.5
Commitment	24	12.0	86.5
Commitment & Graduation	21	10.5	97.0
Graduation	1	0.5	97.5
None	5	2.5	100.0
Total	200	100.0	

The amount of fees charged by the masters varies considerably (Table 7 and 8). The amount of commitment fee ranges from 200,000 Ghanaian Cedis[23] (22 USD) minimum to 3,000,000 (336 USD) maximum, with an average at 755,000 Cedis (85 USD). The graduation fee ranges from 100,000 Cedis (11 USD) to 4,000,000 Cedis (440 USD), with an average at 826,136 Cedis (93 USD) Adding up the different fees (commitment fee, in kind contribution and graduation fee), the average total amount of fees charged for an apprenticeship is 1,420,236 Cedis (160 USD), ranging from 200,000 to 5,500,000 Cedis (22 to 616 USD).[24]

This amount is slightly higher than previous empirical evidence suggests.[25] This might partly be due to the urban focus of the survey. In rural areas, apprenticeship fees are likely to be much lower. A study from rural Ashanti shows that the average fee is of 42 USD, ranging from 13 USD to 173 USD.[26]

Table 7. Amount of fees charged, per type of fee

Type of Fee	N	Minimum	Maximum	Mean (Cedi)	Mean (USD)
Commitment Fee	194	200 000	3 000 000	755 412	85
In Kind Contribution	149	35 000	800 000	143 262	16
Graduation Fee	132	100 000	4 000 000	826 136	93
Total	**195**	**200 000**	**5 500 000**	**1 420 236**	**159**

Table 8. Total amount of fees charged by sector of activity

Sector of Enterprise	N	Minimum	Maximum	Mean (Cedi)	Mean (USD)
Tailoring	48	200 000	3 000 000	1 193 229	134
Hairdressing	49	400 000	3 300 000	1 385 204	155
Mechanics	49	250 000	5 500 000	1 618 469	181
Carpentry	49	350 000	4 700 000	1 479 408	166
Total	**195**	**200 000**	**5 500 000**	**1 420 236**	**159**

About a quarter of entrepreneurs indicate that they do not take fees from all their apprentices, making exceptions for poor people and the children of friends. Also, the majority of masters (55%) state that the amount of fees depends, among other things, on the apprentice's ability to pay.

[23] All monetary values in this report, unless otherwise indicated, are denominated in Ghanaian Cedis (GHC). At the time of the survey (August 24th to September 15th), the value of 10,000 GHC equalled 1.12 USD.

[24] As a comparison, the GDP per capita in Ghana in 2006 was 682 USD (IMF, World Economic Outlook Database, October 2007).

[25] Haan, H.C. and N. Serrière (2002), p.34.

[26] Palmer (2007), p. 264.

Besides paying apprenticeship fees, apprentices also often provide services to their master, other than the labour input in the enterprise. 60% of apprentices state to be offering other services, mostly errands and domestic services. 1% state to be serving as a night guard, while 11% of apprentices sleep at their workplace and thus also fulfil a night guard function, according to their masters.

Furthermore, apprentices are usually asked to bring along their own set of tools (81%). In tailoring, for example, this includes a sewing machine, scissors, needles and pins. The average cost of a toolbox was 400,000 Cedis (44.80 USD). It ranges from 50,000 to 2 million Cedis (5.60-224 USD) and varies considerably between the different trades (Table 9).

Table 9. Cost of toolboxes

Sector of Enterprise	N	Minimum	Maximum	Mean (Cedi)	Mean (USD)
Tailoring	35	50 000	2 000 000	595 429	67
Hairdressing	35	50 000	600 000	195 714	22
Mechanics	37	100 000	2 000 000	408 108	46
Carpentry	40	100 000	2 000 000	412 500	46

Summing up, informal apprenticeships in Accra usually require the payment of apprenticeship fees (commitment, in kind and/ or graduation fees), amounting to an average of 1,420,236 Cedis or 160 USD. Often, apprentices are providing services beyond their labour input in the enterprise and in most cases an apprenticeship also requires the purchase of a toolbox, the cost of which varies between the different trades.

4.2.2 Payments by masters

Masters, in most cases, also support their apprentices financially and/or in-kind.

Table 10. Payment of apprentices

	Yes (%)	No (%)	Total (%)
Do you employ paid apprentices?	**20**	80	100
Do you make payments to your apprentices?	**74**	26	100

According to the statements of the masters, 80% of apprentices are unpaid, i.e. do not receive a wage. Nevertheless, 74% of the masters indicate to make some non-wage payments to their apprentices, usually on a daily basis (Table 10). The allowance

or 'chop money'[27] that masters give to their apprentices is thus not seen as compensation for their labour input but rather as some kind of pocket money. The daily amount of chop money varies between 400 and 10,000 Cedis (4.5 cent to 1.12 USD) for junior apprentices[28], while senior apprentices[28] sometimes receive more (between 1,000 and 40,000 Cedis (1.12 – 4.48 USD) daily).

On a monthly basis, this amounts to an average of around 167,000 and 242,000 Cedis (19 and 27 USD) for junior and senior apprentices, respectively. By comparison, salaried workers in the sample enterprises earn on average about 900,000 Cedis (101 USD) (Table 11). Apprentices therefore receive about one fifth of salaried workers or one half to two thirds of the minimum wage (13,500 Cedis or about 1.50 USD per day, as determined by the National Tripartite Committee). Given that the majority of apprentices are considered to be unpaid, this amount seems relatively high.

Table 11. Monthly amount given to junior and senior apprentices, journeymen and salaried workers

	N	Minimum	Maximum	Mean (Cedi)	**Mean (USD)**
Junior Apprentices	143	10 000	500 000	166 930	**19**
Senior Apprentices	92	25 000	1 000 000	242 065	**27**
Journeymen	17	125 000	900 000	389 118	**44**
Salaried Workers	27	240 000	3 000 000	897 778	**101**

64% of the masters also indicate to support their apprentices in kind, with one or two daily meals, cloths, shelter at the masters' house or workshop, occasional gifts and/or tools. The most common contribution among the entrepreneurs in the sample are end of the year and end of apprenticeship gifts (71% and 43% respectively of the masters that provide any in kind support), followed by one meal (22%), clothes (17%) and shelter (9%).

4.2.3 Comparison of payments of apprentice and master

A comparison of the payments of apprentices and masters provides insights into their relative amounts and into the direction of net transfers.

[27] 'to chop' is the commonly used, informal expression for 'to eat' in Ghana.

[28] Junior apprentices are apprentices in their first year(s) of an apprenticeship while senior apprentices are apprentices that have already completed their first year(s) and are in their final year(s) of an apprenticeship. Senior apprentices often also take part in the training of their junior counterparts.

In 68.5% of cases the allowance received exceeds the amount of fees paid by an average of 6,426,686 Cedis or 720 USD. Among the apprentices that do receive an allowance (74%), in 92% of cases this is greater than the amount of fees paid (Table 12).

Table 12. Comparison of total amount of fees paid and allowance received (in the course of the apprenticeship)

	Frequency	Percent	Average amount of difference	
			Cedi	USD
Fee > Allowance	12	6.0	1 137 833	127
Allowance > Fee	137	68.5	6 426 686	720
No allowance	51	25.5		
Total	200	100.0		

Thus, in 68.5% of cases, over the period of an apprenticeship, a net payment is made from the master to the apprentice. Assuming that the value of all in-kind transfers between the apprentice and the master (domestic services, shelter, food, etc.) is balanced, this suggests that the value of labour input by the apprentice exceeds the training costs of the master and that the master benefits from the apprenticeship.

Given the frequency of up-front commitment fees apprentices provide a credit to the master which is paid back over the course of the apprenticeship in form of daily or weekly allowances. The commitment fee thus seems to compensate the master for the time lag between his initial high training input and the delayed productive labour input by the apprentice.

Masters themselves explain the reason for charging a fee in the beginning of the training with the high initial costs of apprenticeship training (in form of masters' time and material). Also, the payment of a fee in the beginning of an apprenticeship ensures the commitment of apprentices. This fee is therefore also commonly called 'commitment' fee.

4.3 Analysis of financial arrangements: Determinants and effects of apprenticeship fees

The section above has presented a general overview over the financial arrangements in informal apprenticeships. In the following, the determinants and effects of these arrangements, particularly of apprenticeship fees, will be examined in more detail. The following questions will be addressed:

1. What does the amount of apprenticeship fees depend on?
2. The financing of the enterprise - does it have an influence on the charging of apprenticeship fees?
3. How do apprentices finance the apprenticeship training?
4. The charging of apprenticeship fees – does it restrict young people from pursuing an apprenticeship?

4.3.1 What does the amount of apprenticeship fees depend on?

Theory predicts that the amount of fees should depend on the net costs of apprenticeship training and the masters' prospect of benefiting from the training (in form of productive labour input after the training period). The higher the training costs (dependent on the training and material input of the master, the duration of the apprenticeship and the value of the apprentice's labour input) and the lower the prospect of retaining apprentices, the higher the cost and lower the benefits to the master and thus the higher the amount of apprenticeship fees charged.

Masters mention that the amount of fees charged depends on various factors, including the ability of the apprentice to pay (55%), the fees demanded by other masters (16%), the relationship to the parents of the apprentice (9%) and the master's own will (8%), to name the most frequent.

Being aware of the masters' statements, the following analyses how far the theoretical considerations might still be relevant in the practice of informal apprenticeship financing. For that purpose, the amount of fees charged will be compared to indicators of training costs and benefits, using correlation and regression analysis. Indicators used include the cost of the toolbox, the duration of apprenticeship, the nature

of skills *training* and the prospect of retaining apprentices. Furthermore, the turnover and size of enterprises and the relationship between masters and apprentices seem to influence the amount of fees charged.

Determinant 1: Cost of training

The average amount of fees charged differs between the four trades examined in the survey (Table 13). On average, hairdressers and tailors charge less than carpenters and mechanics, while tailors charge the smallest average amount of fees (commitment fees, in kind contributions and graduation fees) and mechanics charge the highest.[29]

Table 13. Total amount of fees charged by sector of activity

Sector of Enterprise	N	Minimum	Maximum	Mean (Cedis)	Mean (USD)
Tailoring	48	200 000	3 000 000	1 193 229	134
Hairdressing	49	400 000	3 300 000	1 385 204	155
Mechanics	49	250 000	5 500 000	1 618 469	181
Carpentry	49	350 000	4 700 000	1 479 408	166
Total	195	200 000	5 500 000	1 420 236	159

The difference may be due to a difference in trade-specific costs of apprenticeship training, such as materials, tools and equipment used in the training and production process.

Taking the costs of the toolbox as a proxy for the costs of tools and materials used, a comparison between the average costs of toolboxes in the four trades shows that they are the highest in the tailoring, where apprentices are required to purchase a sewing machine. After the initial investment in a sewing machine, the working capital costs in the tailoring trade are estimated to be low. This might explain the relatively low amount of fees charged for apprenticeships in tailoring.

The costs for the toolboxes in the carpenters and mechanics trade significantly exceed those in the hairdressing trade (Table 9). Correlating the costs of the toolbox with the amount of fees charged indicates a strong and significant relationship between the two (Table A2 Appendix IV).

[29] The difference between the mean of fees charged in tailoring as compared to mechanics and carpentry is significant at the .05 level (ANOVA contrast test, p-value=.009).

Determinant 2: Turnover of enterprise

Another strong relationship seems to exist between the amount of fees charged in an enterprise and the monthly turnover of the enterprise (Table A4, Appendix IV).[30] The correlation between the two variables (amount of fees and monthly turnover) is not only significant for all enterprises in the sample but also enterprises in each sector. Masters in enterprises with a higher turnover thus seem to demand higher fees. Enterprises with a higher turnover also employ a higher average number of apprentices (Table A5, Appendix IV) and salaried workers. While the correlation between turnover and workforce is to be expected, the higher amount of fees charged for apprenticeships in these enterprises is not as plausible. One explanation might be the better reputation of enterprises with a higher turnover. A good reputation of enterprises might raise the demand for apprenticeship training in these enterprises, which, in turn, might drive up the fees charged for the training. This would confirm the findings of previous empirical studies that suggest that the amount of fees depends on the popularity of the master, among others[31].

Determinant 3: Duration of apprenticeship

Furthermore, the average duration of an apprenticeship and the amount of fees charged are positively correlated. The longer the apprenticeship, the higher the fees charged for the training (Table A3 Appendix IV). This seems counter intuitive: longer apprenticeships come along with longer and more productive labour input by the apprentice. This theoretically reduces the net training costs for the master and should thus lead to a smaller fee. On the other hand, skills acquisition might take longer in more technically demanding trades. The relationship between the average duration of an apprenticeship and the fee charged for the training in each sector of enterprise shows that the relationship is especially strong in the case of mechanics, while it does not seem to exist among carpenters. The direction of influence and the significance of the relationship between the duration of apprenticeships and the amount of fees charged is thus not entirely clear and requires further analysis.

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[30] Correlation coefficient of correlation between amount of fees charged and the monthly turnover of the enterprise: r= 0.305, p-value= 0.000, significant at the 0.01 level (2-tailed).

[31] Roeske, J. (2003), p. 83.

Determinant 4: Relationship between master and apprentice

A clear and unambiguous factor influencing the amount of fees charged by masters is their relationship to the apprentice. Apprentices in the sample that are related to their master pay significantly less than apprentices with no family relationship to their masters (Table 14). Other than with relatives, the average amount of fees charged from apprentices of friends is only slightly lower than the amount of fees charged from apprentices with no prior relationship to their master (Table 15).

Table 14. Comparison of means between the amount of fees charged in the case the master and the apprentices are related or not

	Master and Apprentice related	N	Mean
Total Amount of Fees	Yes	14	917 857 *
Charged in Enterprise	No	186	1 419 871 *

* Difference in means significant at the .05 level (2-tailed, p-value=0.022)

Table 15. Total amount of fees charged in enterprise, by relationship between master and apprentice

Relationship between master and apprentice	N	Minimum	Maximum	Mean
Relative	14	0	3 000 000	917 857
Family friend	29	0	3 000 000	1 407 586
No prior relationship	157	0	5 500 000	1 422 140
Total	200	0	5 500 000	1 384 730

Determinant 5: Nature of skills training and prospect of retaining apprentices

The nature of skills training (general or specific skills) and the prospect of retaining apprentices, i.e. the sharing of the benefits of training between the master and the apprentice, may also influence the amount of apprenticeship fees charged.

Evidence from focus group discussions suggests that the enterprises in the sample train their apprentices on all aspects of the trade, without focusing on a specific production process or method. The training seems to be rather general, which, according to Becker (1975) justifies that apprentices bear the costs of the training.

Also, employers rarely retain their former apprentices in their enterprises (8%). Among the sample apprentices, a large majority (76%) indicated that they were planning to set up their own enterprise, either immediately or 2-5 years after having completed their apprenticeship (Table 16). This suggests that it is ultimately the apprentices who benefit from the training.

Table 16. Plans after having completed the apprenticeship

	Frequency	Percent	Cumulative Percent
Start own enterprise immediately	71	35.5	35.5
Start own enterprise within next 2 years	15	7.5	43.0
Start own enterprise within next 5 years	66	33.0	76.0
Stay in training enterprise permanently	2	1.0	77.0
Stay in training enterprise for a while	29	14.5	91.5
Work for another enterprise	13	6.5	98.0
Others (go back to school, continue education)	2	1.0	99.0
No response	2	1.0	100.0
Total	200	100.0	

Entrepreneurs retaining their apprentices charge (significantly) lower training fees, compared to enterprises that employ other external labourers (Table 17).

The prospect of retaining apprentices, whether this is due to the specific nature of the training offered or due to other factors, thus seems to reduce the amount of fees charged.

Table 17. Fees charged and retention rate

	Employment of former Apprentices	N	Mean
Total Amount of Fees Charged in Enterprise	Yes	10	2 169 000 *
	No	16	1 690 000 *

Difference in means significant at the .01 level (2-tailed, p-value=0.156)

Fees – not every master charges

5 entrepreneurs in the sample do not charge any fees for the apprenticeship training.[32] Comparing their characteristics to the other enterprises in the sample, no significant difference can be found. The 5 entrepreneurs are distributed over the four trades; two of them are related to their apprentices; and also the remaining characteristics resemble those of the other enterprises in the sample. The data of the survey therefore cannot explain why those enterprises, as opposed to all the others, do not charge apprenticeship fees.

Summary and evaluation

Summing up, the amount of apprenticeship fees charged seems to increase with the turnover of an enterprise, the costs of production in an enterprise or trade and the length of the apprenticeship training period. Family relationships between the master and

[32] The data of the 5 enterprises not charging any fees entered into the previous analysis with the amount of fees charged equal to zero, unless otherwise indicated.

the apprentice, on the other hand, reduce the amount of fees charged similar to the prospect of retaining apprentices after the apprenticeship is finished.

Nevertheless, a large portion of the variance in the amount of apprenticeship fees charged remains unexplained. A linear regression with the amount of apprenticeship fees as the dependent variable and the selected independent variables (cost of the toolbox, monthly turnover of enterprise duration of apprenticeship and the relationship between the apprentice and the master), can only explain 29% of the variance[33] in the amount of fees charged (see Table A7, Appendix IV for the regression results).

4.3.2 The financing of the enterprise – does it have an influence on the charging of apprenticeship fees?

Velenchik (1995), in her study on apprenticeship contracts, small enterprises and credit markets in Ghana, analyses the relationship between the charging of apprenticeship fees and characteristics of the training enterprises. She finds that small enterprises, that do not have access to formal sources of enterprise finance, are more likely to charge fees for apprenticeships in their enterprises.

Can this correlation be confirmed by the data in this survey? As stated earlier, 97.5% of the enterprises in the survey charge fees for the apprenticeship training. Also, all the enterprises included in the survey classify as micro or small enterprises. This is consistent with Velenchik's findings about small enterprises being (more) likely to charge fees.

The main source of funds used to finance the start up and working capital of these enterprises have been personal savings (used by 87% for start up) and loans from family and friends (31%). 3.5% of entrepreneurs had used a bank loan to finance their working capital needs.[34] In the case of investment capital, internal sources of funds,

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[33] The variance measures the variation or difference in the amount of fees charged in the different enterprises. If 29% of the variance is explained this means that out of a difference of 100 USD, 29 USD difference is directly related to differences in the relationship between masters and apprentices, the duration of the apprenticeships, the cost of the toolboxes and the turnover of the enterprises.

[34] These figures support the findings of Aryeetey et al. (1994) in their analysis of the supply and demand for finance of small enterprises in Ghana. The authors state that 67% of enterprises in their sample used their own savings as the primary source for start-up capital, while for 81% it featured among the three main sources. Regarding the most common sources of working capital, Areeytey et al. (1994) find that entrepreneurs predominantly used internal sources (retained earnings and own savings) while external sources consisted of suppliers credit and advance payments of customers. 3% of entrepreneurs in their sample had used bank loans for their working capital needs.

including savings and retained earnings, are also the predominant ones. 20% of entrepreneurs also state to be using the revenue from apprenticeship fees to finance new investments (Table 18). Nevertheless, because of the fungibility of money, it is impossible to clearly track the origin and use of funds.

Table 18. Main use of apprenticeship fees among master craftsmen

Use of Fees	Frequency	Percent
Personal affairs	58	29.0
Needs at time of payment (personal or business related)	47	23.5
Equipment, new investments	**40**	**20.0**
Procurement of raw materials	23	11.5
Training related materials	**10**	**5.0**
Other business related expenses	1	0.5
Other	1	0.5
Savings	1	0.5
Total	181	90.5
No Response	14	
Not Applicable	5	

Can this be attributed to a lacking access to formal sources of enterprise finance?

Comparing the entrepreneurs with access to bank loans to those that entirely rely on internal or informal sources of capital, the charging of fees is a common practise in both. Entrepreneurs that did access external finance within the last two years even charged a significantly higher average amount of apprenticeship fees than entrepreneurs that did not (Table 19).[35] Therefore, difficulties in accessing bank loans do not seem to be a determining factor for the charging of apprenticeship fees.

Table 19. Comparison of means between the amount of fees charged in the case the master and the apprentices are related or not

	Loan received within last two years	N	Mean	Std. Deviation
Total Amount of Fees Charged in Enterprise	No	193	1 263 917 *	778 787
	Yes	7	1 958 517 *	1 064 995

* Difference in means significant at the .05 level (2-tailed, p-value=0.052)

[35] There seems to exist a strong positive relationship between the access of enterprises to credit and the amount of fees charged. The results of the statistical analysis here have to be viewed with caution, though. The sample size of 7 enterprises that have received a loan within the last two years is very small and therefore does not allow for reliable statistical inferences and significant tests.

4.3.3. How do apprentices finance the apprenticeship training?

Apprenticeship fees are in a large majority of cases covered by the family or guardians of the apprentice (Table 20). Very few apprentices indicate to have paid for the fees themselves, either through savings from previous income generating activities or through loans from family of friends.

Regarding the living expenses of the apprentices, a similar pattern can be observed. The majority of apprentices lives with their family or the master and thus does not pay any rent. Only 7% of apprentices, living alone, in a dormitory or with friends, indicate to be paying rent. A slightly higher percentage of apprentices indicate to be paying for food and clothes themselves (Table 21).

Masters indicate to be supporting the apprentices in kind, mostly in form of end-of-year or occasional gifts. A relatively small percentage of apprentices also receive one or two meals per day, clothes or shelter. Therefore, both for the payment of fees and living expenses, the majority of apprentices seem to rely on the support of their family or guardian.

Table 20. Who pays for the fees?

	Frequency	Valid Percent
Parents or relatives	155	88.6
Apprentice himself (total)	13	7.4
• From own savings from previous or current income generating activity	• 9	• 5.1
• Through loan from family or friends	• 4	• 2.3
Others	7	4.0
Total	175	100.0
Not applicable	17	
No response	8	

Table 21. Who pays for meals and clothes of apprentice?

		Frequency	Valid Percent
Meals	Parents or relatives	142	71.0
	Master	16	8.0
	Apprentice himself	40	20.0
	Others	2	1.0
Clothes	Parents or relatives	105	52.5
	Master	12	6.0
	Apprentice himself	81	40.5
	Others	2	1.0
Shelter	Parents or relatives	140	70.0
	Master	22	11.0
	Apprentice himself	14	7.0
	Other	24	12.0

However, apprentices also finance part of their living expenses through allowances from their masters or through additional part-time work. 74% of apprentices receive an allowance or chop money from their masters, amounting to a monthly average of 196,000 Cedis (22 USD). 8% of apprentices indicate to be working on a part time basis outside the training enterprise and 10% state to be earning some extra money through the production and sale of products on their own account. The earning of additional income outside the training enterprise does not seem to be driven by the absence of monetary allowance from the master. Almost all apprentices that indicate to be involved in income generating activities do receive an allowance from their masters, although this allowance is on average lower than the allowance received by apprentices without additional earnings.

While apprentices mostly spend their earnings on living expenses, about half of the apprentices also indicate to save part of their allowance in cash at home (77%), with a susu collector (30%) or in a bank account (5%).

4.3.4 Apprenticeship fees – does it restrict young people from pursuing an apprenticeship?

Informal apprenticeships are often praised for being cost effective and accessible, even for poor and less educated youth. Nevertheless, the requirement of fees at the beginning of the training might restrict capital and credit constrained youth from

starting an apprenticeship. What does the data from the survey tell us about this concern?

In the majority of cases, as analysed above, the parents or guardians of apprentices pay for the apprenticeship fees and (in most cases) also for the living expenses. Also, most apprentices receive some daily or weekly allowance from their masters, amounting to about one fifth of the income of regular employees. About half of the apprentices indicate to be able to save. Moreover, the majority of masters indicate that they adjust the amount of fees according to the apprentices' ability to pay. These factors suggest that apprenticeship training in micro enterprises in Ghana is accessible and affordable.

Nevertheless, in focus group discussions masters raised the concern of the miserable financial situation of their apprentices, who often did not receive adequate financial support from their families. According to the masters, many apprentices were badly nourished, badly dressed and did not attend regularly.

The financing of an apprenticeship might be especially difficult for youth from very poor families and vulnerable youth like street children without any family support. Roeske (2003) raises the concern that apprenticeship training in Ghana might not be an alternative for street children and (former) child labourers. Major obstacles are fees as well as living expenses, especially since it is rather uncommon for apprentices in Ghana to be lodged in the master's house. Also, not all masters support their apprentices financially or in-kind (Table 22).

Table 22. Financial or in kind support (other than presents) received from master

	Frequency	Percent
Yes	168	84.0
No	32	16.0
Total	200	100.0

Besides financial constraints, lacking formal education might be another barrier in entering an apprenticeship. Among the apprentices in the survey, 97% have some kind of formal education. 75% have even completed secondary school or higher education. In

comparison to the national average, this is relatively high. In 2004, the net primary enrolment rate in Ghana was 65%[36].

Although informal apprenticeships are often praised for the accessibility, even for poor and vulnerable youth, this data raises the question if lacking access to formal education (due to poverty or other factors) might indeed exclude youth from entry into apprenticeships. During focus group discussions, masters mentioned difficulties with apprentices that did not have a good level of basic education. They favoured apprentices that had at least completed primary school. The relationship between poverty, formal education and access to apprenticeship training is an issue to be explored in more detail in further research.

On the whole the financing of apprenticeships does not seem to be a major concern for the majority of apprentices. Nevertheless, the poorest, most vulnerable and least educated youth might have difficulties in entering and financing an apprenticeship.

4.4 Further issues

4.4.1 Financing of enterprise start ups after apprenticeship training

Besides the need for support before and during apprenticeship training, apprentices also express a strong demand for financial support once the have completed the apprenticeship. As analysed above, the majority (77%) of apprentices plans to set up an own enterprise, if not immediately, at the latest five years after their graduation. Apprentices themselves state that start-up capital, together with the access to working premises, was their main concern in starting an own enterprise. 75% of apprentices indicate access to start-up capital as their most important need in becoming self employed. Also, among the graduate apprentices that do not practise their trade (25% on average) masters mention the lack of start-up capital as one of the main reasons. Enterprise start-up loans are associated with a high lending risk among banks and microfinance institutions. Therefore, in Ghana, one of the requirements for the access to enterprise loans is (in most cases) a minimum period of six months of business operations.

[36] UNDP Human Development Report 2006

4.4.2 Exploitative elements in apprenticeship financing?

The comparison of masters' and apprentices' payments in the course of an apprenticeship has shown that in a majority of cases net transfers go to the apprentice (chapter 4.2.3). Theoretically, this suggests that the apprentice's labour input exceeds the training input by the master, which is compensated by a financial transfer to the apprentice.

A comparison of labour and training inputs shall further examine this relationship. Other than monetary transfers, in kind transfers are more difficult to quantify and compare: masters offer training to their apprentices and apprentices take part in the production process of the enterprise, spending between 6 and 15 hours (10 in average) at the workplace.

Given the difficulty to quantify and compare in kind transfers, the effective training time in relation to the apprentices' productive time shall serve as an indicator. In focus group discussions, masters indicated that depending on the apprentice's ability to learn it took 3 to 12 months to learn the trade. From that position on, masters start to benefit from the labour input of their apprentices. Therefore, given the average apprenticeship period of 36 months, masters invest into the apprentices during the first months and up to one year and recuperate this investment in the following two years of the apprenticeship training.

Although the exact value of the labour input cannot be quantified, key informants raise the point that the apprenticeship training period was far too long. According to them, masters are substituting employees by apprentices, taking advantage of the cheap labour input of the apprentices. The relatively high percentage of apprentices (30%) that do not finish the apprenticeship training but leave their masters to work on their own account or for another enterprise seems to support this point.

Nevertheless, the high rate of graduate apprentices practicing their trade (75%, according to estimations by the masters), and the optimism with which apprentices judge their own future, provide evidence of the usefulness and benefits of apprenticeship training.

Summing up, masters surely benefit from the cheap labour input of the apprentices, often the only employees for a large majority of masters. At the same time, apprentices benefit from the (relatively cheap) training. The comparison of financial transfers indicates that in a majority of cases the allowance received by apprentices exceeds the amount of fees paid. Hypotheses of financial arrangements being exploitative per se can thus be rejected. Nevertheless, individual apprentices might be exploited in that they do not receive an adequate amount of training input in exchange for their labour and apprenticeship fees. Also, the average apprenticeship period of three years might be excessively long.

Concluding, the question about exploitative elements in apprenticeship financing cannot be fully clarified with the available quantitative data and will need to be explored further in depth through the monitoring of individual training enterprises.

5. Entry points for interventions

The results of the survey provide an insight into the financial arrangements in informal apprenticeships in urban Ghana.

The hypothesis of apprenticeship fees being negatively related to the micro enterprises' access to formal sources of enterprise finances has been rejected. However, the results of the survey provide evidence of a limited access to and use of financial services among micro entrepreneurs and apprentices. Demand for financial support, both among entrepreneurs and among apprentices, is likely to be large.

The following section explores the role of microfinance as a cost effective instrument to overcome inefficiencies in capital markets and support both masters and apprentices in financing apprenticeships. Also, the role of the public sector in providing incentive and support structures in the area of apprenticeship financing will be analysed.

5.1. Potential role of microfinance

Access to finance creates and facilitates investment into the future. In the context of apprenticeship training, access to financial services can stimulate both investment into enterprise development and investment into human capital development, i.e. training. While there are examples of educational loans, training grants, and enterprise loans for youth, both in the developed as well as in the developing world,

experience with microfinance for education and training is relatively small. Also, microfinance for youth is an area where so far little research and practical interventions have been developed.

The following potential microfinance interventions could stimulate the access to and quality of apprenticeship training as well as employment outcomes.

5.1.2 Access to apprenticeship training: stimulation of demand and supply

On the demand side, access to (appropriate) financial services for the young (e.g. educational loans, saving products, grants) might enable vulnerable groups of youth that were formerly excluded from the training system to enter and complete an apprenticeship. Financial services might thus have the potential to stimulate the demand for apprenticeship training.

Regarding the design and delivery of financial services for (potential) apprentices, the following issues have to be considered:

I. **Product design**: Which products do apprentices need and demand? (interest rate, loan term, conditions of repayment, grace period as well as mixing loan and grant components).

II. **Targeting**: Which is the most effective and effective targeting methodology? Exclusive targeting of vulnerable youth or access to financial services for a broader group? Cost, risk and social considerations: exclusively targeting the vulnerable might be cheaper (at least if there is a high grant component), but might increase additional costs through high transaction costs and an increased lending risk. Also, exclusive targeting might create tensions between eligible and non-eligible youth.

III. **Market distortions**: the creation of additional demand for training might distort a well balanced training and labour market. Increased demand might not be met by additional supply of apprenticeship positions; entrepreneurs, although able, might not be willing to train more youth and

increase their own competition. Also, the labour market might already be saturated and thus not able to absorb more entrepreneurs.

IV. **Self regulation of apprenticeship systems**: the financing of informal apprenticeships is arranged independently between the master and the apprentice (or his family). Masters indicate to adapt the amount of fees to the payment capacity of the apprentice, reducing fees if the apprentice (or his family) is poor. Although this might not work for everyone, especially not for street children and child labourers without social networks, external interventions in the form of loans or grants might destroy this self-regulating system of adjusting fees.

On the supply side, access to finance might increase the quantity of apprenticeship training through two main pathways. Access to finance facilitates investment, which in turn increases the quantity and quality of production in an enterprise. This rises the demand for labour and, in turn, the supply of apprenticeships. As apprenticeship training is to a large part based on learning by doing, the workload of an enterprise is an indicator of the number of apprenticeship positions an entrepreneur can offer. Entrepreneurs themselves admit that one reason to employ apprentices is to cope with their workload.

A second and more interventionist approach in the stimulation of supply of training is the conditioning of loans. The rationale is to use financial services as an incentive to achieve or ensure a desired outcome, independent of the investment purpose. In the case of apprenticeship training, access to credit for micro entrepreneurs might be conditioned by the offer of a certain number of apprenticeship positions. Another condition might be the creation of employment opportunities for graduate apprentices. As with the stimulation of the demand side, the danger of distorting markets and creating an excess supply of apprenticeships has to be taken into consideration here. Furthermore, in the design of conditional loans, the demand and supply of credit among micro entrepreneurs, the demand and supply of training as well as other local circumstances have to be taken into account.

5.1.2 Quality of apprenticeship training

Financial services might also support improvements in the quality of informal apprenticeships.

Improved access to enterprise finance increases investment opportunities for entrepreneurs and facilitates investment in new technology and equipment. Improved technology and equipment, in turn, increase the quality of production in the enterprise which upgrades the quality of the skills transfer. Furthermore, investment in the enterprise might increase the enterprise's turnover and the workload of apprentices and employees. Since apprenticeship training is to a large extent based on learning by doing, an increased workload should come along with more learning opportunities for apprentices.

Another microfinance instrument with a potential to influence the quality of apprenticeship training are **conditional loans**. Instead of conditioning loans on the supply of apprenticeship positions, as discussed above, they may be conditioned on factors influencing the training quality. This could be entrepreneurs' attendance of training courses, the investment in training related equipment and material or the compliance with a certain training plan.

In focus group discussions entrepreneurs mentioned the need for their own training, both on technical and on didactic skills. Access to credit might provide an additional incentive to create demand for training and stimulate the attendance of training courses among micro entrepreneurs. Again, this could have distorting effects. First of all, an additional demand for training has to be met by adequate supply of training courses, relevant and accessible to the entrepreneurs in question. Secondly, previous studies have shown the readiness of entrepreneurs to pay for useful training courses. An artificial increase in the demand for training among entrepreneurs might thus decrease the demand for quality in training courses, which, in turn, would decrease the impact of training.

Another area where conditional loans might prove to be useful is in the effective implementation and adoption of training plans, rules or structures in informal apprenticeships. In Ghana, trade associations are active in the field of apprenticeship training, developing rules and setting standards regarding the duration, curriculum and

financial arrangements of apprenticeships[37]. Since membership in trade associations is voluntary, though, associations cannot effectively enforce these rules. This problem was raised in discussions with representatives from the two umbrella organizations of the trade associations, Council of Indigenous Business Association (CIBA) and Association of Small Scale Industries (ASSI). In this context, a conditioned access to credit might provide the necessary incentive for entrepreneurs to adjust their apprenticeship training to the defined standards.

5.1.3 Employment outcome

Finally, **improved access to start up capital for graduate apprentices**, a major concern among apprentices, could positively influence the employment outcome of apprenticeship training. Start up loans, as explained above, are associated with a high lending risk. Access to credit is therefore usually limited to running businesses. Another obstacle for the provision of start up loans to apprentices is the high risk associated with this target group. Young entrepreneurs lack financial as well as entrepreneurial experience and usually cannot provide collateral. To overcome these challenges, appropriate support mechanisms like guarantee schemes and incentives for microfinance institutions have to be developed and put in place. Several institutions and organizations in Ghana and elsewhere experiment with the extension of financial services to youth. Although their outreach is so far small, these initiatives might provide further insights into the effective design of microfinance products and services for youth and apprentices.

5.2. Role for public and private sector interventions

In addition to microfinance interventions, the public and private sector might have a role in the implementation of incentives and support structures that facilitate the development of financial services for youth and apprenticeships.

According to discussions with microfinance institutions in Ghana, there are two main obstacles in developing financial services for youth:

[37] Roeske, J. (2003) "Skills training strategies to combat worst forms of child labour in the urban informal economy: Ghana Country Study", ILO-IPEC, p. 85.

First, there is a high risk associated with serving this target group: young people usually do not have access to physical collateral; they lack business and life experience and do not have a track record with financial institutions.

Second, due to the unavailability of flexible and long term credit funds, financial institutions find it difficult to develop long term flexible loan products that could meet the demand for educational and training loans or start up credits.

Overall, experience with providing financial services to youth and apprentices is so far limited. Pilots will be needed to test different approaches and find out what works and what does not.

Public and private sector interventions could help to overcome the obstacles in developing financial services for youth and apprentices that improve access as well as quality and employment outcomes of apprenticeships, through:

- **Subsidies for strategic pilots** that test different approaches and thus increase the knowledge on the effective and efficient provision of financial services for youth and apprentices;
- **Risk and cost sharing mechanisms like guarantee funds** that help financial service providers to overcome the higher costs and risks perceived with serving youth. Guarantors or guarantee funds can be meaningful if financial institutions are positively inclined to lend to the young but fear the risk involved;
- **Grants** that cover a part of the financial needs of youth. If an apprentice or young person could cover part of his/her financial needs through a grant, he/she reduces the need for credit which reduces the debt burden as well as the credit risk associated with providing financial services to youth. There have been successful experiences with conditional cash transfers in the area of health and schooling. In the area of microfinance, the use of cash or in kind grants is piloted by some institutions to reach the poorest and most vulnerable groups. The ultimate aim of grants in financial transactions is to lift beneficiaries out of extreme poverty and graduate them to the regular microfinance program of an institution. An

adaptation of this approach to the case of youth could be tested with the support of public sector support.

- The provision of **non-financial services** like training, financial education and business development services by public sector institutions could be another approach to reduce the costs and risks of youth entrepreneurship promotion and thus the cost and risk of lending to young entrepreneurs.
- Furthermore, the provision of **special funds with long term flexible repayment requirements** could enable financial institutions to develop and extend longer term, flexible loan products for investment in apprenticeships and enterprise start ups. .
- Also, **fiscal incentives** could be meaningful at the enterprise level to improve the quality or quantity of apprenticeship training. Here, the main obstacle would be the limited effectiveness of fiscal incentives in the informal sector, where enterprises often do not pay taxes at all.
- A more interventionist approach of the public sector and policy makers could be the **imposition of quotas on financial institutions** to ensure a certain amount of the credit portfolio is lent to a specific target group, e.g. the young. The success of such an approach is, however, rather negative, especially as it involves high monitoring costs.
- Finally, public sector institutions should see their role in the **establishment of an inclusive and efficient (formal) education and training systems** which effectively prepare children for further (apprenticeship) training and the labour market.
- Also, the **promotion of micro-and small enterprises** through appropriate legislation, incentives and direct support mechanisms
- As well as the creation of a **conducive environment** for the development of a competitive and efficient financial market (including macroeconomic stability, adequate rules and regulations, sound institutions, etc.) falls into the primary role of the public sector.

6. Conclusion

The paper has analysed the financial arrangements in informal apprenticeships in urban Ghana, using data from a quantitative and qualitative survey among 200 micro enterprises in Accra, Ghana. The analysis shows that financial arrangements in informal apprenticeships are diverse. They mostly include the payment of fees by the apprentice (or his family), the payment of allowances by masters as well as in-kind contributions from both sides. In the majority of cases, in the course of an apprenticeship, the allowance paid by the master exceeds the fees paid by the apprentice.

The amount of apprenticeship fees charged by masters seems to depend on a variety of factors: the cost of apprenticeship training, like the production costs in the enterprise, the turnover of the enterprise and the duration of the apprenticeship. Other factors include the relationship between the master and the apprentice and the prospect of retaining apprentices. Masters also state that the amount of fees depends on the apprentices' ability to pay, the amount of fees charged by other masters and the masters own will. Masters use apprenticeship fees to finance the initial training expenses, to ensure the apprentice's commitment, to finance investments and needs at the time of payment. The charging of fees does not seem to be caused by an absence of formal sources of enterprise finance. Master who did access working capital or investment loans also charge fees for the apprenticeship in their enterprises.

Apprentices largely rely on their parents or guardians for the financing of apprenticeships. Both fees and living expenses are mainly covered by the parents. Masters, through the payment of allowances and the provision of occasional meals or shelter, also contribute to the financing of apprenticeships. Nevertheless, poor and vulnerable youth, especially street children and former child labourers, who do not get any financial support from their family, might find it difficult to access and complete an apprenticeship. Also, youth without any formal education may have problems entering into apprenticeships. Masters seem to be reluctant to accept youth without any basic formal education. Poverty and lacking access to financial support might therefore restrict the poorest and most vulnerable youth from receiving training through informal apprenticeships.

Under these circumstances, microfinance might be an effective tool to improve access to apprenticeships. Educational loans, training grants and saving schemes may facilitate the financing of education and training (fees and living expenses) for vulnerable youth. Microfinance may stimulate the supply of apprenticeships and give incentives to improve the quality of training. Finally, financial services for youth could play an important role in facilitating the transition from apprenticeships to self employment.

Since we do not know much about the effective, efficient and sustainable provision of financial services for youth and apprentices, yet, additional research and the testing of approaches through strategic pilots is crucial. Besides microfinance institutions, the public and private sector might have a role in the provision of incentives, support and appropriate accompanying services, both for the improvement of training and financing mechanisms for the young. Combined efforts to improve access, quantity, quality and employment outcomes of informal apprenticeships could have an important positive effect on the youth employment situation in many developing countries.

7. Next steps

7.1. Strategic pilots

The ILO, in collaboration with research institutions, microfinance institutions and others interested actors, should engage in pilots to test.

- The potential of microfinance to facilitate access to apprenticeships for poor and vulnerable youth; design of educational and training loans.
- The potential of microfinance to improve transition from apprenticeship to (self) employment
- The development of support structures and incentive mechanism for more and better access to financial services for youth.
- Feasibility of conditional loans, to influence supply, quality or structure of informal apprenticeships.

7.2. Suggestions for further research

Areas for further research include:

- Access to finance for youth and apprentices: which products and services do youth demand?
- Positive versus negative effects of microfinance: danger of distorting a self-regulating apprenticeship system?
- Quality and structure of apprenticeship training: exploitative elements?
- Training options for poor and vulnerable youth: are they excluded from informal apprenticeships?
- Possibilities to upgrade and improve apprenticeship training – for more effective training and improved employment outcome.

Appendix I: List of stakeholders consulted for the study

Accra Metropolitan Assembly (AMA)	Sylvester Gabianu, Land Information Programme
Association of Small Scale Industries (ASSI)	Mr. Richmond Tetteh
Council of Indigenous Business Association (CIBA)	Ben Kittah (Chairman), Emmanuel Poku (Executive Member, Project Manager), Ralph Ameyaw (Executive Secretary)
FIT Ghana	Robert Nsiah, Coodinator Michael Asceou
Ghana Microfinance Network (GHAMFIN)	Dr. David O. Andah, Executive Director
Ghana Statistical Service (GSS)	Mr. J.Y. Amankrah, Labour Statistician
ILO-GDWPP	Kwamina Amoasi-Ando, ILO Nacional Country Programme Coordinator
ILO-IPEC	Yaa Yebuah, Chief Technical Adviser Emmanuel Otoo, Country Programme Coordinator Vocational Skills Project
Ministry of Manpower, Youth and Employment	Mr. Leo Kabah, National Coordinator of the National Youth Employment Programme
National Board of Small Scale Industries (NBSSI)	Mr. Dawarnoba Baeka, Director of Programming, Planning, Monitoring and Evaluation
Sinapi Aba Trust	Anthony Gyasi-Fosu, Executive Director, Samual Afrane, Vice Board Chairman
Social Investment Fund (SIF)	Ama Serwahh Dapaah, Executive Director Forster K. Boateng, Institutional Development Specialist

Appendix II: Grouping of Accra Town Councils for the quantitative data collection

1. Dansoman, Abossey Okai, Korle Gonno
2. West Okaikwei, Kaneshi, Abeka
3. Achimota, West Ayawaso, Central Ayawaso, East Ayawaso
4. Adabraka, Gamashie, Osu
5. La, Teshie, Nungua

Appendix III: Registration of enterprises

Ghana does not have a special regulation for the registration of micro and small enterprises. In principle, micro enterprises are required to register with the same authorities and revenue agencies as all larger enterprises in Ghana[38], which include:

- Register General or the NBSSI (which helps SME to register with the Register General)
- Local Authority/District Assembly i.e. Accra Metropolitan Assembly (AMA))
- Environmental Protection Agency (EPA)
- Ghana Standards Board
- VAT Service
- Internal Revenue Service (IRS)
- Social Security & National Insurance Trust (SSNIT)
- Customs Excise & Preventive Service (CPES)

Compliance with registration requirements varies (Table A1): a large majority of the enterprises (80%) is registered with the AMA, while only a small percentage (12.5%) has obtained a business corporation certificate with the Register General. Only one enterprise in the sample (0.5% of enterprises) is registered with the VAT Service, none with either the SSNIT or the CPES.

Almost three quarter of enterprises state to be registered with the IRS, though. The IRS has established tax collection points in sub districts[39] and employs tax collectors that visit the enterprises, which might explain this relative high percentage of registration with the IRS. The fact that 84% of enterprises in the sample indicate to be paying taxes for their enterprises, ranging from 20,000 to 14 million Ghanaian Cedis per year seems to confirm the effectiveness of the tax collectors. Furthermore, 50% of the entrepreneurs in the survey state to be part of a business association, while this percentage is highest among the hairdressers (68%) and lowest among the carpenters (26%).

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[38] Manu, G., P. et al (EMPRETEC Ghana Foundation) (2003) "Background paper on micro and small enterprise development and the informal economy", ILO, Ghana.

[39] EMPRETEC Ghana Foundation (2002) "Improving the enabling environment for indigenous private sector growth and investment", Bannock Consulting Ltd., Department for International Development, p.16

Table A1. Compliance of enterprises with registration requirements

	% of Enterprises Registered	
Authority/Revenue Agency	Registered	Not Registered
AMA (Accra Metropolitan Assembly)	**80.5**	19.5
IRS (Internal Revenue Service)	**71.5**	28.5
Business Association	**50.0**	50.0
Register General	**12.5**	87.5
NBSSI	**1.0**	99.0
VAT Service	**0.5**	99.5
SSNIT	**0.0**	100.0

Appendix IV: Data from correlation and regression analysis

Table A2. Cost of toolboxes, per trade

Sector of Enterprise	N	Minimum	Maximum	Mean (Cedi)	**Mean (USD)**
Tailoring	35	50 000	2 000 000	595 429	**67**
Hairdressing	35	50 000	600 000	195 714*	**22**
Mechanics	37	100 000	2 000 000	408 108*	**46**
Carpentry	40	100 000	2 000 000	412 500*	**46**
Total	184	50 000	2 000 000	403 000	**45**

* Differences in mean costs between hairdressing on the one hand and mechanics and carpentry on the other hand significant on the .05 level.

Table A3. Correlation between the total amount of fees charged in an enterprise and the costs of the required tool box

		Total Amount of Fees Charged in Enterprise (if any)	Cost of Tool Box
Total Amount of Fees Charged in Enterprise (if any)	Pearson Correlation Sig. (2-tailed) N	1 . 195	.327 ** .000 179
Cost of tool box	Pearson Correlation Sig. (2-tailed) N	.327 ** .000 179	1 . 184

**. Correlation is significant at the 0.01 level (2-tailed).

Table A4. Correlation between the average turnover of an enterprise and the amount of fees charged for apprenticeships

		Total Amount of Fees Charged in Enterprise	Average Turnover per Month
Total Amount of Fees Charged in Enterprise	Pearson Correlation Sig. (2-tailed) N	1 . 200	.305 ** .000 187
Average Turnover per Month	Pearson Correlation Sig. (2-tailed) N	.305 ** .000 187	1 . 200

**. Correlation is significant at the 0.01 level (2-tailed).

Table A5. Correlation between the average turnover of an enterprise and the number of apprentices employed

		Average Turnover per Month	Number of Apprentices in Enterprise
Average Turnover per Month	Pearson Correlation Sig. (2-tailed) N	1,000 . 187	.347 ** .000 187
Number of Apprentices in Enterprise	Pearson Correlation Sig. (2-tailed) N	.347 ** .000 187	1,000 . 200

**. Correlation is significant at the 0.01 level (2-tailed)

Table A6. Correlation between average duration of and fees charged for apprenticeship

		Total Amount of Fees Charged in Enterprise (if any)	Cost of Tool Box (if any)
Average Duration of Apprenticeship	Pearson Correlation Sig. (2-tailed) N	1 . 200	.282 ** .000 195
Total Amount of Fees Charged	Pearson Correlation Sig. (2-tailed) N	.282 ** .000 195	1 . 195

**. Correlation is significant at the 0.01 level (2-tailed).

Table A7. Multiple Regressions on Amount of Fees Charged in Enterprise

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.290	.268	679768

a. Predictors: (constant), dummy trade: tailoring 1/0, duration of apprenticeship, average, dummy for relationship to master (1 related, 0 not related), average turnover per month, cost of tool box, "zero if no toolbox required)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.11E+13	5	6.218E+12	13.456	.000[a]
	Residual	7.62E+13	165	4.621E+11		
	Total	1.07E+14	170			

a. Predictors: (constant), dummy trade: tailoring 1/0, duration of apprenticeship, average, dummy for relationship to master (1 related, 0 not related), average turnover per month, cost of tool box, "zero if no toolbox required)

b. Dependent Variable: Total Amount of Fees Charged in Enterprise

Coefficients[a]

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)					.056
Duration of Apprenticeship, Average			.168		.015
Dummy for relationship to master (1 related, 0 not related)			-.164		.014
	529147.1	274520.8		1.928	
Cost of tool box, "zero if no toolbox required)	18586.632	7562.468	.328	2.458	.000
Average Turnover per Month	-509766	205465.5	.245	-2.481	.000
Dummy trade: tailoring 1/0			-.161		.019
	.571	.119		4.805	
	3.227E-0.2	.009		3.630	
	-295144	124676.2		-2.367	

a. Dependent Variable: Total Amount of Fees Charged in Enterprise

Table A8. Comparison of mean fee charged among entrepreneurs that do and do not give any allowance (monetary or in kind, other than presents) to their apprentices

	Allowance paid/received	N	Mean **	Std. Deviation
Total Amount of Fees Charged in Enterprise	Yes	166	1436602	826884
	No	34	1131471	555955

** t-test: difference in means significant at the .05 level, 2 tailed p-value equals 0.01

Table A9. Correlation between registration status of enterprise and access/use of loans

		Average Turnover per Month	Number of Apprentices in Enterprise
Registered under the Registrar General (Business Incorporation Certificate)	Pearson Correlation	1	.175 **
	Sig. (2-tailed)	.	.013
	N	200	200
Loan Received	Pearson Correlation	.175 **	1
	Sig. (2-tailed)	.013	.
	N	200	200

**. Correlation is significant at the 0.05 level (2-tailed).

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